



Commission for  
**Communications Regulation**

## Submissions received in response to Consultation

### Next Generation Access (NGA) Proposed Remedies for Next Generation Access Markets:

**Non-confidential submissions received from respondents**

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ComReg 12/97

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## **1 Alternative Operators in the Communications Market (ALTO)**

# alto

alternative operators in the communications market

**Response to Consultation - Proposed Remedies for Next  
Generation Access - NGA, Markets Ref:12/27**

**Submission By ALTO**

**Date: June 13<sup>th</sup> 2012**

ALTO is pleased to respond to the Consultation - Proposed Remedies for Next Generation Access – NGA, Markets.

### **Preliminary Remarks**

ALTO welcomes this Consultation on the proposed remedies for NGA, however we approach this debate extremely apprehensively owing to what has occurred and the behaviours exhibited by the incumbent – eircom, and the regulator – ComReg, during the previous two EU regulatory frameworks. ALTO members have significant fears that what occurred historically will be replayed in current market.

ALTO's entire membership engaged with ComReg and ComReg's independently chaired Next Generation Industry Steering Group – NISG, since the year 2005. Since that time, only some minor movements have occurred in the Irish market to drive on the Next Generation Access technological debate. The industry has been offered and watched with particular interest, the various pilot schemes relating in the main to the incumbents own field-testing and various ideas of what the Irish Next Generation Access might look like throughout the various iterations of ownership of eircom, the Irish incumbent.

ALTO drafts this response in the full knowledge that, ETNO, ECTA, the EU Commission, other European regulators and EU trade associations may look at the response in a relatively significant level detail. To that end, we feel that it is important to state that ALTO views the issue of Next Generation Access and very specifically the issue of vectoring as a lab based offering at this time only, and it may not do what it is that the incumbent and various other proponents says it will. ALTO currently views the vectoring debate as something of a 'white elephant' that may not prove fit for purpose offering in the medium to long term. Further, eircom are on record publically as stating that they are a technology follower, not innovator in the sense that a technology trial may emerge in Ireland. Our response to Q. 5., below provides further information relating to our thinking.

## **ComReg's Approach**

ALTO cautiously welcomes the approach that ComReg has taken to this area, but suggest that extreme caution must be exercised when reviewing various offerings that may emerge over time, to include the margin modelling/price squeeze and network forecasts relating to NGA that have been made publically available to industry. De-regulation should not be a feature of anything that emerges as a result of this consultation.

ALTO seeks to impress on ComReg the importance of the maintenance of the Current Generation Access – CGA, product sets.

ALTO urges ComReg to use all powers and framework remedies available to it, without fettering its discretion in any regard. Industry cannot withstand another ten-year battle in order to get to where we need to be. ALTO refers to the Local Loop Unbundling – LLU, battle in that regard.

## **Economic Backdrop**

While ALTO welcomes the newly emerged eircom, the Examinership process is one which in an appropriate case, enables an enterprise, in the instant case eircom, to continue in existence throughout the process for the benefit of the economy as a whole and, of equal, or indeed greater, importance to enable as many as possible of the jobs which may be at stake in such enterprise to be maintained for the benefit of the community in which the relevant employment is located.

With this in mind, ALTO suggests that investment in the future, or Next Generation of products and services is still going to challenge eircom and its management of an extraordinary extent in the coming years.

ALTO calls on eircom and its owners to embrace the spirit of the Examinership process under which they have just been allowed to benefit, and to apply the same spirit to the Information Society agenda in Ireland, while casting off old behaviours designed to frustrate and block innovation.

Readers must note that eircom remains a single trading entity for the purpose of the Next Generation debate. No legal, regulatory or undertaken approach to formal functional separation has occurred within eircom. In fairness to eircom, they have at least cosmetically endeavoured to create a perception of separation between its Wholesale and Retail units. ALTO waits in anticipation to see whether any tangible change arises without more formal legal or regulatory intervention.

ALTO remarks, and it is ALTO's opinion that eircom's market share remains significant enough that no one ALTO member-company, or indeed industry player actually poses and clear and present threat to eircom's dominance. We welcome any development that enables Next Generation competition, but we must clearly state that cautionary approaches must be taken in each stage of the process of enablement.

## **Equivalence**

Industry now requires greater detail relating to Equivalence of Input – EOI, and in some CGA products outputs - EOO. This is a concept that has not been present in the market to date. This may come as a surprise to many, but in fact it is true that transparency, and achieving same, has been a struggle over the years.

## **Bundling and CGA protection**

ALTO also notes that the decisions that arise as a result of this particular consultation paper may have the effect of jettisoning entire Wholesale product sets, if those decisions are taken incorrectly. We note with interest that ComReg has

published another Consultation at this time, entitled: '*ComReg 12/63: Supplementary Consultation - Price Regulation of Bundled Offers*' It is the ALTO and widely held industry view that this paper, is designed to protect legacy services, when the backdrop of the NGA Consultation, which is addressed below, is entirely different. ALTO urges ComReg to take an extremely cautious approach to the issues outlined in and throughout the answers provided below. The handing over of unbridled pricing freedom to an incumbent operator may irreparably damage the competitive landscape in Ireland.

ALTO notes that trading conditions in general are tough and member companies have taken remedial action, where necessary, in order to facilitate their actual existence in the market at this stage. That said member companies have the funding, expertise and ability to engage, build and compete in the Next Generation market, though this must not come at cost to the CGA products and services or the market as a whole.

### **Commission Policy Statement**

ALTO remarks that European Commission VP Kroes made the following policy statement the day before, 12<sup>th</sup> July 2012, this response was due to this consultation on NGA, suggesting that Regulatory policy should clearly be an enabler not an obstacle.

Regulation that is stable over time and consistent throughout Europe can underpin sustainable competition and efficient investment. The key points of Kroes' speech are rehearsed below:

#### ***"General conclusions***

##### ***1) Competition needs a level playing field.***



*In particular, alternative players should not have to compete with one hand tied behind their backs: incumbents should not be able to discriminate between their own retail arms and others'. Although often undervalued in today's regulatory practice, securing truly equivalent access by alternative operators to incumbent networks is probably the most important guarantee of sustainable competition, on existing and new networks.*

**2) Too much intervention constrains flexibility**, which in turn reduces the range and quality of services that can be offered to different consumers. Particularly as we make the transition from one technology to the other, both incumbent operators and others need to be able to explore new possibilities. As far as possible, we will focus on issues vital for healthy competition, allowing us potentially to lighten regulatory intervention elsewhere.

**3) We should be aware of both direct and indirect effects of regulation.**

*For example, regulating copper access prices can affect the pricing and return on other infrastructures: on new fibre networks or fibre-based upgrades (from whatever kind of operator), on cable, even perhaps on wireless. In the right circumstances, we can take advantage of this by focusing wholesale price regulation on key anchor products.*

**4) We should be wary of picking winners.**

*"Technology neutrality" is just another way of saying that we cannot predict with any certainty what the best technological solutions will be, nor how they will compete and interact. Incremental solutions may help to address weak demand in the short term – for example, new technology combining fibre and copper, or upgrading TV cable, can be very cost-effective in delivering higher download capacity.*

**5) In general, regulated wholesale access prices should get the "buy or build" signals right.**

*Replacement cost can give other operators a clear incentive to build out their own networks, and so to use their own assets to drive infrastructure-based competition, in areas where it makes economic sense to do so. Elsewhere, alternative operators will continue to have wholesale access to incumbent networks so consumers can get competitive services.*

**6) Regulatory stability and consistency over time is a value in itself, and is vital to build trust by commercial investors and operators. Consistency across the single market is also a vital part of the equation. Our approach should be maintained over time, consistent and reliable for the long term – but it also needs to be sufficiently flexible to adapt to changing circumstances.**

**7) The question whether a rise or fall of copper prices would spur NGA investment is complex.**

*Different factors pull in different directions, and vary in relative strength: according to context and in their effect on alternative and incumbent operators. Last October we explored some ideas on how to reconcile these competing factors. NRAs were concerned that an approach linking the copper price to NGA investment commitments would be difficult to enforce in practice, and open to gaming.*

*But more importantly [Regulators should], 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.”*

### **Summarising VP Kroes' Messages**

In effect VP Kroes suggests:

1. Tougher non-discrimination rules to ensure “incumbent” operators do not get an unfair advantage.
2. One of the issues raised in the Commission’s consultation relates to the prices charged for wholesale access to copper networks. The evidence shows that lowering those prices will not induce greater investment in very fast broadband. But the Commission feels that it does not need to aim at more consistency in the approach to price regulation between Member States – some differences can be justified by local conditions, but current outcomes vary too much; and that’s a single market issue.
3. More flexibility on how “next generation” wholesale products can be priced: subject to meeting strict conditions to ensure fair competition.

ALTO remarks that much of what VP Kroes states is relevant to the Irish market, though not all of it, owing to historic and perceived market failures related to CGA product sets.

ALTO also does not endorse the Commission view in relation to Regulatory Holidays and on price methodologies. As a result of this approach, and in general, incumbents will not only be allowed to regain full monopolies on future networks, they will also be allowed to continue overcharging consumers and starving competitors on existing networks.

This is of course, a departure from the approach taken with the NGA Recommendation in 2010 and might take Europe and Ireland back to the pre-liberalisation era. The EU already lags behind other regions of the world when it comes to super fast broadband – an important enabler of economic growth – and these measures will set us further back.

The European Commission has in the past recognised that consumer prices suffer a direct impact from abusive behaviours of incumbents in wholesale markets (this

digital deficit has been estimated to be worth €25bn).<sup>1</sup> Hard-core pricing abuses and discriminatory behaviours of incumbent operators have been punished recently by the Commission. However, this happened years after the abusive conduct started. The non-recoverable harm to the market and to competitiveness makes strong *ex ante* intervention necessary.

ALTO warmly welcomes the announced “margin-squeeze” test and the move towards Equivalence of Inputs. It will be up to National Telecom Regulators, such as ComReg, to make real progress in diligently and strictly implementing non-discrimination obligations.

Regrettably, much of the approach announced by the VP Kroes on asset pricing policy is potentially catastrophic for competitors, for consumers and for the competitiveness of our economy. Mrs Kroes is asking for more of the same when it comes to pricing, but fibre technology and regulatory holidays have been there for years and investments have not taken place by the dominant firms who keep asking for more money. Incumbents have been only partially upgrading their networks (VDSL) and re-building their monopolies on future broadband (the incumbent retail broadband market share of VDSL lines in the EU is close to 100%).<sup>2</sup> There is no reason to believe that without competitive pressure, incumbents will give up their goldmine legacy network to invest in Europe. Investments will take place in more attractive emerging economies and short-term yield-hungry banking investors will continue to be rewarded with more than a half of incumbents’ cash flow.<sup>3</sup>

Alternative operators who are currently the major investors in future proof fibre networks to the home (FTTH)<sup>4</sup> will be forced to keep transferring the near-totality of

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<sup>1</sup> See Analysis Mason - 3 March 2010 ‘The state of competition in the European telecoms sector and its impact on consumers and business’.

<sup>2</sup> See WIK Consult – 6 March 2012 – NGA Progress Report.

<sup>3</sup> See FT Lex-Column Europe’s telecoms: fading charms – 8 July 2012.

their cash flows to incumbents and be prevented from playing a significant role in investments. The result being, that many alternative operators will be simply forced out of the market.

## **Consultation Response**

ALTO deals with the Consultation questions below. It has not been possible to answer all questions to the level of detail, but we have endeavoured to provide at least a guideline response in relation to the ALTO position on the topic in question.

### **Response to Consultation Questions:**

#### **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.**

A. 1. Ireland is in a completely different situation to many EU member states considering NGA deployment at this time. This is due to the incumbent operator eircom's issues recently with financial debt restructuring through Examinership (similar, but not the same as America's Chapter 11 or the UK Administration process). Ireland has managed to have the only national incumbent telco in the EU region, and possibly the world, enter into the protection of the courts. Thankfully though, the eircom debt has now been restructured and the Examinership process has been concluded, though the following concern remains:

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<sup>4</sup> According to the FTTH Council Europe, Alternative operators in 2011 were responsible for 55% of investments in FTTH, with incumbents behind at 33%.

1. eircom, the Incumbent is now **only** investing in NGA technologies and products, and thus needs to find significant investment funds in excess of several hundred million Euro to complete a substantial (and possibly unrealistic) NGA roll-out plan. This cost will have to be added to any current and existing debt at a time when the incumbent is losing market share. eircom has said it will invest €1.5 billion capital over the next five years, however it's not clear how much of this is for the continuation of existing services, and how much is for NGA.

Given the current unfavourable situation, ALTO suggests that it is premature of ComReg and the State, to be discussing transition periods and the prudent approach would be to put in place a review once the incumbent has significantly deployed.

ALTO is very aware eircom are deploying phase 1 of its NGA rollout to pass about 100k premises in key urban areas, and we can only assume this will be completed and that NGA will subsequently be launched by eircom. However, the continuing debt issues and the lack of availability of investment funds that eircom continues to face may impact the rate of the expansion into other locations.

ALTO therefore strongly recommends that ComReg indicate formally that it will review NGA progress in approximately two years time and consult then concerning transition periods. To do otherwise, will almost definitely commence foreclosure on current markets and undermine the return in investment for eircom, ALTO members and other operators. ALTO believes that eircom must maintain copper based services in NGA footprint areas, and our reasoning is outlined in detail below in our response below to Q. 2, below.

**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.**

A. 2. In ALTO's view other operators who have embarked on commercial investment in the network some years ago, to deploy high-speed triple play services and compete properly with eircom and others are welcomed. It thus appears disproportionate and potentially unfair that the regulator should therefore assist the new entrants primary competitor eircom.

ALTO remarks that it is important to note that eircom has, and continues to be, a highly profitable company and the recent financial difficulties have not arisen due to competition. ALTO has made submissions to ComReg relating to our views on eircom's difficulties and this document is not designed to rehearse those matters again.

As ComReg discusses numerous times, and almost pointedly, throughout the consultation, many of the regulated prices in the Irish market are maximum values only, and eircom has the flexibility to reduce prices.

ALTO notes that eircom has engaged in no initiative(s) to reduce its pricing at all, such as for example the Wholesale Line Rental – WLR, prices which it has the scope to do, thus it is ALTO's view that eircom is trying to get the best of both worlds – retaining existing product set high prices, and have the regulator push wholesale customers to NGA.

ALTO firmly believe that it is too early at this time to discuss retiring of the copper network in Ireland, for the following reasons:

1. eircom have not yet even commercially launched NGA services;
2. The eircom NGA solution maybe dependent on the copper WLR services for voice traffic;
3. eircom themselves say it will take three years to deploy NGA in key urban

areas;

4. ALTO considers that there is massive uncertainty as to whether eircom will have the finance for a rapid roll out of NGA, even eircom's ownership remains quite uncertain at this time; and
5. Signalling the retirement of the copper platform sends "do not invest" signals, and therefore ComReg should not consider such until there is increased certainty as to Eircom NGA rollout. Further information can be provided in relation to this point, if required.

ALTO's view is that ComReg should postpone any and all decisions on retiring the copper network until there has been a substantial rollout of NGA and its future is clearly sustainable. Some suggest that tying eircom to a legal undertaking might give certainty to some kind of copper retirement.

ALTO's current view is that it might take the employment of a strong and not insignificant regulatory remedy to focus the minds of management at eircom.

### **Access to Duct and Dark Fibre**

**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.**

A. 3. ALTO makes the following points:

1. ALTO notes that eircom has not Functionally Separated and the situation has already occurred pre-launch of NGA, where eircom's self-provided NGA



access is not equivalent to that provided to other operators .

2. eircom's recent financial issues raise major uncertainty as to whether eircom has the finance to support a comprehensive NGA rollout and ALTO certainly does not see eircom deploying NGA in less financially attractive areas of the country for the foreseeable future. This is supported by the existing broadband rollout where State aid has assisted with deployment in commercially unviable areas.

ALTO therefore considers there is an opportunity for others to deploy NGA solutions in the market and the availability of Market 4 facilities such as such as Sub-Loop Unbundling – SLU, and duct access etc., are essential for competitors in Ireland.

If eircom were to have Functionally Separation similar to that which is apparent at BT Openreach, ALTO would have had more confidence in using Market 5 solutions, knowing that we were conceivably being treated equivalently, however that has not happened.

ALTO members have had a very poor experience relating to and considering eircom's voluntary reform programme, and confidence in eircom equivalence continues to be low, if not rock bottom.

In conclusion, ALTO considers it essential that the opportunity exists for other parties to deploy Market 4 and Market 5 type solutions, and agrees that access to civil infrastructure should be mandated. ALTO also agrees that where access to civil infrastructure is not feasible, access to dark fibre should be mandated.

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

A. 4. ALTO agrees with ComReg conclusions that eircom should be mandated to allow fibre unbundled access. ALTO also agrees with a mandate to access the

terminating segment and agree with the other mandates in relation to access. ALTO does not see why this would have to imply that fibre terminating access is not also mandated in essence, ALTO believes that both types of fibre access should be mandated.

## **Sub-Loop Unbundling**

**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.**

A. 5. ALTO members are aware of the various national and wider-EU discussions surrounding technology commonly referred to as vectoring. Vectoring, eircom claims means VDSL access, and must be exclusive in order to achieve the possible benefits of higher bit rate that is already achievable via existing products. However, vectoring technology is only at very early stages of availability at the time of writing this response, and the technology is not expected to be commercially available from competitive vendors for at least another year, if not two years in time.

ALTO is happy to communicate the various information it has in relation to vectoring on request.

According to eircom's NGA rollout plan, eircom will roll their network solution past 1 million premises within the next three years, suggesting most of the network will be rolled out **prior** to vectoring being available. This presents a number of challenging issues and quite perplexing questions, such as:

1. Should the market be delayed for two or three years waiting for vectoring?

2. Will vectoring delay/prevent competitors investing?
3. Will eircom have to retrofit their existing deployment and at what cost?
4. Will vectoring be overcome by some other VDSL development as the technology is still evolving?

ComReg offers three potential regulatory outcomes:

1. **Option A** – Modification of the obligation of SLU in NGA Area;
2. **Option B** – Access to the sub-loop withdrawn in NGA area, conditional on the roll out of bandwidth enhancing technology by eircom;
3. **Option C** – Access to the sub-loop continues to be mandated.

ALTO addresses our answer to all three:

- It maybe another year before vectoring is competitively available;
- eircom have stated on numerous occasions it is a follower of technology, and hence it will only buy proven solutions;
- VDSL technology is still evolving and the track record of DSL evolution is there is more to come as incumbents seek ways to sweat their assets further;
- A considerable part of eircom's NGA deployment will be operational before commercial vectoring is available; and
- The introduction of the 17khz band doubles the available VDSL line rate from 40Mbit/s to 80Mbit/s without the issue of exclusivity.<sup>5</sup>

In the event of any regulatory limitations in the so-called NGA area (which is an area that is not fixed) further difficult and perplexing issues will arise if another

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<sup>5</sup> It remains to be seen whether such speeds will be achievable in the market in the near future.

entrant deploys Sub-Loop Unbundling using VDSL with vectoring before eircom. It is ALTO's assumption that this sort of exclusivity means that eircom would also have to purchase the downstream bitstream services from the other operator. Hence vectoring could potentially be a 'double edged sword' for eircom and entrants.

## **Conclusion**

As it will take at least another year until vectoring is competitively available, ALTO believes that it is unreasonable for the regulator to create a market restriction based on something that might or might not happen.

Our view is that there should be no restrictions or modifications to regulation at this time, and where multiple operators deploy services in the same areas in the next two years the situation should remain without vectoring.

The economics of multiple operators deploying are difficult hence commercial decisions may naturally lead to exclusivity at locations irrespective of the vectoring.

ComReg should carefully consider ALTO's remarks in the preamble and in answer to the questions towards the top of this response. The wrong decisions now, may lead to an unsustainable position in the short to medium term for competition in the communications market in Ireland. This would be deeply undesirable for Wholesale providers, such as ALTO members, consumers and policy makers.

### *The Options*

As matters currently stand, ALTO disagrees with **all three** of these options, because each option implies, to a greater or lesser degree, the complete phasing-out of a regulatory obligation and a corresponding wholesale input, or the creation of uncertainty, based solely on assumptions with regard to a potential specific

technology choice by the SMP operator.

ALTO considers that the assumptions made by ComReg with regard to VDSL2 vectoring technology development are erroneous.

ALTO considers that all NRAs, including ComReg are under an obligation, where SMP is found, to impose appropriate specific regulatory obligations to address that SMP and this arises from Article 16.4 Framework Directive. If SMP operators can simply escape necessary regulation simply by selecting technologies that make the imposition of appropriate regulatory obligations impossible, the regulatory framework would be unacceptably open to gaming by dominant operators. The European Commission's 2010 Recommendation on Regulated Access to Next Generation Access Networks has clarified (see Recital 21, Recommendation 39) that obligations imposed by NRAs under Article 16 of the Framework Directive are to be based on the nature of the problem identified, without regard to the technology or the architecture implemented by an SMP operator, and that existing SMP obligations in relation to Markets 4 and 5 should not be undone by changes to the existing network architecture and technology, unless agreement is reached on an appropriate migration path.

ALTO is firmly of the view that ComReg's draft proposals are not in line with these fundamental principles, and that ComReg should modify its proposals to bring them in line with these principles.

VDSL2 with vectoring has, to our knowledge, not been commercially deployed on any meaningful scale anywhere in the world, and the technology has not been standardised.

ComReg's proposed adoption of de-regulatory decisions at this time, or giving de-regulatory indications at this time, based on assumptions about possible roll-out of pre-standard VDSL2 with vectoring, is clearly premature and inappropriate, and entails serious risks of undermining competition, as well as undermining the credibility of the regulatory process.

With regard to the technology facts and the roadmap for VDSL2 with vectoring, ALTO has the following points to make.

Vectoring is a technology that simply cancels cross-noise between copper pairs present in the same cable. The noise cancellation is achieved by monitoring noise levels and actively cancelling cross-noise in the cable by a vectoring processor deployed at the network level (this can be done at different locations in the network) and by equipment (specific modems) located at the customer premises.

The first generation of (non-standard) VDSL2 with vectoring technology does not support the co-existence of multiple DSLAMs at the sub-loop aggregation point. This is valid for a single operator's multiple DSLAMs, as well as for the DSLAMs of two (or more) operators. In this first generation, deploying multiple DSLAMs would strongly reduce or annihilate the benefits that can be gained from the deployment of vectoring.

The technology roadmap (also driven by incumbent operators wishing to engage in multi-DSLAM deployments in order to be able to serve a greater number of lines) already provides for second and subsequent generations of VDSL2 vectoring technology. Incumbent operators themselves are awaiting the next generation offerings before committing to meaningful roll out of vectored VDSL2.

It is noteworthy in this regard that eircom has characterised and publicly stated that it is as a **technology follower** rather than as a technology leader, and this position has been borne out in practice, given eircom's comparatively late announcement of the development of its NGA offering.

Based on information in ALTO's possession, the second generation of VDSL2 vectoring technology (still non-standardised) is likely to become available in the near future, and quite possibly within less than 12 months. Crucially, this second generation is expected to support multi-DSLAM deployment, thereby mitigating or even removing the co-existence problem (for single operator multi-DSLAM deployment and for multi-operator co-existence).

To be more precise, it is our understanding that in first generation vectoring, the vectoring processor is embedded into the DSLAM(s) to be located at the sub-loop unbundling aggregation point (typically a street cabinet in the Irish case). By contrast, in second generation vectoring technology, the vectoring processor

becomes a separate component that is located higher up in the network (e.g., at the MDF or metropolitan aggregation node), and is connected to multiple DSLAMs (with the DSLAMs physically residing at the Sub-Loop aggregation point). In essence, in the second generation, the vectoring 'intelligence' is being centralised, and the ability of remotely managing multiple DSLAMs is achieved.

In a second generation deployment, it will therefore be possible for two (or more) operators to co-exist, and use Sub-Loops, with a limitation (given the lack of standardisation) that they would likely need to adopt equipment from the same technology vendor and agree on management of the vectoring processor function. Such agreement on management of the vectoring processing function should be relatively non-controversial, given that the operators have a joint interest in achieving the highest possible bandwidth. We note in this regard that agreeing on joint technical decision-making and management principles is not new in the telecommunications industry, and has been done in the context of other DSL technologies deployed on copper networks (e.g., copper spectral management).

Further generations of VDSL2 vectoring technology are expected, which would enable co-existence at the sub-loop aggregation point of multiple operators using different technology vendors. This is likely to be achievable on the basis of standardisation.

On the basis of the above, ALTO asks ComReg to:

- a) Fully inform itself of the technology trajectory for DSL vectoring technology, including from neutral (non-vendor/non-incumbent) information sources, prior to taking any decisions on the phasing-out of sub-loop unbundling and/or prior to taking any decisions permitting the deployment of vectored DSL on the SMP operator's copper network.
  
- b) Refrain from taking any decisions which would phase-out, create an

expectation of phase-out, or create a concern about possible phase-out, of sub-loop unbundling, in ANY geographic area of the Irish Republic.

c) Disallow the deployment of first generation VDSL2 vectoring technology, due to its extremely negative implications for competition.

d) Only allow the deployment of second (and future) generation DSL vectoring technology insofar as a formal offer is made to other/subsequent deploying operators to jointly manage noise cross-cancellation or insofar as a regulatory obligation is imposed on any first deployer to provide noise cross-cancellation to a second deployer. Principles on operational management and cost sharing of noise cross-cancellation may have to be adopted to enable co-existence.

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

A. 6. Given ALTO's answer to question 5., above, ALTO provides the following answer agreeing with ComReg concerning continued obligations on eircom and all possible options on offer and make the following supporting comments:

1. ALTO's experience of classic broadband deployment is that local authorities may decide to tender for NGA deployment in their local environment. Maintaining the Sub-Loop Unbundling obligations in non-NGA locations facilitates competitive bids and provision of services.
2. ALTO views the need for deployment planning as being based on the assumption of a technology, or activity, forcing exclusivity and ALTO is not yet sure this will happen. However, given there is a possibility of such, ALTO accepts that ComReg will need to monitor the evolving situation over the coming years ALTO members would accept liberal



conditions requiring members to provide our deployment plans to ComReg in confidence.

3. If another notional operator deploys vectoring ahead of eircom, that operator would have to accept a regulatory obligation to supply other operators with the relevant NGA wholesale inputs. However, it is reasonable that such would be dependent on the structure and facilities of operator's network, for example, it is unlikely they will have NGN nodes in similar locations to eircom. The notional operator would thus have to offer wholesale services allowing other operators to develop their own solutions.

ALTO refers ComReg to Clause 5.6.1 and specifically the third bullet point therein. The limit of exchanges greater than 1800 lines appears too small. LLU operators have to date, deployed in areas of greater than 4000 lines and ComReg, in its own Supplementary Consultation Ref: 12/63, suggests the cable company's deployment is also in exchange areas of greater than 4000 lines. It is ALTO's view that the rationale for NGA deployment will be similar to that of LLU, therefore we consider that the limit should be raised accordingly, to greater than 2500 line exchanges.

ALTO further refers ComReg to Clause 5.6.1 and specifically the seventh bullet. ALTO members question why it is presupposed that the industry will use a specific technology? At this time, only one vendor appears to have a solution available (and in limited form) and all others appear to be at very least one year out from that time forecast. ALTO does not see that members should be forced to use one vendor that may increase expense to members. Further, we query what would happen to the Irish market if better solutions emerge over time, or is industry simply to just to take what it is we are given?

**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.**

A. 7. ALTO is aware that at least two operators have made make requests for access to the Sub-Loop service and initially plan to deploy a pilot service similar to the approach taken by eircom. We are limited in providing any further comments.

**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.**

A. 8. It is ALTO's view that Industry could deploy bandwidth enhancing technologies such as the 17khz band to upgrade the speed from 40Mbit/s to 80Mbits however such does not give rise to exclusivity. We are limited in responding in further detail on this as a trade association.

## **Backhaul**

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

A. 9. ALTO agrees with ComReg there are clear requirement for backhaul, exchange and cabinet co-location.

## **Reasons for requiring backhaul**

ALTO members experiences with LLU is that industry has been frustrated by eircom in the supply of fit-for-purpose backhaul for almost all of our various LLU services. This had led to the costly and time consuming activity of having to bring member owned fibres to the eircom exchanges requiring members to go through

the expense and disruption of digging up the local environment. This has delayed the establishment of competition and has set high barriers to entry. Only recently after some ten years have viable solutions been made available. This remark will come as no surprise to ComReg at this time, given that the regulator has been in place right throughout this particular process.

## **Market 5**

**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.**

A. 10. ALTO generally agrees with ComReg's technical assessment except Sub-Loop Unbundling still offers more functionality and control including the ability to implement new technologies at the operator's choice and higher speed bonded services etc.

With regards to the Market 5 obligations we consider they fall short of the proven list of *ex ante* regulatory remedies as below.

1. Equivalence – We are of the strong view that all aspects of the Market 5 service should be equivalent including but not limited to the service offering, performance, order gateway, assurance gateway, pricing and terms and conditions. This is sought as this is a new service and the opportunity exists to achieve the same or similar functions as Eircom with similar efficiencies.
2. In our view the standard set of regulatory obligations are necessary.
3. We fully support the initiative to support the co-location of other operators in eircom exchanges to connect to the NGN/NGA node for VUA. We also note

that eircom in the updated Access Reference Offer – ARO, known as ARO 2 gives eircom the ability to terminate LLU co-location in the event of de-regulation. Given eircom's record of behaviour with LLU as demonstrated on the ComReg website, we consider that Virtual Unbundled Access – VUA, access Co-Location must be mandated in its own right to ensure efficiencies of access that are possible can be maintained or achieved. Separately, such is also required where VUA access is deployed in Co-Locations not previously used for LLU.

**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.**

A. 11. ALTO agrees with ComReg's conclusion on the need to mandate *ex ante* the provision of backhaul services and facilities for WBA. ALTO supports this position for the following reasons:

- It is not always viable to provide our own backhaul to an exchange due to the extent of civil engineering work and other access issues.
- Most NGN/NGA nodes will be at the serving exchange however where this is not the case we will require eircom to backhaul the traffic to the remote serving node.

### **Access Obligations in the Wholesale Physical Access Market**

**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.**

A. 12. ALTO members share considerable concerns relating to the current proposal for five years notice for the closure of an MDF site. We note approval from ComReg will be required before any such notice can be issued, however no detail is provided as to the tests that must be passed prior to such a decision.

ALTO also notes that the current eircom NGA proposal is based on the use of the traditional voice platform hence the existing MDF and infrastructure would appear to feature in eircom plans for NGA at least for the medium term. Our view on the test required should include but not be limited to:

1. A public consultation at the time prior to the approval to close an MDF site so that the concerns of all are considered;
2. Demonstrable evidence that the market has effectively migrated to new platforms and the existing services are at a point of end of life;
3. Compensation for other parties whose investments and business maybe damaged by such an initiative.

### **Access to Eircom Operational Support Systems (OSS)**

ALTO support ComReg's view as expressed in clause 7.23 as extracted below as follows:

*“Therefore, eircom must ensure that any of its future IT developments evolve such that both eircom's downstream arms and OAOs have the ability to access OSS in exactly the same manner. “*

In our view this will assist others to compete more fairly with eircom, however we are hugely disappointed to learn eircom network solution does not appear fully

equivalent, hence our perception is one step forward and two steps backward. ComReg should now mandate Functional Separation and full Equivalence of Input for NGA access.

### **Service Level Agreements – SLAs**

ALTO believes that it is helpful that ComReg are mandating that eircom must negotiate legally binding SLAs, however we consider that following the impasse reached over event based SLAs for services in the Terminating Segments of Leased lines market, there is now a need for ComReg to include an automatic obligation to determine if agreement cannot be reached. We consider it reasonable eircom should adopt “*best practice*” SLAs but cannot see how agreement of such can be achieved without ComReg intervention.

**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 WPNIA market (Market 4)? Please provide reasons for your response.**

A. 13. ALTO supports a fair and proportionate Migration process that does not unduly have the impact of not incentivising the use of current generation services, e.g., by removing the migration transaction fee (by bundling into the rental) is not available in other services such as LLU. Please also see answer to question 33.

### **Non Discrimination, EOI and EOO**

**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.**

A. 14. ALTO makes the following comments:

### **EOI and EOO**

ALTO welcome ComReg's proposal to strengthen its approach to regulating non-discrimination and agree there are examples where corrective action has been required. The introduction of these principles will assist the realisation of a fairer competitive environment that is good for investment and customers. Further, it is also good for the new NGA environment and new deployments the preference should always be EOI and as such should be designed in from the start without the need for costly retrofitting or retrospective manipulation.

### **Statement of Difference**

As explained by ALTO in numerous earlier consultations the non-discrimination obligation does not operate properly without strong transparency regulation as there is both an ability and motive for SMP operators to keep non-discrimination issues secret. ALTO welcomes the ComReg proposal in Clauses 8.6c, 8.6d and 8.6e. ALTO notes an earlier regulatory remedy of this nature merely resulted in high level outline information responses saying virtually nothing. As they say, 'the devil is in the detail' and we agree clause 8.6d is clearly required to support 8.6c.

### **KPIs**

This was a welcome initiative at the time to highlight potential discrimination in service provision and assurance performance. We are observing a shift in eircom Wholesale's trading behaviour now, more towards favouring Wholesale solutions and ALTO considers that this should now be identified as a separate downstream market for the purposes of KPIs; there is a genuine risk any discrimination between

downstream wholesale solutions and upstream wholesale regulatory access products is being masked in the same category.

Ideally, eircom should simply be required to provide KPIs on a per provider basis with the providers name kept confidential other than to ComReg.

## **Transparency Obligation**

**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.**

A. 15. ALTO makes the following comments:

### **Transparency obligations**

ALTO agrees with the proposed transparency obligation and as our response to question 14 and we welcome the proposal in 9.5g for eircom to publish sufficient information on their website to identify and justify differences. We comment however, though that unfortunately, the devil is in the detail hence this will only be effective if adequate detail is provided.

### **Notification of Non-price information**

ALTO welcomes the proposal for six months prior public notice prior to new Next Generation, WPNIA and WBA services and facilities coming into effect.

However, ALTO considers a two month notification for changes to existing services as wholly insufficient in the majority of cases and would suggest the proposal



should be *'sufficient time (enables the obligation to be consistent with Competition law) but not less than 'x' months'*. We suggest this, as, for example, if eircom was to significantly alter a technical solution or process it will more than likely take longer than two months to assess the systems and network impacts; obtain or re-allocate resource; design and build and importantly carry out appropriate integration testing, etc.

Without prior knowledge three months is actually too risky and notifications without industry having reasonable prior knowledge should be not less than six months.

### **Transparency for network development and rollout**

ALTO agrees with the need for transparency of NGA rollout information to enable other operators to reach the same potential markets as eircom downstream services.

We also make the observation that eircom should be able to provide similar cabinet information to potential Sub-Loop Unbundling providers as they are clearly providing for themselves.

### **NGA in the Home – Home Wiring**

**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.**

A. 16. ALTO suggests that a significant competitive concern with home wiring is the coordination of technician resources to carry out the installation of it. If the Incumbent were to avail of its own technical resource to both jumper the

connection at the cabinet and then install the new NTU in the customer premises this could easily be achieved in one installation visit, as eircom has access to both facilities. However, other operators technicians are not permitted access to the cabinet, meaning that two separate installation visits are required with the additional expense such entails. This is further exacerbated if the incumbent's retail division is then able to use the eircom Wholesale engineer to install the customer equipment.

In Belgium, a process known as Open Calendar and Certified Technicians allows the technicians of Alternative Operators to provision lines including VDSL2 equipped lines.

ALTO welcomes that eircom Wholesale are planning to offer options for the technician activities including both the jumpering and the NTU install, however, there is no clarity as to how they will be supporting their downstream retail arm activities beyond the NTU and whether similar will be offered to other operators.

## **VoIP**

**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.**

A. 17. Deployment in the Network:

ALTO does not accept the eircom position that the barriers in Ireland for deploying VoIP are low. The deployment of carrier class VoIP switches includes a

considerable amount of cost and activity to integrate with existing technology, billing systems, etc.

There are numerous other reasons for this especially if an operator wants to compete with Plain Old Telephone Services - POTS:

1. Interconnect is still required;
2. Numbers are still required i.e., number ranges from ComReg;
3. Geographic Number Portability – GNP, costs charged by operators;
4. Class of Service – CoS, comes at an extra cost – to ensure voice gets priority over generic broadband and data;
5. Equipment cost i.e., splitters;
6. Engineer install costs in the both business and residential sectors;
7. 95th percentile costs re. traffic.

ALTO also notes that voice providers have regulatory obligations to support 112/999 access services and various other regulatory and legal requirements that raise the standard and cost.

### **Within the Customer Premises**

The delivery of VoIP services to the customer premises, in particular the consumer market is problematic as the Voice service will be delivered through the customer's modem acting as an Analogue Terminal Adaptor rather than just coming down the wires in its current form.

In many situations the customers internal telephone extension wiring will have to be modified and the phone service will stop if the modem is switched off. Issues such as the current location of the Network Terminating Unit - NTU, the closeness of mains power to the NTU and the poor aesthetics of several items of equipment

in places such as entrance hallways are problematic and should not be underestimated.

## **Price Controls**

**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.**

### **A. 18. Part A – WPNIA**

ALTO generally agrees that ComReg should continue the current cost orientation price controls in the WPNIA market and makes the following comments:

#### **Cost Orientation Pricing**

- The proposed cost orientation approach has been in place over several years and appears to work in practice, however it is of concern that ComReg only sets the ceiling implying eircom maybe trading above the cost orientation value. ALTO believes that ComReg should review the pricing to ensure efficiencies gained by eircom are passed through to its customers.
- The cost BU-LRAIC cost orientation models developed by ComReg align with international practice in many other EU countries as demonstrated by ComReg its LLU Costing Methodologies Consultation.
- The European Commission NGA Recommendation (Recital 32) advises the cost orientation approach.
- However, ALTO is concerned that 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.

- Impact on Line Share and Traditional Bitstream Pricing
- Whilst maintaining our view the Retail Price should not impact the upstream cost orientated price, we consider LLU is overpriced and there should be scope to reduce its underlying cost both through redefining the exchange areas and Eircom passing to the industry the benefits of its numerous cost savings initiatives. We consider it should be possible to reduce the cost of the Sub-Loop component and for this reduction to 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.

### **Margin Squeeze Test SLU to VUA**

- ALTO agrees that a margin squeeze test is required, as the incumbent will have both the ability and motive to margin and functionally squeeze other access seekers in favour their own downstream solutions.

In conclusion ALTO agrees with applying a cost orientation obligation in the WPNIA market. Additionally we consider there is scope to reduce the Sub-Loop component price but such must apply to all downstream services including WLR, LLU and Standalone NGA.

### **A. 18. Part B – We consider the appropriate solution to the retail to wholesale price controls are as follows:**

- Applying a Retail minus price control to establish the economic space between the retail price and wholesale price. This meets the ComReg objective of giving eircom the freedom to manage their retail pricing. Separately, a Margin 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 suggests that this floor should be set at the cost plus price as eircom is not allowed to trade below cost and all should benefit from the WACC.

#### **Price Control for Wholesale Infrastructure Market (Market 4)**

**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.**

ALTO is glad that ComReg has identified in Clause 11.79 that less costs are to be recovered in VUA, as Sub-Loops are a lot shorter. This will have an impact on the price of LLU due to the interrelationship proposed by ComReg of LLU and VUA pricing in this consultation (Clause 11.82).

Clause 11.84 outlines on what basis that LLU pricing was determined, however, with a consultation, 12/63 consulting on this basic premise i.e. removing the Large Exchange Area from correlation to exchanges with greater than 2,500 to a list of 4 requirements, which gives a variance to the Larger Exchange Area and potential reducing down the number of exchanges included in this area.

ALTO agrees with the proposal that eircom's ducts and trenches have been depreciated and unless eircom is installing new ducts and trenches the cost of ducts is a depreciate or nil value.

ALTO believes that it is very important that a pricing methodologies review takes place for LLU and SLU. Factors being considered not only in this consultation but also Consultation 63/12 require such a consultation and sooner rather than later as the market is moving very swiftly.

ALTO agrees that if eircom reduce the SLU charge than there must be a corresponding reduction in the LLU price. However, it is necessary to now have a pricing methodology review for SLU and LLU pricing.

ALTO agrees that all eircom are required to do is just remove copper price and insert fibre price in the LLU cost stack i.e., unbundled fibre cost.

ALTO agrees with Clause 11.23 that where infrastructure is being reused such as ducts and trenches then historical costs should be used including anything that has fully depreciated should have a zero value associated with it. This would prevent over recovery of costs.

ALTO believe that the copper fibre link should be maintained for a period of 5 years or until 75% customer penetration in the exchanges within the final NGA footprint have been upgraded to using NGA.

**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.**

A.20. ALTO does not agree that 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.

The reasons for our comment are as follows:

- eircom has not yet deployed a commercial NGA network, hence it faces at least three years (the time it has stated it will take to reach a million premises) of considerable new capital investment costs as well as maintenance costs of the new network.
- Eircom are proposing to offer the existing WLR Voice services as part of its NGA offering, hence the traditional voice platform is part of NGA. Simple logic means CGA, plus NGA must be more costly than just CGA.
- It is well documented Ireland was late to reach significant growth in broadband hence a significant part of the ADSL (including ADSL2+) deployment is as yet not even five years old and will not have exploited its useful working life. To strand non-depreciated assets will raise a financial cost to all concerned.
- SLU deployment uses the legacy copper network from the customer, including the entire relevant access infrastructure, up to and including the cabinet.
- A three-year eircom deployment plan suggests that the volume of customers will continue to consume CGA services for many years to come.

Regrettably, the situation in Ireland does not support the view in the short to medium term that NGA using SLU will attract much lower costs than the network costs of providing current generation services. ALTO's concern is that eircom will develop over-optimistic NGA volume projections to argue for a low NGA entry price and such will artificially distort the market in eircom's favour. ComReg must be alive to this strategy.

ALTO's view is that NGA costs, particularly in the early years, will be at a premium until the time arrives where the reduction in current generation volumes changes the cost base.



ALTO urges ComReg to carry out extensive and required sensitivity testing of any forecasts that eircom may provide and to take sounding from the wider industry as to whether such are realistic.

**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.**

A. 21. Overall ALTO considers that the HCA is appropriate and should be mandated in the context of civil engineering infrastructure as the copper already is in the duct and the cost of the civil works and the installation of copper has been recovered via LLU and WBA costs. 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.

### **Maintaining the Pricing Relationship Between NGA and CGA**

**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 NGA: should this period be and what triggers for a change should be considered? Please provide reasons for your response.**

A. 22. ALTO agrees that the link between copper (LLU) and fibre based (SLU) services should be maintained during the transition as one continues to be a physical component of the other.

Industry has invested heavily in LLU in Ireland, we consider that this investment has stimulated the growth of high-speed broadband services over recent years.

ALTO considers it just as reasonable to recover this investment, as eircom will clearly be seeking to recover its investment in NGA. The regulator has a major influence on this set of outcomes and ALTO believes that from our own experience eircom can drive NGA forward while the current market continues to thrive, and be competitive.

### **Price Control for the Bitstream Access Market (Known as WBA and Market 5)**

**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.**

A. 23. ALTO agrees with ComReg that a price control must be established in the WBA market as eircom has both the opportunity and motive to squeeze upstream margins. We would add that since the publication of the consultation an operator has ordered Sub-Loop Unbundling from eircom.

ALTO's 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 (Reference: ComReg's retail bundles consultation).

ALTO therefore consider that a Margin Squeeze is also required to set absolute pricing floors to prevent a Margin Squeeze; however the price floor should be set at the cost plus price.

We comment that eircom as an operator designated with Significant Market Power – SMP, is simply not allowed to trade below cost hence in our view the floor price set by the Margin test should be the same as the cost plus price.

ALTO considers that the Weighted Average Cost of Capital – WACC, of 10.21% should raise the Margin Squeeze floor slightly for the following reasons:

- New entrant operators in the upstream market are considerably smaller than eircom and will experience reduced economies of scale, scope and externalities hence experience higher costs. The 10.21% added to the price floor will exasperate this imbalance.
- eircom are permitted by ComReg to avail of the 10.21% and to prevent entrants benefiting from the additional margin within the test would be discriminatory against the entrants.

In conclusion ALTO agrees with the application of a dual price control of retail minus allowing eircom to set the WBA price in relation to the retail price, and separately a margin squeeze test setting the WBA price floor at the cost plus level.

#### **Question 24**

ALTO notes that there is no question 24.

#### **Retail to Wholesale Price Controls including Margin Squeeze Tests**

**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.**

A. 25. ALTO's response to question 23 above on cost orientation in the WBA market provides our answer to the use of price control between the retail market and the WBA price. We also address the other issues raised by question 25 below.

- **Reliability of Margin Squeeze Tests** - ALTO notes that the proposed

margin squeeze test will be between the retail price, and the wholesale end-to-end price, both of which can be complicated and circumvented through bundles and comparing like with like. Hence, we are concerned at the ability of eircom to influence the outcome of these tests to their advantage when operators do not even know they are being conducted. We consider the industry should be asked for input when such will impact the market and fully agree with ComReg's views in Clause 11.172 to cross check the test with the regulated wholesale prices.

- **Margin Squeeze against Legacy Services** - ALTO welcomes ComReg's recognition in clause 11.162 that legacy copper based (also known as CGA services) "should not be squeezed by NGA services at least in the interim." We note 'Interim' is not defined and this is correct as eircom have not even launched a commercial NGA service yet and then they to take at least three years to achieve the initial rollout.
- **Infrastructure Competition** - We agree and support ComReg's continued preference for infrastructure-based competition as we have invested significantly and to change tack now would be hugely damaging to future investment decisions in the industry. The recently publicised debt problems at eircom also highlight the benefit to the country of having infrastructure competition.
- **Notifications, compliance with the Retail Margin Squeeze Tests –** ComReg proposes allowing eircom a year to offer a statement of compliance with Margin Squeeze tests, although ComReg will continue to monitor the compliance with the NGA Margin Squeeze Model. ALTO would suggest that as a safeguard, ComReg should include a clause in the proposed regulations that allows for the process to be triggered at ComReg's request.

**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.**

A. 26. ALTO does not agree with ComReg's preliminary views that "materiality" should mean the lower of either:

1. 20% of eircom's Next Generation retail customer base, in terms of subscriber numbers; or
2. 20,000 new retail subscribers for eircom's next generation services.

The reason for ALTO's position is that this type of clause is more suited to a mature market, where the definition of materiality is understood in terms of the impact of the market. NGA using the eircom network is nascent and we do not know what a material impact will be. Hence ALTO members are extremely concerned that this preliminary view could fetter ComReg's discretion entirely. As outlined in our response to Q. 30 if a figure must be mandated, then a 10% level would be more appropriate.

### **Wholesale Margin Squeeze Tests**

**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.**

A. 27. ALTO agrees with ComReg's preliminary views 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. eircom has both the ability and the motive to foreclose wholesale competition and ALTO believes that they are actively pressurising competition in this market. A margin squeeze test is required between regulated access products and end-to-end 'White-label' wholesale products. If this margin squeeze test does not emerge, the wholesale market in Ireland will be irreparably damaged by eircom squeezing out wholesale competitors. ALTO members also feel that statement of compliance obligations need to have a short time spans. This is to ensure that no market distortion takes place, or permits eircom to release a product, 1 day after statement of compliance and they then have another 12 months before next one due and this product needs to be reported or examined by ComReg.

**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.**

A. 28. ALTO agrees with the proposed margin squeeze test. However, ALTO wants to see hypothetical worked examples using costs known to members. This is to ensure that the offering yields a sufficient margin.

**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.**

A. 29. ALTO agrees with ComReg's preliminary views 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.

ALTO also agrees with the Similarly Efficient Operator – SEO, approach as entrants don't have the same scale or scope of eircom in Ireland, and such scale is highly unlikely in the foreseeable future.

ALTO agrees with the margin squeeze in principle but not to the 25% market share being outlined for a new market entrant. Though ALTO notes that this is the European standard unfortunately, Ireland's marketplace has such a low customer base i.e., 4 million (or 1.8 million homes) it is a different market place and has differing growth opportunities than our European counterparts. ComReg outlined at 11.238 that eircom has a 70% market share and thus, ALTO asks the question how can one other rival operator obtain a 25% market share when there are already numerous operators in the market?

ALTO does not agree with the intention outlined at Clause 11.258, which for NGA standalone broadband and a LRAIC plus model can be used. Though there may be little difference between LRAIC plus and ATC, it should be necessary not to allow eircom over recover or under sell and effectively squeeze a market sector, irrespective of the number of customers in the customer base.

ALTO refers to its answer at question 27, in relation to what is material, and the statement of compliance.

ALTO agrees with ComReg's use of discounted cash flow model.

**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.**

A. 30. ALTO agrees 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 10% of the eircom retail NGA customer base. It is possible to mask key product squeezes with a portfolio approach whilst maintaining compliance hence we support a product-by-product approach. As in our earlier responses, ALTO consider that the issue of materiality is not yet known in the nascent NGA market, and consider the 20% threshold could fetter ComReg's discretion. If such has to be mandated then a 10% level would be more appropriate.

**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.**

A. 31. ALTO's view is 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.

For example:

- WLR and Full unbundling;
- Line Share and current generation Bitstream as both use WLR as a component.

ComReg has already suggested in the consultation there is scope to reduce the Sub-Loop price and as ALTO has said on previous occasions, the price of LLU in Ireland is too high.



In ALTO's view the other solutions:

1. Create an artificial construction to unfairly assist Eircom whilst at the same time squeeze the investments made by other operators;
2. Cause a customer discrimination as customers in urban areas will avail of the same but less costly voice service to those in other areas;
3. Delay eircom's incentive to invest in modern technologies such a VoIP.

### **Co-Investment**

**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.**

A. 32. ALTO's view is that the options appear to suit different operators in different ways, for example, an aggregator may take a different view on volumes and risks compared to a retail provider. ALTO considers that the various options should be left available, or open for consideration and that any co-investment should comply with the Regulations and Competition Law.

### **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.**

A. 33. ALTO note a general unfairness and discrimination relating to the initial

direction of discussions and the arrangement to migrate to NGA in Ireland. ALTO remarks that it took several years of sustained industry and ComReg regulatory activity against eircom, for them to even support the concept of a seamless migration to LLU, and even at that the solution was at punitive and unjustified 'premium' pricing. Now, when eircom want to migrate their own customers to what is an LLU service i.e., LLU Sub-Loop Unbundling, they want to move as fast as possible with no transaction price, or consideration for the current generation products and services.

It is ALTO's view that the impact is that the absence of a transaction price, lowers barriers to switching from current services that have and continue to endure significant eircom switching costs. We say that this is clearly discriminatory. An example of this is the cost of sending an engineer to a cabinet, and then to the customer's premises, which is considerably higher than sending a technician to an exchange and NGA will get the **X** benefit (in excess of €100) from this proposal and LLU and other current generation services a lower **Y** benefit (€29 for a single pair and €15 per pair in a bulk migration). So, based on current prices, SLU Migration is priced at €139.00 + Cost of Works at €100.00 + LLU cease at €29.00 = €268.00 (or €233.00 when dealing in bulk migrations).

The migration of customers on existing services remains relatively small scale, when contemplated with eircom's proposed mass migration of hundreds of thousands of customers to NGA. Hence a huge and disproportionate benefit is being accrued by eircom.

ALTO does not agree to a different regime whereby migrations to NGA are free at the time of the transaction, whereas other services have to apply a charge at the time of transaction. The industry has only recently had to endure significant migration costs, and we say and do so strongly, that it is disproportionate and unreasonable for ComReg to allow or supervise in the process to eircom's benefit

in this way.

To date eircom has made downstream providers manage the cost of migrations. ALTO considers that the same model should continue, with the costs being managed in the downstream business. Hence, if eircom Retail want to offer free migrations, then the risk and cost of such an initiative should be taken in and accounted for within the their business models. Placing the Migration transaction cost in the upstream market hands a disproportionate and discriminatory benefit to eircom in the following ways:

- eircom Retail has the largest customer base (+56% - as opposed to fixed line at +/-70%) so accrue and stand to gain the greatest benefit.
- eircom Wholesale will over-recover the transaction costs, as all customers will pay this cost in their rental forever, even after it has been recovered. Hence, there is an argument that eircom will be overcharging its customers.
- The net effect being the squeezing of the entire Wholesale market by the moving of retail costs in to the Wholesale market (clearly this should be impermissible).

**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.**

A. 34 ALTO does not agree to a universal migration fee, because it would be disproportionate and discriminate against providers of current generation services for the following reasons:

- NGA migration is considerably more work and more expensive than LLU or Bitstream migrations;
- The volumes of NGA migrations will be considerably larger than the number of migrations between current generation services.

ALTO believes that a universal price will cause the price of CGA migrations to rise considerably to the NGA rate.

**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.**

A. 35. ALTO generally agrees with ComReg's preliminary views, as set out in the table in Figure 11 of the consultation, regarding the retail costs in the context of NGA, however ALTO considers that the following components should be added:

- Cost of Voice services – WLR and or VoIP;
- Service Assurance;
- Cost of White Label Wholesale Service which should include a proxy for interconnect and general network connectivity;
- Retail Equally Efficient Operator (EEO) testing.

**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.**

A. 36. ALTO does not agree an EEO approach should be applied in the case of some retail cost categories (e.g., advertising), where other larger network operators in Ireland are susceptible to similar economies of scope to that of eircom. eircom still enjoys the largest market share by far, and the shoots of competition are only beginning to emerge at this time. ALTO perceives this to be a de-regulatory argument from eircom and we make the following points:

1. eircom still holds a huge and disproportionate market share when compared to other providers and of course competition remains in its infancy. Forcing the EEO approach on to some retail cost categories simply acts to extinguish the genesis of competition. Only when eircom's retail share starts to be equivalent to others should this action be taken;
2. Most ALTO members, and other operators cannot avail of the advantages of scale and scope implied, hence this proposal acts to undermine the smaller players of which there are many;
3. Certain companies should be removed from the ComReg comparison as they are no longer operating in the consumer market and by comparison to the other operators' relatively small customer bases.

**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.**

A. 37. Please see our answer to question 36.

**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.**

A. 38. ALTO does not agree with ComReg's preliminary view that helpdesk costs for eircom (retail costs) in the context of NGA should be adjusted for the SEO unit cost scenario for the following reasons:

- The concept is incorrect, as you cannot be equivalent with yourself, and if you could, the model would have to be EEO;
- The proposal appears to be suggesting that eircom will not be able to capture its costs correctly. This is a deeply worrying development given these costs are (or are supposed to be) factored into the Margin Squeeze tests;
- ALTO expects eircom and ComReg to be applying sensitivity analysis to the volume forecasts as part of the underlying pricing and margin squeeze models;
- The SEO approach is not required, as it should be dealt with in the pricing model.

**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.**

A. 39. See answer to Q. 38 – In as much as it goes to address this 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.**

A.40. ALTO believes that the costing for IP connectivity is incomplete in its current form.

ALTO suggests that the IP costs must include:

1. costs of IP interconnection *simpliciter*;
2. costs of IP Interconnection to backhaul;
3. costs associated with interconnection to IP core;
4. costs allowed for IP transit; and
5. any allowed peering costs.

It may be the case that ComReg need to revisit this particular issue at a later time, perhaps in coordination with industry.

### **Writing off the cost of Modems**

**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.**

A. 41. eircom has informed industry it plans to deploy the technology known as vectoring when it becomes available in two years time. Given the strong possibility of eircom having to retrofit its existing installation of VDSL cabinet equipment and customer modems the depreciation should be:

- Circa 2 years if vectoring is to be deployed;
- Five years if vectoring is not deployed.

**Q. 42. What do you consider is a reasonable estimate of the likely installation costs involved with NGA services?**

A. 42. ALTO considers a reasonable estimate of the likely installation costs is in excess of 100 Euros as this is the current cost orientated charge eircom applies when an engineer visits the customer premises where no fault is located on the eircom network.

**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.**

A. 43. ALTO considers that all of the costs relating to retail multicast are as follows:

1. DSLAM cost;
2. Content cost/Transit costs;
3. Headend;
4. Encryption;
5. Encoder cards;
6. Satellites/Transponders;
7. Helpdesk.

Thus, the question should not be retail multicast, the question should be the cost of



providing IPTV. Thus, content is expensive and comes with a lot of obligations and costs. The next major cost is bandwidth usage costs and transit costs. A provider also requires the equipment to receive the channels, interpret them and to change them into IP, then to encrypt the channels and send them out. Also, each TV content provider requires unique encoder cards to receive each channel as each potentially comes in via different frequencies. Also, people are exceptionally sensitive to the loss of their TV packages. They are more understanding and tolerant if their telephone or broadband has a fault, but far less so with TV. Thus, helpdesk and someone on call 24/7/365 to repair TV faults is essential.

### **Cost stacks**

**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.**

A. 44. ALTO agrees with the proposed approach for determining the cost stack for end-to-end Next Generation Bitstream as such should align with the costs experienced by other operators. As such the cost should also include the QIB and PIB costs as well as any ancillary charges that apply.

### **Question 45**

We note there is no question 45.

**Q. 46. Do you agree with the proposed approach for determining the cost stack for NGA Bitstream? Please provide reasons for your response.**

A. 46. ALTO generally agrees with the proposed approach for determining the cost stack for NGA Bitstream as it aligns with the components consumed. However we comment that:

- ALTO considers the backhaul charge should be carefully compared to the costs experienced by other providers as the physical connection arrangement for Bitstream plus is different to the VUA connection arrangement. In our view eircom will be able to avail of shared network services in the same transmission and will gain increased efficiencies over other operators. We consider a weighting should be applied for this additional benefit.

## **Multicast**

**Q. 47. What are your views regarding the parameters for determining the relevant costs for a Multicast service. Please provide reasons for your response.**

A. 47. ALTO considers the costs for the multicast service should include:

- WEIL or virtual path cost
- Cost of the Multicast server and associated service elements
- Backhaul costs
- Service management costs

Given the potential for the multicast service to be at a very low price if treated as an incremental cost there is a potential requirement that it should be sold as a service in its own right with the unicast service.

**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.**

A. 48. ALTO generally agrees with the approach for determining the cost stack for the VUA product in the WBA market, but would add the following comments:

1. To definitely include co-location costs within the exchange as these are considerable for LLU providers; and
2. To remove the migration costs as these should be taken-up for consideration at the retail layer.

**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.**

A. 49. ALTO suggests that in the medium term we tend to agree that the 95:5 probability weighting factor should be included for determining the costs of VUA, however, it is expected NGA will replace current broadband and the roll-out will ultimately be wider than LLU.

**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.**

A. 50. ALTO believes that the price for VUA should increase, where Multicast services are provided and be the same as the cost element included for Multicast in the context of NGA Bitstream. The only exception to this agreement is we would

not agree to cost be loaded into the access.

**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.**

A. 51. ALTO considers that the price of repair should be factored into the rental of LLU for fairness and to provide the correct incentives for first time every time repair.

**Q. 52. Do you agree with the proposed outputs from the NGA Margin Squeeze Model? Please provide reasons for your response.**

A. 52. ALTO agrees that it is necessary to include the cost of quality of service (class of service) i.e., multicast and voice, which are two services that require a higher class of service as they need guarantee packet delivery. If these services degrade or have any slight delay in transmission, it is noticed by customers who will invariably not be happy with the service and will seek to churn to either the traditional POTS or to an alternative provider such as cable, where available.

**Q. 53. Do you agree that the proposed price control period should be for at least three years in the context of NGA services in the WPNIA and WBA markets? Please provide reasons for your response.**

A. 53. ALTO states that as there is huge uncertainty around eircom's deployment of NGA and we believe this will continue. Setting a three-year price control system in a market that is not yet launched, and where the principal player has recently

experienced huge debt restructuring appears inflexible to events. Our view is ComReg should as a minimum create one-year review windows in case of the need to adjust.

### **Decision Notice Text**

**Q. 54. Do you believe that the draft text of the proposed Decision Instrument is from a legal, technical and practical perspective, sufficiently detailed, clear and precise with regards to the specifics proposed? Please explain your response and provide details of any specific amendments you believe are required.**

A. 54. ALTO believes that the NGA footprint definition is too prescriptive and should be amended to be more fluid and flexible, to allow change to happen.

ALTO feels that protracted negotiations may take place around the implementation of SLA and thus, would recommend that Clause 7.2(ii) outlines a time line for SLA negotiations that if a SLA is not agreed within 3 months of this decision, ComReg will intervene and publish a SLA. By ComReg allowing SLA negotiations to become protracted that means that the service will suffer and customers will not wish to upgrade to NGA due to the poor quality of service.

ALTO suggests the following amendments to the Decision text:

### **Reference Draft Decision Instrument – WPNIA, Definitions, NGA Footprint Area and Non-NGA Footprint Areas.**

ALTO considers that the greater than 1800 Exchange Lines definition used to

define an NGA footprint to be too low and that ComReg should align the definition with the current LLU greater than 2500 Exchange Line analysis as this figure is a more realistic lower boundary. ComReg themselves have stated that most LLU operators have only deployed to the greater than 4000 exchange line exchanges suggesting that greater than 2500 lines is appropriate for NGA. ComReg in its Consultation Ref. 12/63 also state that other operators have rolled out in greater than 4000 line exchange areas, supporting the contention that the 1800 Exchange Line definition is incorrect.

**Reference Draft Decision Instrument – WPNIA, Section 4 Options A and B.**

ALTO is firmly of the view that Sub-Loop obligations should continue as they are today and commercial viability will essentially determine exclusivity as the viability of a second (and or subsequent) operator is significantly reduced.

**Reference Draft Decision instrument – WPNIA, Section 4. Clause 4.5**

ALTO strongly disagrees with ComReg setting a single migration charge that applies for both CGA and NGA services. This proposal is highly discriminatory based on current generation services as it will ratchet their costs up as NGA migrations will be in excess of €233, whereas CGA Migrations are already only €29 per line and €15 per bulk transfer line. If eircom were to progress their roll out, the number of NGA migrations will increase and the average price will rise increasing the cross subsidisation effect. ALTO's view is that NGA services should recover their own costs and these costs should be passed on to the retail provider to manage (depending on the operating model). ALTO considers that a universal charge approach breaches numerous regulatory principles and could be appealable.

**Reference Draft Decision Instrument – WPNIA, Section 7, Clause 7.2(iii)**

Eircom should publish a new schedule to the Access Reference Offer – ARO, to provide a Duct Access Offer – DAO, as the details of the offer eircom claims that they have already made are not of sufficient detail to be of use to the market.

**Reference Draft Decision Instrument – WPNIA, Section 7, Clause 7.2(iii)**

Given the recent impasse in industry relating to Service Level Agreements – SLAs, related specifically to Terminating Trunk Segments of Leased Lines, ALTO proposes that ComReg should augment the remedy proposed in order to resolve the SLA dispute. The current dispute processing being too onerous and time consuming, thus ComReg can use the remedy available via this decision, to resolve the dispute.

**Reference Draft Decision Instrument – WPNIA, Section 8, Clause 8.5**

ALTO proposes a minor but not insignificant change to the text therein. In Competition terms downstream providers should be provided with information in sufficient time to deploy equivalence downstream services to those of eircom. ALTO therefore suggests that the decision be changed from: ‘seven months prior to any offer’, to ‘**at least** seven months prior to any offer’, as this will prevent regulation contradicting any necessary *ex ante* or *ex post* measures that may arise.

**Q. 55. Do you believe that the draft text of the proposed Decision Instrument is from a legal, technical and practical perspective, sufficiently detailed, clear and precise with regards to the specifics proposed? Please explain your response and provide details of any specific amendments you believe are**

**required.**

A. 55. ALTO also believes that 'multicast' should be defined on its own rather than "Multicast Service for Next Generation WBA". Though the definition of 'multicast' itself is acceptable.

ALTO further feels that protracted negotiations may take place around the implementation of SLA and thus, would recommend that Clause 7.2(ii) should outline a time line for SLA negotiations and that if a SLA is not agreed within 3 months of this decision, ComReg will intervene and publish a SLA.

ALTO agrees in principle with the proposed Decision subject to the following amendments:

**Reference Draft Decision Instrument – WBA, Definitions, NGA Footprint Area and Non-NGA Footprint Area.**

ALTO considers that the greater than 1800 Exchange Lines definition used to define an NGA footprint to be too low and that ComReg should align the definition with the current LLU greater than 2500 Exchange Line analysis as this figure is a more realistic lower boundary. ComReg themselves have stated that most LLU operators have only deployed to the greater than 4000 exchange line exchanges suggesting that greater than 2500 lines is appropriate for NGA. ComReg in its Consultation Ref. 12/63 also state that other operators have rolled out in greater than 4000 line exchange areas, supporting the contention that the 1800 Exchange Line definition is incorrect.

**Reference Draft Decision Instrument – WBA, Section 6, Clause 6.2**



ALTO considers that ComReg need to carefully consider a couple of services, which are as follows:

1. Where a cabinet is not served by the local exchange, eircom should be required to formally Offer an extension service to offer VUA connectivity from the nearest NGA node exchange;
2. The provision of stand-alone multicast services are clearly required as more than one ALTO member has already requested same, and others seek similar.

### **Reference Draft Decision Instrument – WBA, Section 7, Clause 7.2 (iii)**

Given the recent impasse in industry relating to Service Level Agreements – SLAs, related specifically to Terminating Trunk Segments of Leased Lines, ALTO proposes that ComReg should augment the remedy proposed in order to resolve the SLA dispute. The current dispute processing being too onerous and time consuming, thus ComReg can use the remedy available via this decision, to resolve the dispute.

### **Reference Draft Decision Instrument – WBA, Section 9, Clause 9.3**

ALTO proposes a minor but not insignificant change to the text therein. In Competition terms downstream providers should be provided with information in sufficient time to deploy equivalence downstream services to those of eircom. ALTO therefore suggests that the decision be changed from: ‘seven months prior to any offer’, to ‘**at least** seven months prior to any offer’, as this will prevent regulation contradicting any necessary *ex ante* or *ex post* measures that may arise.

### **Supplementary Comment**

In answer to Q. 28, above, ALTO requests that ComReg make available hypothetical pricing and margin squeeze test models in order that the industry know precisely on what basis and against which components it must compete.

ALTO suggests that Annex 4. of the present Consultation, which contains a useful product/service component grid should have another column entered on the right-hand-side of the grid and it should contain the various voice market elements/components therein. We request that ComReg generate this, in order to assist the industry with decision making and aspects of cause and effect, or condition/action, that may arise as a result of regulatory decisions, and in particular those that may effect or contain the CGA voice component.

Finally, ALTO remarks that the industry and ComReg now work with a number of price and margin squeeze test models (in or around 8 in number). As the debate relating to NGA continues, and indeed the various CGA products continue to be augmented invested in and changed, we would call on ComReg to focus its regulatory economics and finance teams on providing the industry with the regulatory transparency that ComReg is capable of providing to the extent it can, relating to those various models and formulae.

**ALTO endorses and associates itself with any NGA Consultation response received by ComReg from ECTA, acting as ALTO's EU partner and representative grouping during this process.**

**Ronan Lupton**

**Chairperson**

**ALTO**

**13<sup>th</sup> July 2012**

Submissions to Consultation Document No. 12/27

ComReg 12/97

Submissions to Consultation Document No. 12/27

## **2 BT Communications Ireland Limited**



## **BT Communications Ireland Ltd (“BT”) Response to the ComReg Consultation:**

### **Next Generation Access (‘NGA’): Proposed Remedies for Next Generation Access Markets**

Issue 1 - 13th July 2012

#### **1.0 Introduction**

We welcome this momentous consultation concerning the implementation of regulatory remedies for Next Generation Access (NGA) and appreciate the potential impact the final outcome of this process may bring, however such also carry’s risk to the commercial viability to some sectors of the communications industry. At a time when many people across Europe and Ireland are suffering from the wider poor financial decisions of recent times, we consider the key focus of this consultation should be to ensure a measured approach to encourage innovation and investment on a sustainable basis whilst ensuring current industry sources of revenue required to fund this upgrade are managed responsibly.

Ireland has struggled to achieve a fully competitive fixed telecoms market as demonstrated in the quarterly ComReg reports where the incumbent has maintained an entrenched high market share. Only recently have there been initial signs of the market opening further and it would be a lost opportunity if this consultation process were to stifle competition before it becomes established. Competition in Ireland will bring investment creating sustainable and skilled Irish jobs (in other communication providers and supporting companies as well as Eircom) and competitive pricing to benefit consumer and business customers.

#### **2.0 Executive Summary**

We welcome the evolution of Next Generation Access (NGA) Services which like the transition from dial-up internet to Broadband should open the door to incredible new services and on-line experiences compared with today. Ireland is a hub for state-of-the -

art technology and innovation and it must keep ahead of the curve to remain competitive.

We consider an appropriate regulatory regime will facilitate competition to stimulate investment and jobs and we summarise our key views below.

Pricing – Whilst the consultation largely addresses the pricing framework we consider the combined WLR and NGA services need further work and we agree with ComReg publishing the supplementary consultation (ComReg Ref. 12/63). Only when the standalone NGA and combined NGA/voice issues are taken in the whole will the way forward be clear.

Migrations have been the source of considerable frustration over the years through the struggle to attain migrations for LLU. Sadly the issue appears to continue and we cannot agree with either the proposal from Eircom or ComReg. ✗. The ComReg proposal of a universal charge effectively causes CGA services to cross subsidise NGA migrations and we consider this breaks various regulatory principles including cost causation and proportionality.

Sub Loop Unbundling has raised much debate within the industry in Ireland particularly concerning technical exclusivity. We view the 1<sup>st</sup> mover advantage as more important in determining exclusivity in Sub-Loop unbundling as the commercial viability of a second entrant is significantly degraded at the same cabinet location. We consider Sub-Loop unbundling should continue to be a regulatory obligation in Ireland.

Transition Period – Eircom has not yet launched their NGA service and in our view uncertainty remains as to whether Eircom has the ability to rapidly roll out an NGA platform. We therefore consider ComReg should postpone any discussion of transition periods until a material NGA deployment has been undertaken as the issues at that point may be very different to the issues we are facing today.

Equivalence and Functional Separation – ✗. We consider the time has come for Functional Separation of Access and ComReg should seize the opportunity to push this remedy for NGA services. In the interim strict equivalence should be a mandated given that NGA is new and Eircom were aware of the Equivalence rules from the outset and such will facilitate competition.

Reviews – NGA is a major development and significant competition issues could emerge hence we suggest ComReg should ensure it maintains the greatest regulatory flexibility to intervene at short notice.

### 3.0 Structure of our response

1. Introduction
2. Executive Summary
3. Structure of Our Response

4. Summary of the Key Issues
5. BT response to the detailed ComReg questions

## 4. Summary of the Key Issues

### 4.1 Pricing - Review of the Pricing Stack and Margin Squeeze framework.

#### 4.1.1 Introduction and Retail Bundles Supplementary Consultation

The most critical aspect of this consultation is the relationships of the various prices within both the Current Generation Access (CGA) and Next Generation Access (NGA) pricing stacks and the interrelation between the two stacks. We have found it difficult to reconcile the voice pricing proposals with current services and we welcome that ComReg has recently published a Supplementary Consultation (Ref. 12/63) to the Retail Bundles Consultation (Ref. 11/72) which in our view has a direct relationship with the issues being addressed in this consultation, particularly the issues with how to deal with WLR voice pricing.

As the supplementary consultation is very recent we have not yet had time to analyse in depth and we will provide our considered response when required (10<sup>th</sup> August), however it does appear to be trying to address some of the issues we were having difficulty in reconciling. We now consider this NGA consultation focuses more on the standalone NGA issues and we link our discussions on WLR pricing with the Supplementary Consultation.

#### 4.1.2 NGA Retail Pricing Established

Within Ireland the Cable Operator UPC has invested in NGA services over recent years and is now first to market in selling mature NGA triple play services establishing a retail price for such.

Eircom have stated it will take three years for its NGA roll-out to pass the first 1 million premises and such a long timeframe suggests a pricing approach that does not cannibalise the current generation market. We see this consultation establishing a pricing environment to serve the customer and the communications industry as a whole rather than simply benefiting Eircom.

#### 4. 1.3 WLR (Voice) Price Discrimination

Other than the obvious that Eircom has not yet launched an NGA service, we perceive a key problem facing users of the Eircom Wholesale platform is that it's expensive for deploying competitive NGA solutions against the UPC offer. The majority of the cost is in

the provision of voice services where Wholesale Line Rental is priced at €18.02exVat, and proposals to reduce this price need to be fair to all parties.

✂

We fully support the principle of what ComReg has tried to do, however we believe the ComReg NGA pricing solution described in this consultation when linked to WLR services potentially causes other issues such as having to bundle WLR and Broadband at the wholesale layer which is problematic for customer switching. We note subsequent to this consultation ComReg has issued a Supplementary Consultation (Ref ComReg 12/63) to its Retail Bundles Consultation (Ref 11/72) which appears to be attempting to define different trading areas (in our view similar akin to sub-geographic markets) to reduce pricing regulation in certain locations i.e. where Cable, LLU (Sub Loop) based retail services and Eircom all compete.

Although we have not yet considered the supplementary consultation in detail we are of the view that Eircom should not be able to discriminate at the access and wholesale layers to prevent or restrict others using Eircom wholesale and access platforms to derive their own competitive retail services.

#### 4.1.4 Pricing Stack and Margin Tests

The pricing framework proposed by ComReg is dependent on numerous price controls which establish the economic spaces between the various layers, Access, Wholesale and Retail; and for products within those layers. In principle we agree with this approach although we do have material comments. We offer the following general comments with the detail provided in the responses to the questions.

- a. Notification and Margin Testing – We welcome ComReg’s proposal to monitor developments on NGA services however the wording around intervention needs to be strengthened otherwise there is a risk issues will not be addressed until the annual statement of compliance is provided by Eircom, by which time the markets could be damaged.
- b. Review and remedy – This is one of the most complex consultations of recent years including a new regulatory framework, numerous complex price controls and a service not even launched. [We note ComReg has subsequently published another consultation which attempts to address NGA/voice combined product pricing issues.] The risk of a material error is high and we would propose ComReg ensure there is an ability within the remedies to rapidly address material issues as they occur.
- c. Retail to Wholesale Margin Test – We propose a modification to the Margin Test proposed to prevent the Retail Minus price floor being set below the cost plus price. This supports the pricing freedom sought by ComReg but prevents the situation of below cost trading which raises other regulatory and legal issues and would be damaging to the industry. We are seeking the ‘plus’ element is added to



the floor as this benefit is afforded to Eircom hence on the principle of non-discrimination such should be afforded to Eircom's competitors.

#### 4.1.5 Migrations

We understand Eircom is considering moving customers to NGA for no migration fee at the time of the transfer (recovering the transaction charge through the wholesale rental price over time). This approach effectively moves the cost of migrating customer from the retail market to the wholesale market and we have the following concerns.

BT does not agree with the Eircom proposal to recover migration through Wholesale rental pricing as such is discriminatory against current generation products, ✕

We also note ComReg are proposing a universal migration charge for all migrations including to NGA and CGA. We have estimated the migration cost in question 34 and conclude 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. We therefore consider this proposal is a ✕ discrimination against CGA products and effectively mean they will cross subsidise NGA migrations. ✕

Additionally, the larger the number of migrations the average price will become and thus the greater the cross subsidy. As Eircom Retail has the largest customer base they will take the greatest benefit.

#### 4.1.6 CGA to NGA Transition Period

We consider there is uncertainty around the Eircom's ability to invest in a rapid NGA roll-out hence it's not yet clear the market will rapidly migrate to NGA. We therefore consider ComReg should commence the review for a transition period once a demonstrable change is well underway.

We would recommend given the current deployment uncertainty ComReg signpost it will review progress in two years' time and consult at that time concerning transition periods.

The consultation proposes the incumbent must give at least 5 years notice to close MDF sites (i.e. closing an exchange to LLU) following ComReg approval. However, the consultation does not explain either the process or the test before ComReg will give such an approval. Given the difficult history of the LLU product in Ireland we consider a set of checks must be passed prior to ComReg giving any approval. As a minimum,

ComReg should include a public consultation to understand the impact on the LLU providers, to hear their concerns, to establish a compensation regime etc.

#### 4.1.7 Sub-loop Unbundling – Maintaining an environment for operator investment

##### VDSL2, Vectoring and Exclusivity

A popular approach to roll-out NGA is to install high speed VDSL(2) modems in the street cabinet and drive data rates up to 80Mbit/s and possibly higher over the short copper access tail from the cabinet to the customer premises (known as the D-side network). In technical and physical terms the solution planned by Eircom serving customers from the cabinet uses the LLU Sub-Loop Unbundling product service in Ireland.

In September 2011 Eircom announced it was going to deploy a new technology in its NGA VDSL solution known 'Vectoring' which is a crosstalk noise reducing technology reported to increase the line rate when speed becomes limited by self-crosstalk due to the effects of other VDSL2 modems in the same cable binder. However, Eircom also explained 'Vectoring' may require the supply of VDSL2 from the cabinet to be exclusive to one supplier which is potentially exclusionary.

We acknowledge ComReg's concern to benefit the consumer whilst maintaining competition in access. ✕. The failure to achieve functional separation makes it imperative that physical access solutions are available to minimise issues around non-equivalence and discrimination.

Given the current investment environment, the decision as to whether to remove or modify the sub-loop obligations in Ireland is significant as such could stifle future competition and the growth of NGA.

We would like to make the following points to highlight our views.

- a. As above, it is important to note functional separation has not been achieved in Ireland ✕. In our view the Eircom Reform Programme appears to be aimed at operators buying end-to-end wholesale solutions rather than regulatory component or access products so little has changed. These environmental issues make Sub-Loop Unbundling critical for competitive NGA deployment by other operators in Ireland.
- b. 1<sup>st</sup> mover advantage - The economic case for sub-loop unbundling for traditional broadband is difficult as the maximum market reached by a cabinet is approximately 250 residential and business customers and a significant take-up is required to make the investment viable. However, the NGA case is slightly different as very high speed VDSL services cannot be substituted by

Exchange based DSL services and FTTH is problematic to deploy at this time, hence there appears to be a commercial 1<sup>st</sup> mover advantage. 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.

We therefore consider there is no need to remove the Sub-Loop Unbundling obligation for Eircom to provide Sub loop Unbundling on a national basis.

- c. ✂. We also note that there is no published Duct Reference Offer from Eircom and ComReg need to address this matter to support the availability of Sub-Loop Unbundling.
- d. We were surprised to see a discussion within Option C that even though another provider had used Sub-loop unbundling to deploy an NGA solution, Eircom could then give notice for that provider to be removed following a consultation. We strongly object to this as such destroys the incentive for any other operator to invest in Ireland and it is highly discriminatory against competition.
- e. The timing of Vectoring deployment – We are aware that one equipment vendor is potentially ahead of the industry by about a year and should Eircom's decision be to go with that vendor we are minded that Eircom's deployment will be subject to a single vendor 1<sup>st</sup> to market solution with the associated risks such a strategy brings. ComReg will also need to ensure such does not cause a restriction or reduced services for other vendor CPE equipment in Ireland.
- f. We note ComReg suggest for Option C that Eircom could force the removal of another provider that has already used Sub-Loop unbundling to provide NGA services. We do not agree with this approach and it should not be adopted or applied to any of the other options, the general conditions, or the existing rules.

In conclusion we are of the view the none of the options are correct and the existing regulation should remain and the economics of the market will decide.

#### 4.1.8 Equivalence and Intermediate Wholesale Market.

✂

In our view regulation is required more than ever to ensure and maintain equivalence for NGA and we welcome the consultation proposals to regulate in this area. We would add NGA has been developed in an environment where Eircom should reasonably understand the concepts of equivalence and such can be designed into its solutions. Absent Functional Separation of NGA services, the equivalence test should be to a very 'strict' standard for NGA.

✂

#### 4.1.9 Co Investment views

The options would appear to suit different operators in different ways, for example an aggregator may take a different view on volumes and risks compared to a retail provider. We are the view the various options should be left on the table and any co-investment should comply with the Regulations, Competition Law and be transparent.

#### 4.1.10 Duct and Dark Fibre Views

We note clause 5.19 of the consultation where ComReg highlight that Eircom State they have offered Duct Access. ✂.

## 5.0 BT Response to the Detail ComReg Questions

For clarity we have responded to the questions in the sequence provided and have provided section headings where appropriate.

### 5.1 Transitional Period and Arrangements

**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.**

A. 1 Ireland is in a different situation to many countries considering NGA deployment as the incumbent operator Eircom has recently experienced financial debt restructuring through Examinership (similar but not the same as America's Chapter 11 or the UK Administration process). Although the Examinership has ended successfully and the debt has been reduced, it is still significant and the company appears to be owned by its creditors.

1. Eircom is only now investing in an NGA deployment and we believe needs to find significant investment funds (several hundred million Euros) to complete a substantial NGA roll-out. Eircom have said they will invest 1.5 billion Euro capital over the next five years but it's not clear how much of this is for the continuation of current generation services and how much is for NGA. ✂.

2. The cable operator UPC has invested significantly over the last three to four years and is now starting to offer services to 100Mbit/s with a capability of supporting 150Mbit/s. The cable operator also has a mature TV package and experience in triple play solutions.
3. We are aware Eircom is deploying phase 1 of its NGA roll-out to pass circa 100k premises in key urban areas and Eircom's announcement to pass 1 million premises within three years, ✕. Although Eircom may launch NGA in ✕ the key issue is how fast they will roll-out a significant NGA platform thereafter, given the availability of investment funds.

Considering the current situation we would suggest it pre-mature to be discussing transition periods and the prudent approach would be to put in place a review once Eircom has significantly deployed. To do otherwise potentially starts to foreclose current markets and undermines the return in investment for both Eircom and other operators.

We therefore recommend ComReg signpost it will review progress in two years' time and consult at that time concerning transition periods.

**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.**

A.2 As for our response to question 1 it appears premature to discuss transitional periods and managing a migration of service until there is something to migrate to. It is also inconsistent to be proposing the retirement of the copper network when Eircom's plans suggest voice over copper (WLR service from the Exchange) is a fundamental part of Eircom's NGA offering.

It is simply too early at this time to discuss retiring the copper network for the following reasons:

- Eircom have not yet even launched NGA services ✕.
- The Eircom NGA solution is dependent on the copper WLR service for voice
- Eircom themselves say it will take three years to pass 1 million premises.
- It is unclear to us whether Eircom have the finance for a rapid roll out of NGA.
- Signalling the retirement of the copper platform creates 'do not invest signals' and ComReg should be certain as to the NGA rollout before communicating such to the industry.

Our view is ComReg should postpone any decision on retiring the copper network until there has been a substantial roll-out of NGA and its future is clearly sustainable.

## 5.2 Access to Duct and Dark Fibre

**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.**

A.3 We would like to make the following points:

- We note Eircom has not functionally separated ✕
- In our view Eircom's recent financial issues raise uncertainty whether Eircom has the finance to bank-roll a rapid NGA roll-out and we certainly don't see Eircom deploying NGA in less financially attractive areas in the foreseeable future. This is supported by the existing broadband roll-out where the State assisted deployment in non-commercially viable areas.

We therefore consider 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.

If Eircom were to have functionally separated similar to Openreach we would have had more confidence in using market 5 solutions knowing we were being treated equivalently, however that has not happened, we have had a poor experience of Eircom's reform programme, and confidence in Eircom equivalence continues to be low.

In conclusion we agree with ComReg's preliminary conclusions on mandating access to civil engineering infrastructure due to the lack of functional separation ✕

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

A.4

✕. 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.

Absent Eircom's full functional separation of the access layer, we agree with ComReg's preliminary conclusions as such now appears to be the only way to achieve equivalence of access.

## 5.3 Sub-Loop Unbundling

**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.**

Maintaining an environment for operator investment.

VDSL2, Vectoring and Exclusivity

A popular approach to roll-out NGA is to install high speed VDSL2 modems in the street cabinet and drive data rates up to 80Mbit/s and possibly higher over the short copper access tail from the cabinet to the customer premises (known as the D-side network). In technical and physical terms the solution planned by Eircom serving customers from the cabinet uses the LLU Sub-Loop Unbundling product service in Ireland.

In September 2011 Eircom announced it was going to deploy a new technology in its NGA VDSL solution known 'Vectoring' which is a crosstalk noise reducing technology reported to increase the line rate when speed becomes limited by self-crosstalk due to the effects of other VDSL2 modems in the same cable binder. However, Eircom also explained 'Vectoring' may require the supply of VDSL2 from the cabinet to be exclusive to one supplier which is potentially exclusionary.

We acknowledge with ComReg's concern to benefit the consumer whilst maintaining competition in access. We also note that functional separation has not yet been achieved in Ireland ✕. The failure to achieve functional separation makes it imperative that physical access solutions are available to minimise issues around non-equivalence and discrimination.

Given this environment, the decision as to whether to remove or modify the sub-loop obligations in Ireland is significant as such could stifle future competition and the growth of NGA. We would like to make the following points to highlight our views.

- a. As above, it is important to note functional separation has not been achieved in Ireland ✕. In our view the Eircom reform program appears to be aimed at operators buying end-to-end wholesale solutions rather than regulatory component or access products so little has changed. These environmental issues make Sub-Loop Unbundling critical for competitive NGA deployment by other operators in Ireland.
- b. 1<sup>st</sup> Mover Advantage - The economic case for sub-loop unbundling for traditional broadband is difficult as the maximum market reached by a cabinet is approximately 250 residential customers and a significant take-up is required to make the investment viable. However, the NGA case is slightly different as very high speed VDSL services cannot be substituted by Exchange based DSL services and FTTH is problematic to deploy at this time, hence there appears to be a commercial 1<sup>st</sup> mover advantage. I.e. 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. We therefore consider there is no need to remove the Sub-Loop Unbundling obligation for Eircom to provide Sub loop Unbundling on a national basis.

- c. ✗. We also note that there is no formal Duct Reference Offer from Eircom and ComReg need to address this matter to support the availability of Sub-Loop Unbundling.
- d. We were surprised to see a discussion within Option C that even though another provider had used Sub-loop unbundling to deploy an NGA solution. Eircom could then give notice for that provider to be removed following a consultation. We strongly object to this as such destroys the incentive for any other operator to invest in Ireland and it is highly discriminatory against competition.
- e. The timing of Vectoring deployment – We are aware that one equipment vendor is potentially ahead of the industry by about a year and should Eircom's decision be to go with that vendor we are minded that Eircom's deployment will be subject to a single vendor 1<sup>st</sup> to market solution with the associated risks such brings. ComReg will also need to ensure such does not cause a restriction or reduced services for other vendor CPE equipment in Ireland.
- f. We note ComReg suggest for Option C that Eircom could force the removal of another provider that has already used Sub-Loop unbundling to provide NGA services. We do not agree with this approach and it should not be adopted or applied to any of the other options, the general conditions, or the existing rules.

In conclusion we are of the view that none of the options are correct and the existing regulation should remain and the economics of the market will decide.

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

We would like to offer the following amendments to the general conditions which would apply to all options.

- a. Ref. Clause 5.6.1 3<sup>rd</sup> bullet. The limit of exchanges greater than 1800 lines appears too small. LLU operators have to date deployed in areas of greater than 4000 lines and ComReg in its supplementary consultation 12/63 suggests the cable company's primary deployment is also in exchange areas of greater than 4000 lines. The rationale for NGA deployment will be similar to that of LLU hence we consider the limit should be raised to greater than 2500 line exchanges.



- b. Ref. Clause 5.6.1 7<sup>th</sup> bullet. Why are operators being forced to use a specific technology? At this time only one Vendor appears to have a generally available solution and others appear to be a year out. We don't see we should be forced to use one vendor which may cause us increased expense. Additionally, what happens if a better solution emerges or we simply consider it more efficient to use a standard solution?

**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.**

A. 7.

✂

Scale

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.

**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.**

A.8

We would deploy bandwidth enhancing technologies such as the 17Mhz band to upgrade the speed from 40Mbit/s to 80Mbits as this address many applications and does not give rise to exclusivity. We also plan to monitor the development of the vectoring technology as it is still not competitively available in the market. However, as we have discussed in our answer to question 5 we consider the 1<sup>st</sup> mover advantage is of greater significance than the technical exclusivity issues raised by using vectoring technology. In this respect we consider ComReg should continue the existing Sub-Loop obligations as they are today.

## 5.4 Backhaul

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

A. 9 We agree with ComReg there are clear requirements for backhaul, exchange and cabinet co-location.

Reasons:

- Our experience with LLU is that we have been frustrated by Eircom over many years for the supply of fit-for-purpose backhaul for LLU services. This had led to the costly and time consuming activity of having to bring our own fibres to the Eircom exchanges requiring us to go through the expense and disruption of

digging up the local environment. This has delayed the establishment of competition and has set high barriers to entry. Only recently after some ten years have viable solutions been made available.

✂

- Backhaul of Cabinets – In accordance with the EC NGA Recommendation we consider Eircom should make a Duct Offer and such should be published.

✂

## 5.5 Wholesale Broadband Access Market (Also known in regulatory circles as European Commission Recommended Market 5)

**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.**

A.10 We generally agree with ComReg's technical assessment except Sub-Loop unbundling still offers more functionality and control including the ability to implement new technologies at the operator's choice and higher speed bonded services etc.

With regards to the Market 5 obligations we consider they fall short of the proven list of exANTE regulatory remedies as below.

1. Equivalence – We are of the strong view that all aspects of the Market 5 service should be equivalent at the local handover point including, but not limited to, the service offering, performance, technical facilities, network facilities, information availability, provision gateway, assurance gateway, pricing and terms and conditions. We consider exANTE regulation is required given there is both opportunity and motive to discriminate against the industry. ✂.
2. Given the issues we have experienced with Eircom's provision of LLU over the past decade, demonstrated through numerous Decisions and documents on the ComReg website, we consider the full set of obligations are necessary for NGA access services which should include all the current obligations from ComReg Decision D05/10 in ComReg document 10/39.
3. We fully support the initiative to support the co-location of other operators in Eircom exchanges to connect to the NGN/NGA node for VUA. We also note that Eircom in the updated Access Reference Offer known as ARO 2 now has the ability to terminate LLU co-location in the event of de-regulation. Given Eircom's past of behaviour with LLU as demonstrated on the ComReg website, we consider VUA access Co-Location must be mandated in its own right and to the same level of detail as LLU Co-Location in Decision 05/10 to ensure efficiencies of access that are possible can be achieved and maintained. Separately, such is also required where VUA access is deployed in Co-Locations not previously used for LLU.

**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.**

A.11 We agree with ComReg's conclusion on the need to mandate exANTE the provision of backhaul services and facilities for WBA. We support this position for the following reasons:

- It is not always viable to provide our own backhaul to an exchange due to the extent of civil engineering work and other access issues.
- Most NGN/NGA nodes will be at the serving exchange however where this is not the case we will require Eircom to backhaul the traffic to the remote serving node.

## 5.6 Access Obligations in the Wholesale Physical Access Market

**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.**

A.12 We consider ComReg's preliminary conclusions on the terms and conditions of the access obligation should be modified based on the following:

- a. We have a considerable concern with the proposal for five years notice for the closure of an MDF site. We note approval from ComReg will be required before any such notice can be issued, however no detail is provided as to the tests that must be past prior to such a decision.

We note the current Eircom NGA proposal is based on the use of the traditional voice platform hence the existing MDF and infrastructure would appear to feature in Eircom plans for NGA at least for the medium term. Our view on the test required should include but not be limited to:

- i. A public consultation prior to the approval to close an MDF site so that the concerns of all are considered.
  - ii. Demonstrable evidence that the market has effectively migrated to new platforms and the existing services are at a point of end of life.
  - iii. Compensation for other parties whose investments and business maybe damaged by such an initiative.
  - iv. Maintain the co-location of other services such as Terminating Segments of Leased Lines.
- b. Access to Eircom Operational Support Systems (OSS)

We support ComReg's view in clause 7.23 as extracted below as follows:

Italics added

*“Therefore, Eircom must ensure that any of its future IT developments evolve such that both Eircom's downstream arms and OAOs have the ability to access OSS in exactly the same manner. “*

In our view this will assist others to compete more fairly with Eircom, &lt;. ComReg should now mandate Functional Separation for Eircom NGA and in the Interim full equivalence of input for NGA access.

c. SLAs

It is helpful that ComReg are mandating Eircom must negotiate legally binding SLAs, &lt;, there is now a need for ComReg to include an automatic obligation to Determine an outcome if agreement cannot be reached.

We consider it reasonable Eircom should adopt “best practice” SLAs but based on experience we can’t see how agreement of such can be achieved without ComReg intervention.

**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 WPNIA market (Market 4)? Please provide reasons for your response.**

A.13

Whilst we agree with the principle of migrations, we don’t agree with some of the detailed aspects discussed in the consultation. We don’t agree with the Eircom proposal (cost moved to wholesale rentals) or the ComReg proposal (universal migration charge) as we don’t consider either are fair or proportionate as they act to dis-incentivise the use of current generation services. We consider the migration price is of the order of €233 and averaging this with the CGA bulk migration fee of €15 means CGS migrations will significantly subsidise NGA migrations. Please see our response to question 34 for details of our concerns.

*Separately* - We also consider the discussion to date has largely concerned the migration from CGA to NGA services, however in the short to medium term customers must have the ability to migrate back to current generation services for the following reasons:

- a. The customer simply wants to migrate back CGA services.
- b. The customer may have experienced poor service on NGA and wants to revert.
- c. The migration failed and it should be possible to reverse until the issue is resolved.
- d. The customer changed their mind.
- e. The customer has received a better retail deal that meets their needs on the CGA platform.
- f. Provider problems may require a bulk transfer of customers to another provider to maintain at least the basic services.
- g. Supports the USO obligation to provide basic voice services.

These services don't yet appear in the Eircom proposed NGA products and should be mandated by ComReg if such are not volunteered.

## 5.7 Non Discrimination, EoI and EoO

**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.**

A.14

We would like to offer the following comments:

- a. EoI and EoO - We welcome ComReg's proposal to strengthen its approach to regulating non-discrimination and agree there are examples where corrective action has been required. The introduction of these principles will assist the realisation of a fairer competitive environment which is good for investment and customers. 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. We are of the view that ComReg should be insisting on the functional separation of Eircom for NGA services as we are still experiencing equivalence issues with the proposed NGA service and functional separation will remove such problems going forward.
- b. Statement of Difference - As explained in numerous earlier consultations the non-discrimination obligation does not operate properly without strong transparency regulation.. We welcome the ComReg proposal in clauses 8.6c, 8.6d and 8.6e.

We note an earlier regulatory remedy of this nature merely resulted in high level outline information responses saying virtually nothing. As they say, 'the devil is in the detail' and we agree clause 8.6d is clearly required to support 8.6c.

- c. KPIs. - This was a welcome initiative at the time to highlight potential discrimination in service provision and assurance performance. We are observing a shift in Eircom Wholesale's trading towards favouring wholesale solutions and, if not already completed, consider this should now be identified as a separate downstream market for the purposes of KPI; there is a genuine risk any discrimination between downstream wholesale solutions and upstream wholesale regulatory access products is being masked in the same category. Ideally, Eircom should simply be required to provide KPIs on a per provider basis with the providers name kept confidential other than to ComReg.

## 5.8 Transparency Obligation

**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.**

A.15

We would like to make the following comments:

- a. Transparency obligations - We agree with the proposed transparency obligation and as in our response to question 14 we welcome the proposal in 9.5g for Eircom to publish sufficient information on their website to identify and justify differences. Again the devil is in the detail hence this will only be effective if the detail is mandated.
- b. Notification of Non-price information - We welcome the proposal for six months prior public notice for new NGA, WPNIA and WBA services and associated facilities coming into effect. However, we consider a two month notification for changes to existing services is insufficient in the majority of cases and would suggest the proposal should be 'sufficient time (enables the obligation to be consistent with Competition law) but not less than 'x' months'. For example were Eircom to significantly alter a technical solution or process it will take longer than two months to assess the impact; obtain or re-allocate resource; design and build and importantly carry out appropriate integration testing etc. Without prior knowledge three months is actually too tight and notifications without the industry having reasonable prior knowledge should be not less than six months.
- c. Transparency for network development and rollout - We agree with the need for transparency of NGA roll-out information to enable other operators to reach the same potential markets as Eircom downstream services at the same time. We also make the observation that Eircom should be able to provide similar cabinet information to potential Sub-Loop unbundlers as they are clearly providing for themselves.

## 5.9 NGA in the Home – Home Wiring

**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.**

A. 16

A competitive concern with home wiring is the co-ordination of technician resource to carry out the installation. If the Incumbent were to avail of its own technical resource to both jumper the connection at the cabinet and then install the new NTU in the customer premises this could easily be achieved in one truck roll as Eircom has access to both facilities. However, other operator technicians are not permitted access to the cabinet meaning two truck rolls are required with the additional expense such entails. This is further exacerbated if the incumbent's downstream retail division is able to use the same Eircom technician to install the service into the customer's CPE.

We note Eircom Wholesale are planning to offer options for the technician activities including both the jumpering and the NTU install and this is welcomed, ✂.

## 5.10 VoIP

**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.**

A.17

We would like to offer the following comments:

- a. Deployment in the Network - We don't accept the Eircom position that the barriers in Ireland for deploying VoIP are low.

The deployment of carrier class VoIP switches includes a considerable amount of cost and activity to integrate with existing technology, billing systems, etc. In many ways the cost of integrating and testing a carrier class switch is independent of the technology.

We also note voice providers (e.g. WLR) have regulatory obligations to support 112/999 access services and various other regulatory and legal requirements which require switch resilience and other costly carrier class facilities.

✂

- b. Within the Customer Premises - The delivery of VoIP services to the customer premises, in particular the consumer market is problematic as the voice service will be delivered through the customer's modem acting as an Analogue Terminal Adaptor (ATA) rather than just coming down the wires in its current form. In many situations the customers internal telephone extension wiring will have to be modified and the phone service will stop if the modem is powered down. Issues such as the current location of the Network Terminating Unit, the closeness of mains power to the NTU and the poor aesthetics of several items of equipment in places such as entrance hallway is problematic.
- c. We are surprised Eircom is saying that the barriers for migration to VoiP are low as they have conducted a pilot service and should be well aware of the issues highlighted above, particularly the work required in the customers' premises. ✂. In NI and GB BT has continued to offer the WLR voice service with its NGA services.

## 5.11 Price Controls

**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.**



A.18

Part A – WPNIA

We generally agree ComReg should continue the current cost orientation price controls in the WPNIA market and would like to make the following comments:

#### Cost Orientated Pricing

1. The proposed cost orientation approach has been in place over several years and appears to work in practice, however it is of concern that ComReg only sets the price ceiling implying Eircom maybe trading above the cost orientation value. We believe ComReg should review the pricing to ensure efficiencies gained by Eircom are passed through to its customers.
2. The cost BU-LARIC cost orientation models developed by ComReg aligns with international practice in many other EU countries as demonstrated by ComReg in its LLU Costing Methodologies Consultation.
3. The European Commission NGA Recommendation (Recital 32) advises the cost orientation approach.
4. However we are concerned 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.

#### Impact on Line Share and Traditional Bitstream Pricing

5. Whilst maintaining our view the Retail Price should not impact the upstream cost orientated price, we consider LLU is overpriced and there should be scope to reduce its underlying cost both through redefining the exchange areas and Eircom passing to the industry the benefits of its numerous cost savings initiatives. We consider it should be possible to reduce the cost of the Sub-Loop component and for this reduction to 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.

#### Margin Squeeze Test SLU to VUA

6. We agree a margin squeeze test is required as the incumbent will have both the ability and motive to margin and functionally squeeze other access seekers in favour their own downstream solutions.

In conclusion we agree with applying a cost orientation obligation in the WPNIA market. Additionally we consider there is scope to reduce the Sub-Loop component price but such must apply to all downstream services including WLR, LLU and Standalone NGA.

A18

Part B – We consider ComReg should mandate a Retail minus price control to establish the economic space between the retail price and wholesale price. This meets the ComReg objective of giving Eircom the freedom to manage their retail pricing.

Separately a Margin 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. We suggest this floor should be set at the cost plus price as



Eircom is not allowed to trade below cost and all should benefit from the Weighted Average Cost of Capital (WACC).

## 5.12 Price Control for Wholesale Infrastructure Market (Market 4)

**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.**

A.19

We agree regulation in the context of NGA in the WPNIA market should be Cost Orientated as recommended by the European Commission in the NGA Recommendation.

We consider ComReg should review the cost orientated price for WPNIA services. ComReg suggest in their doc 12/63 that LLU deployment to date has been in the less costly exchanges areas of greater than 4000 lines yet the more expensive greater than 2500 line exchange category is being used for pricing LLU. We consider ComReg should resolve this disparity.

**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.**

A.20

We do not agree that 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. The reason for our comment is as follows:

- Current generation services have already been deployed and in many case their investment has been depreciated hence the cost is now maintenance only.
- Eircom have not yet deployed a commercial NGA network hence it faces at least three years (the time it has stated it will take to reach a million premises) of considerable new capital investment costs as well as maintenance costs of the new network.
- Eircom are proposing to offer the existing WLR Voice service as part of its NGA offering hence the traditional voice platform is part of NGA. Simple logic means CGA plus NGA must be more costly than just CGA.
- It is well documented Ireland was late to reach significant growth in broadband hence a significant part of the ADSL (including ADSL2+) deployment is not yet five years old or will not have exploited its useful working life. To strand non-depreciated assets will raise a financial cost.
- FTTC deployment uses the legacy copper network from the customer, including the access infrastructure up to and including the cabinet. NGA additionally requires an additional cabinet to be installed increasing the access costs.

- The three year Eircom deployment plan suggests that the volume of customers will continue to consume CGA services for many years to come.

Hence the situation in Ireland does not support the view in the short to medium term that NGA using SLU will attract much lower costs than the network costs of providing current generation services. Our concern is Eircom will develop over optimistic NGA volume projections to argue for a low NGA entry price and such will artificially distort the market in Eircom's favour.

Our view is NGA costs, particularly in the early years will be at a premium until the time arrives where the reduction in current generation volumes changes the cost base. We urge ComReg to carry out extensive sensitivity testing of any forecasts that Eircom may provide and to take soundings from the wider industry as to whether such are realistic.

**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.**

A.21

BT is not commenting on this issue.

### 5.13 Maintaining the Pricing Relationship Between NGA and CGA

**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 NGA: should this period be and what triggers for a change should be considered? Please provide reasons for your response.**

A.22

As discussed in our response to questions 1 and 2 we consider it pre-mature to be discussing transition periods until there is evidence of a significant NGA roll-out using the Eircom Network.

We agree the link between copper (LLU) and fibre based (SLU) services should be maintained during the transition as one continues to be a physical component of the other.

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. The regulator has a major influence on the outcome and we believe from our own experience that Eircom can drive NGA forward whilst the current market continues to be competitive.

## 5.14 Price Control for the Bitstream Access Market (Known as WBA and Market 5)

**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.**

A.23

We agree with ComReg that a price control must be established in the WBA market as Eircom has both the opportunity and motive to squeeze upstream margins. We would add that since the publication of the consultation an operator has ordered Sub-Loop Unbundling from Eircom

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 (Reference ComReg's retail bundles consultation 11/72). We therefore consider 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.

Eircom as an operator designated with Significant Market Power (SMP) is not allowed to trade below cost hence in our view the floor price set by the Margin test should be the same as the cost plus price. We consider the Weighted Average Cost of Capital (WACC) of 10.21% should raise the Margin Squeeze floor slightly for the following reasons:

- Entrant operators in the upstream market are considerably smaller than Eircom and will experience reduced economies of scale, scope and externalities hence experience higher costs. The 10.21% added to the price floor will assist this imbalance.
- Eircom are permitted by ComReg to avail of the 10.21% and to prevent entrants benefiting from the additional margin within the test would be discriminatory against the entrants.

In conclusion we agree with the application of a dual price control of retail minus allowing Eircom to set the WBA price in relation to the retail price, and separately a margin squeeze test setting the WBA price floor at the cost plus level.

Question 24

We note there is no question 24.

## 5.15 Retail to Wholesale Price Controls including Margin Squeeze Tests

**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.**

A.25

Our response to question 23 above on cost orientation in the WBA market provides our answer to the use of price control between the retail market and the WBA price. We also address the other issues raised by question 25 below.

- **Reliability of Margin Squeeze Tests** - We note the proposed margin squeeze test will be between the retail price, and the wholesale end-to-end price, both of which can be complicated and circumvented through bundles and comparing like with like. Hence we are concerned at the ability of Eircom to influence the outcome of these tests to their advantage when operators don't even know the tests are being conducted. We consider the industry should be asked for input when such will impact the market and we agree with ComReg in clause 11.172 to cross check the test with the regulated wholesale prices.
- **Margin Squeeze against Legacy Services** - We welcome ComReg's recognition in clause 11.162 that legacy copper based (also known as CGA services) "should not be squeezed by NGA services at least in the interim." We note 'Interim' is not defined and this is correct as Eircom have not even launched a commercial NGA service and the roll-out is predicted to take at least three years. We seek for industry to be consulted for its agreement to the end of any interim period given the impact on competitiveness.

• **Infrastructure Competition** - We agree and support ComReg's continued preference for infrastructure-based competition as we have invested significantly. To change tact now would be hugely damaging to future investment decisions. The recently publicised debt problems at Eircom also highlight the benefit to the country of having infrastructure competition.

- **Notifications, compliance with the Retail Margin Squeeze Tests** – ComReg are proposing to allow Eircom a year to offer a statement of compliance with Margin Squeeze tests although ComReg will continue to monitor the compliance with the NGA Margin Squeeze Model. We would suggest as a safeguard ComReg should include a clause in the remedy that allows for the process to be triggered at ComReg's request.

**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.**

A.26

We do not 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. The reason for our position is this type of clause is more suited to a mature market where the definition of materiality is understood in terms of the impact on the market. NGA using the Eircom network is nascent and we don't yet know what a material impact will be. Hence we are concerned this preliminary view could fetter ComReg's discretion.

## 5.16 Wholesale Margin Squeeze Tests

**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.**

A. 27

We agree with ComReg's preliminary views 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. Eircom have 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.

**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.**

Q. 28

We 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 provided all reasonable costs are included as such maintains an economic space for others to compete with Eircom. We note Eircom has both the motive and opportunity to squeeze and this eXAnte obligation is required.

**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.**

A.29

We agree with ComReg's preliminary views 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.

We agree with the SEO approach as entrants don't have the same scale or scope of Eircom in Ireland and such is unlikely in the foreseeable future.

**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.**

A.30

We agree that Eircom should be required to follow the product-by-product approach, as well as a portfolio approach, where the new or existing product is likely to represent at

least 10% of the Eircom retail NGA customer base. It is possible to mask key product squeezes with a portfolio approach to maintain compliance hence we support a product by product approach. As in our earlier response we consider the issue of materiality is not yet known in the nascent NGA market and consider the 20% threshold could fetter ComReg's discretion. If such has to be mandated the 10% level would be more appropriate.

**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.**

A.31

Our view is 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
- Line Share and current generation bitstream as both use WLR as a component.

ComReg already suggest in the consultation there is scope to reduce the sub-loop price and as we have said on previous occasions the price of LLU in Ireland is too high.

In our view the ComReg solutions:

- Cause a customer discrimination as customers in urban areas will avail of the same but less costly voice service.
- Delay Eircom's incentive to invest in modern technologies such a VoIP.

## 5.17 Co\_Investment

**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.**

A.32

The options would appear to suit different operators in different ways, for example an aggregator may take a different view on volumes and risks compared to a retail provider. We consider 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.

## 5.18 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.**

A. 33

We note a general unfairness and discrimination as to the direction of the migrations discussions for NGA. For example it took several years of sustained ComReg regulatory activity against Eircom for them to even support the concept of a seamless migration to LLU, and then at 'premium' above cost pricing. Now, when Eircom want to migrate their own customers to what is an LLU service i.e. LLU Sub-Loop Unbundling, they want to move as fast as possible with no perceived transaction price to the customer.

The impact of moving migration costs to wholesale rentals causes the end customer to perceive there is no transaction cost and this is discriminatory as similar has not been offered for CGA services.

In conclusion we do not agree to a different 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. The industry has only recently had to endure significant migration costs and we believe it is disproportionate and unreasonable for Eircom to benefit themselves in this way.

**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.**

A.34

We do not agree a universal migration charge is the most appropriate option for migrations as this is ✕ discriminatory and effectively makes CGA products subsidise NGA products.

The reasons for our view are as follow:

Table 1 – Estimation of NGA Bulk Migration Price per Line.

Exchange Migration Fee	Sub Loop Unbundling migration price (LLU price list)	Visit to customer site equivalent to Eircom cost of works charge.	Eircom Net migration prices based on existing cost orientated component prices:
Single Line €29	€139	€100	€268 Single Price
Bulk price 15	-15% for Bulk = €118.15	€100 no bulk available	€233.15 Bulk Price

Based on the above the NGA bulk migration fee is of the order of €233 and when this is averaged with the CGA cost orientated LLU bulk migration fee of €15 we get an average migration fee of €124 Euro. I.e. ComReg's proposal will raise the CGA bulk migration fee from €15 to €124.

The situation gets worse when volumes are considered suggesting the average bulk price when volumes are applied will be considerably higher than €124.



In our view this proposal clearly uses products such as LLU to subsidise the cost of migrating customers to NGA and is disproportionate, not cost orientated for CGA services and below cost trading for NGA migrations etc. Such would appear open to appeal if mandated.

For the avoidance of doubt we most strongly object to this approach.

**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.**

A.35

We generally agree with ComReg's preliminary views, as set out in the table in Figure 11 of the consultation, regarding the retail costs in the context of NGA; however we consider the following should be added:

- Cost of voice services – WLR and or VoIP
- Service Assurance
- Cost of White Label Wholesale Service which should include a proxy for interconnect and general network connectivity.

### 5.19 Retail Equally Efficient Operator (EEO) test

**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.**

A.36

We do not agree an EEO approach should 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.

- We offer the following reasons for our view: Eircom still hold a huge fixed market share compared to other providers and competition is only in its infancy. Forcing the EEO approach on some retail cost categories simply acts to extinguish the shoots of competition. 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 we believe this proposal acts to undermine the smaller players of which there are many.
- BT should be removed from the comparison as we are not in the consumer market and by comparison to the consumer volumes our customer base would be relatively small.



**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.**

A.37

Please see our answer to question 36.

**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.**

A.38

We do not 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 for the following reasons:

- The concept is wrong as the reference operator is the incumbent hence any comparison with yourself must be EEO.
- 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.
- The proposal appears to be suggesting Eircom won't be able to capture its costs correctly and this is deeply worrying given these costs are factored into the Margin Squeeze tests. We don't accept these arguments as Eircom should be able to manage its help desk costs efficiently.

In conclusion the EEO approach should be applied to Eircom.

**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.**

A.39

We have not operated in the retail consumer market in the RoI since 2009 and are not in a position to offer an informed view to this 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.**

A.40

We believe the costing for IP connectivity is incomplete. The IP costs 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.

✂

## 5.20 Writing off the cost of Modems

**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.**

A. 41

Eircom have informed industry it plans to deploy the technology known as 'Vectoring'. Although we do not know the vendor they are using, 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 there is a risk that early deployed CPE will have a relatively short lifespan of say two to three years as the technology matures.

**Q. 42 What do you consider is a reasonable estimate of the likely installation costs involved with NGA services?**

A. 42

We consider a reasonable estimate of the likely installation costs is in excess of €233 Euros. Please see our response to question 34.

**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.**

A.43

We are only now receiving indicative outline details of the wholesale chargeable components of Eircom's proposed multicast service and it is too early to determine what a reasonable retail cost is.

## 5.21 Cost stacks

**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.**

A.44 We agree in principle with the proposed approach for determining the cost stack for End-to-end Next Generation Bitstream as such should align with the costs experienced by other operators. The cost should also include the QIB and PIB costs as well as any ancillary charges that apply.

### Question 45

We note there is no question 45.

**Q. 46 Do you agree with the proposed approach for determining the cost stack for NGA Bitstream? Please provide reasons for your response.**

A.46

We generally agree with the proposed approach for determining the cost stack for NGA Bitstream as it aligns with the components consumed. However we do have the following comment:

- We consider the backhaul charge should be carefully compared to the costs experienced by other providers as the physical connection arrangement for bitstream plus is different to the VUA connection arrangement. In our view Eircom will be able to avail of shared network services within the NGN/NGA node which will enable increased efficiencies over other operators. We consider a weighting should be applied for this additional benefit.

## 5.2 Multicast

**Q. 47 What are your views regarding the parameters for determining the relevant costs for a Multicast service. Please provide reasons for your response.**

A.47

We consider the costs for the multicast service should include:

- WEIL or virtual path cost
- Cost of the Multicast server and associated service elements
- Backhaul costs
- Service management costs
- Service control costs
- Service administration costs.

✂

**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.**

A.48

We generally agree with the approach for determining the cost stack for the VUA product in the WBA market but would add the following comments:

To include co-location costs within the exchange as these are considerable for LLU providers. To remove the migration costs as these should be taken at the retail layer.

**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.**

A.49

In the medium term we agree the 95:5 probability weighting factor should be included for determining the costs of VUA, however, it is expected NGA will replace current broadband and the roll-out will ultimately be wider than LLU.

### 5.23 VUA and Multicast

**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.**

A.50

We believe the price for VUA should increase where multi-cast services are added to VUA as such aligns with regulatory principle of cost causation. We are concerned that no charge implies the cost is being unreasonably bundled into another charge as discussed in our response to question 47.

With regards to whether the cost for the bitstream plus solution should be the same as VUA solution the answer at a service level is clearly no as the bitstream plus solution includes significant backhaul and the multicast service as associated service management costs.

✂

**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.**

A. 51 We consider the price of repair should be factored into the rental of LLU for fairness and to provide the correct incentives for first time every time repair.

**Q. 52 Do you agree with the proposed outputs from the NGA Margin Squeeze Model? Please provide reasons for your response.**

A. 52

We note the Publication by ComReg of the Supplementary Consultation paper (ComReg Ref 12/63) has a direct impact on the final decision of this NGA Consultation and thus reserve our final position until we have completed a holistic review of various issues and proposed remedies. However in the interim we would like to offer the following comments to this consultation.

a. Reference NGA wholesale/retail cost model Results (1/5)

- We consider there is scope to reduce the sub-loop price of €10.53 as ComReg have based their cost orientated price regulation of the greater than 2500 line exchanges, however LLU has only deployed to the greater than 4000 line exchanges suggesting the sub-loop and full unbundled prices are too high.

- We also consider the €9.23 is too low particularly if it includes a partial allocation of migration costs as we estimate these at €233 per order as documented in our response to question 34.
- b. Reference NGA wholesale/retail cost model Results (2/5)
- Backhaul – our experience of the backhaul price is it is closer to  $\frac{1}{2}$  Euro than the 3.48 proposed by ComReg. There are significant economies of scale in backhaul as the 95<sup>th</sup> 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
- c. Reference NGA wholesale/retail cost model results (1/5)
- “LL w/o SLU” @ €1.09 should be €1.88 to sum to ULMP cost of €12.41. We assume it 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 OLT input should be transparently based on a regulated wholesale product available to all SLU operators
  - Aggregator node costs should relate to the Unicast service only, with the optional Multicast Aggregator node costs priced and recovered separately

**Q. 53 Do you agree that the proposed price control period should be for at least three years in the context of NGA services in the WPNIA and WBA markets? Please provide reasons for your response.**

A. 53

We consider there is huge uncertainty around Eircom’s deployment of NGA and we believe this will continue. Setting a three year price control in a market, not yet launched and where the principle player has recently experienced huge debt restructuring appears inflexible to events. Our view is ComReg should as a minimum create one year review windows in case of the need to adjust.

## 5.24 Decision Notice Text

**Q. 54 Do you believe that the draft text of the proposed Decision Instrument is from a legal, technical and practical perspective, sufficiently detailed, clear and precise with regards to the specifics proposed? Please explain your response and provide details of any specific amendments you believe are required.**

A.54

- a. We agree in principle with the proposed Decision with the following amendments: Reference Draft Decision Instrument – WPNIA, Definitions, NGA Footprint Area and Non-NGA Footprint Areas.
- We consider the greater than 1800 Exchange Lines definition to define an NGA footprint is too low and ComReg should align the definition with the current LLU greater than 2500 Exchange Line analysis as this figure is more realistic of the lower boundary. As ComReg themselves have said most LLU operators have only

deployed to the greater than 4000 exchanges lines exchanges suggesting >2500 lines is appropriate for NGA. ComReg in consultation 12/63 also state the cable company UPC has generally rolled out in the greater than 4000 line exchanges areas further supporting that the greater than 1800 Exchange Line definition is incorrect.

- b. Reference Draft Decision Instrument – WPNIA, Section 4 Options A and B.  
We are of the view the sub-loop obligations should continue as they are today and commercial viability will essentially determine exclusivity as viability of a second operator is significantly reduced.
- c. Reference Draft Decision Instrument – WPNIA, Section 4 Clause 4.5.  
We strongly disagree with ComReg setting a single migration charge that applies for both CGA and NGA services. We believe this proposal is highly discriminatory on current generation services as it will put their costs up as NGA migrations will be in excess of €233 whereas CGA Migrations are already only €29 per line and €15 per bulk transfer per line. If Eircom were to progress their roll-out the number of NGA migrations will increase and the average price will rise increasing the cross subsidisation. Our view is the NGA service should recover its own costs and this cost should be passed to the retail provider to manage.
- d. Reference Draft Decision Instrument – WPNIA, Section 7 Clause 7.2(iii)  
Eircom should publish a new schedule to the ARO to provide a Duct Access Offer as the details of the Offer Eircom claim they have already made are not of sufficient detail to be of use.
- e. Reference Draft Decision Instrument – WPNIA, Section 7 Clause 7.2(iii)  
✂
- f. Reference Draft Decision Instrument – WPNIA, Section 8 Clause 8.5  
We propose a minor but important change to the text. In Competition terms downstream providers should be provided information in sufficient time to deploy equivalence downstream services to those of Eircom. We therefore suggest the Decision should be changed from ...seven months prior to any offer... to ... at least seven months prior to any offer... as this will prevent regulation contradicting potential ExPost remedies.

**Q. 55 Do you believe that the draft text of the proposed Decision Instrument is from a legal, technical and practical perspective, sufficiently detailed, clear and precise with regards to the specifics proposed? Please explain your response and provide details of any specific amendments you believe are required.**

A.55

We agree in principle with the proposed Decision with the following amendments:

- a. Reference Draft Decision Instrument – WBA, Definitions, NGA Footprint Area and Non-NGA Footprint Areas.

We consider the greater than 1800 Exchange Lines definition to define an NGA footprint is too low and ComReg should align the definition with the current LLU greater than 2500 Exchange Line analysis as this figure is more realistic of the lower boundary. As ComReg themselves have said most LLU exchanges have only deployed to the greater than 4000 exchanges lines exchanges suggesting >2500 lines is appropriate for NGA. ComReg in consultation 12/63 also state the cable company UPC has generally rolled out in the greater than 4000 line exchanges areas further supporting our position that the greater than 1800 Exchange Line definition is incorrect.

b. Reference Draft Decision Instrument – WBA, Section 6 Clause 6.2

We consider ComReg need to include some additional services as follows:

- a. Where a cabinet is not served by the local exchange Eircom should be required to Offer an extension service to offer VUA connectivity from the nearest NGA node exchange.
- b. The provision of stand-alone multi-cast services are clearly required as one operator has already requested and we seeking similar.

c. Reference Draft Decision Instrument – WBA, Section 7 Clause 7.2(iii)

✂

d. Reference Draft Decision Instrument – WBA, Section 9 Clause 9.3

We propose a minor but important change to the text. In Competition terms downstream providers should be provided in sufficient time to deploy equivalence downstream services to those of Eircom. We therefore suggest the Decision should be changed from ...seven months prior to any changes... to ... at least seven months prior to any changes... as this will prevent regulation contradicting potential ExPost remedies.

Please address enquires concerning this submission to [john.odwyer@bt.com](mailto:john.odwyer@bt.com)

End

Submissions to Consultation Document No. 12/27

ComReg 12/97



### **3 Digiweb Limited**

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 (p34).*

**Digiweb Response:** We believe it's a too early stage to formally agree on an acceptable transitional period. ComReg rightly points out in section 3.24 that many contingencies exist which prevent the industry to forecast accurately what transitional period should be set. ComReg should weight up the advantages versus the drawbacks in its assessment. The copper network within the NGA footprint will remain a valuable infrastructure, whose usability could be extended due to future innovations. Many examples can be found where worthless assets become invaluable following technological innovations. The cost of maintaining the network should be properly assessed as part of this evaluation. Digiweb is of view that, should the NGA network be in position to be rolled-out in parallel to the Copper base without significant additional cost, there may be a better interest to conserve this asset as dormant following a 10 years transitional period, with a potential ownership transfer should Eircom wish so.

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 (p34).*

**Digiweb Response:** Regarding the prospect that copper may delay fibre take-up, Digiweb is of view that Comreg should let the market naturally evolve. The drive for bandwidth that characterizes the market today will gradually favour fibre-based solutions. A complete move to fibre will be also facilitated once an international norm is established. That is not yet the case today.

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 (p57).*

**Digiweb Response:** Looking at 5.19 – A basic non-discriminatory factor is the lack of information flow; it has not come to our attention that Dark Fibre was available from Eircom. The factor to not communicate on a regulated offering is a form of non-price discriminatory factor (Google search "*dark fibre*" site:<http://www.eircomwholesale.ie> - did not match any documents). The three months negotiation deadline is not practical with business standards (government contracts). We will engage directly with Eircom to understand the design, pricing and installation processes associated with using civil engineering infrastructure and dark fibre as part of access solutions for our customers.

4. *Do you agree with ComReg's preliminary conclusions on network access in the context of FTTH? Please provide reasons for your answer (p60).*

**Digiweb Response:** Digiweb agrees with ComReg on that providing access to the terminating segment is too early at this stage, and that this will prove uneconomical to duplicate this infrastructure. Focus should be made on providing unbundled access to the fibre loop, as this will in-fine secure access to the terminating segment by the OAOs.

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 (p69).*

**Digiweb Response:** Despite of the poor take up of SLU to date, Digiweb would recommend ComReg to maintain the SLU obligation and monitor closely bandwidth enhancing technology improvements. The ASSIA has recently published a white paper which claims that the introduction of Dynamic Spectrum Management (DSM) solutions could help maintaining a competitive environment among DSL service providers using

Vectoring Technology<sup>1</sup>. There is good probability than a solution could soon emerge which would effectively allow for the introduction of vectoring technology without any requirement for exclusive rights.

*6 Do you agree with the general conditions which would apply to all options? Please provide reasons for your response (p69).*

**Digiweb Response:** Digiweb agrees with all the general conditions outlined by ComReg. However, we are not certain that the SLU obligation should be maintained in non NGN areas (exchanges with lines lesser than 1,800) since there may not exist a business case supported a network development in those areas. A potential SLU take-up could only occur in dense urban areas.

*7. Do you intend to make a request for access to the sub-loop and on what scale? Please provide reasons for your response (p69).*

**Digiweb Response:** Digiweb is not currently considering requesting access to the sub-loop. Digiweb is engaged in a concurrent technology which would provide equivalent level of service to the end customer, without requiring engaging in a wholesale model.

*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 (p69).*

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*9. Do you agree with the ComReg’s analysis for the requirement of Backhaul and exchange and cabinet co-location are required? Please provide reasons for your response (p72).*

**Digiweb Response:** Agreed. Backhaul can be troublesome for the OAOs – so the option from Eircom to provide backhaul would be optimal, while other options will be considered as well. We would like to ensure that all backhaul service contracts are provided with options for collocation within exchange and cabinet and are independent from LLU/SLU agreements.

*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 (p84).*

**Digiweb Response:** We agree with the fact that the VUA product should be categorized under the Market 5 obligations since this solution does not guarantee the same level of technical independence than LLU. The VUA product is a welcomed addition to Eircom’s portfolio and could well be implemented when physical unbundling is not technically feasible at an economically viable point, but we feel a true physically independent solution should also be designed in order to guarantee a migration path to existing LLU operators which will preserve full network-based independence from the former incumbent..

*11. Do you agree with ComReg’s conclusion on the provision of backhaul services and facilities for WBA? Please provide reasons for your response (p85).*

**Digiweb Response:** Agreed. This will allow greater reach for OAOs to access WBA products. The use of existing WEIL/WSEA process will provide certainty when developing plans to expand network reach.

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<sup>1</sup> “Methods for Supporting Vectoring when Multiple Service Providers Share the Cabinet Area”, ASSIA, June 2012



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 (p127).

**Digiweb Response:** The area of CPE is a dynamic one, where there is continuous evolution in the types of equipment available and their capabilities. The situation with regard to CPE has also changed since DSL was first rolled out and the need for coordination at an operator level, *a priori* a rollout, was necessary (e.g. to define a CLFMP and to have all proposed access equipment “certified” as compliant).

The evolution of the technical solutions and indeed the technical standards has been to move towards dynamic adjustment and management of the access network. Indeed, it is only by this mechanism that the speed improvements that are being achieved by vectoring and other techniques that we have researched, are made possible.

With this circumstance arising, the need for over-arching control and coordination of CPE must be questioned. It is accepted that CPE should conform to international standards, and by doing so will ensure a minimum set of characteristics that will guarantee interoperability. Having this in place benefits all operators. However it is not often feasible to determine all additional standards that need to be supported, well in advance, The dynamic spectrum management techniques, and noise control techniques, that are available, are designed on the premise that there will be noise in the working environment. This is the noise that they will control, either via technological advancement in suppression techniques, or via coordinated management of the actual CPE (both on the connected line, and on the other lines in a cable). Where this is the case, and once the CPE conforms to accepting such management messages, then optimisation of the performance for all users will occur. Hence it may be nigh impossible in these circumstances for the “undue effect on the performance of other users” to arise. Indeed, even if a rogue CPE is deployed that ordinarily would cause too much noise and impact on an adjacent user, the control mechanisms will mitigate this by either reducing the power at which the rogue CPE is transmitting or requesting the increase in transmit power of the impacted CPE, so that an overall “equilibrium” can be reached.

With regard to deliver of service to customers, it is essential that this be a seamless, simple and efficient process. Customers ordering service from a new operator want to have that delivered without any intermediate loss of service to themselves or the hassle of having to be present to facilitate access to their homes. It is crucial that any inter-operator coordination that might be required to facilitate a change of service provider, be minimised and be able to occur in a seamless fashion for the customer.

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 (p128).

**Digiweb Response:** To operate in the retail voip market an operator clearly needs access to a voip switch, inter-operator interconnects, suitable cpe, and an appropriate level of technical expertise. The first item here is potentially easy to acquire as there are free, open source, products available for deployment. While these provide easy access to a market, the configuration of those switches, and the tailoring of services to mimic those offered on the PSTN, may require much greater level of technical expertise than a small company may possess. In many cases, companies of this sort are often only providing carrier-like, SIP-T services to end-customers (typically enterprises with PBXs in-situ) which mitigates against needing to acquire the required knowledge base.

To adequately provide services to all potential end customers in the retail market, requires a higher level of proficiency and knowledge. There are many problems that can arise and that need suitable solution mechanisms to be in place. Some of these include:

- Understanding the regulatory requirements associated with provision of ECS rather than PSTN services
- Understanding the regulatory requirements associated with different supplementary services

- Configuring supplementary services to provide an experience similar to what customers would expect on the PSTN
  - o Many SIP based services require specific adaptation to function correctly and often will only work correctly with a limited set of terminals
- Supporting (or not) life-line requirements within CPE, and communicating that support (or lack of it) clearly to customers
- Testing and approving CPE that will interwork correctly with the service offering, and having the necessary support structures in place to assist customers when they have problems afterwards
- Having the required level of infrastructure management and monitoring systems in place to assure the infrastructure and the service offering
  - o The level of management and monitoring systems can give operators an advantage compared to a company that does not have these in place. For a larger operator, and specifically in the case of Eircom, many of the system elements to support this would already be in place to assure the core NGN infrastructure and services that are deployed on their network.

The main cost impact of these items is time to market and the need for additional resources to support a product.

*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 (p147).*

**Digiweb Response:** Digiweb broadly agree with all of ComReg’s preliminary views. We would have some comments to make on the “cost +” and “retail – “proposed to be used.

One key factor used in the Margin Squeeze Test model is the Discount Rate. It is our understanding that ComReg is set to use the Eircom WACC. We don’t feel this value is a fair assumption of the average WACC supported by OAOs. It does assume that the WACC of a SMP is similar to the one of an OAO, even though better access to capital and leverage from economies of scale does improve significantly Eircom’s WACC. The BEREC published a report in 2009 on the Discussion on the application of margin squeeze tests to bundles which stated that *“In calculating the WACC one may incorporate the differences in risks and costs of raising funds of alternative operators or the SMP firm”*<sup>3</sup>. We believe that ComReg should explore ways to amend the discount rate used for Margin Squeeze Tests.

Digiweb strongly welcomed the drop in LLU/SLU cost-base decided in 2010. The key motive behind the drop was to acknowledge that LLU/SLU will only be rolled out in a limited number of exchanges/cabinets reaching a limited number of premises within a set distance from the node. We believe ComReg should develop further this line of thought and set-up a range of SLU/LLU line rental prices depending on the number of exchanges/cabinet rolled-out by the OAO (i.e sub €10.5 pm with less than 25 exchanges, €11 pm with less than 50 exchanges, €11.5 with less than 100 exchanges). This model would be in line with the previous conclusions reached by ComReg in term of cost methodology and would act as a further incentive for OAOs to move into the investment ladder in complete accordance to their capital ability.

*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 (p160).*

**Digiweb Response:** See Digiweb’s response to section 18, which is related. We fully agree that the VUA, LLU and SLA rental cost should be connected, in order to incentivize operators to move up the investment ladder. ComReg should not incentivize fibre over copper using pricing techniques, and should instead let the market adjust by itself. For civil engineering infrastructure and dark fibre, Digiweb would have a strong interest in using such assets from Eircom. We’ll closely review the costing matrix introduced for those products.

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[http://erg.eu.int/doc/publications/2009/erg\\_09\\_07\\_report\\_on\\_the\\_discussion\\_of\\_the\\_application\\_of\\_margin\\_squeeze\\_tests\\_to\\_bundles.pdf](http://erg.eu.int/doc/publications/2009/erg_09_07_report_on_the_discussion_of_the_application_of_margin_squeeze_tests_to_bundles.pdf)

It is also important that the same costing principles for new duct apply equally to cases where new infrastructure is required to be deployed by Eircom to facilitate connections to customers. In many cases the length of duct to be run to a customer site will be consistent with the distance from the exchange to a cabinet, so similar price structures would be expected to apply.

*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 (p160).*

**Digiweb Response:** Yes. 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 locations will be lower than serving low-density locations. The current access products have evolved from USO requirements to service all required housing and business developments in an exchange area. The servicing of these areas has expanded over time, typically requiring ribbon-like extensions to existing network infrastructure, and often being deployed without reference to a “master plan”.

For NGA, Eircom is able to “master plan” its deployment, program manage the physical plant upgrade activity in a specifically designed program, and to gain the economies of scale that arise from working in this fashion. Eircom also gains pricing economies from engaging in civils work during a deflated economic period where prices are reduced compared to what they would be a number of years ago. Also, due to the lateness by which network is being rolled out compared to other jurisdictions, Eircom can also benefit from price reductions on active equipment, which is reaching maturity in a manufacturing cycle, with large volumes being produced worldwide.

All of these factors combine to reduce the costs when compared to current generation services. In addition, as long as the covering reach of the SLU is smaller than other current generation services, a smaller proportion of the “national” maintenance cost should be allocated to this product.

*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 (p160).*

**Digiweb Response:** We would welcome a review of the current vs amended cost base under HCA due to complexities in selecting the timeframe (40 to 50 years) or what engineering infrastructure elements will be included, rural vs urban.

*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 (p160).*

**Digiweb Response:** We confirm a link between copper and fibre should be maintained for at least three years given the necessary times for operators to react from market evolutions. We believe ComReg should not incentivize fibre over copper using pricing techniques, and should instead let the market adjust by itself, which will be driven by a requirement for higher speeds in the years to come.

*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 (p164).*

**Digiweb Response:** 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. We'd like to reiterate our concern regarding the discount rate applied in ComReg's margin squeeze tests.

*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 (p174).*

**Digiweb Response:** Digiweb agrees with all of ComReg's preliminary views. We find the amendment made on the statement of compliance obligations to be in theory rather fair. However, it may prove difficult to identify which products may have a "material" impact or not prior to launch. The pre-notification notice of 15 days is adequate as long as ComReg believes it is sufficient leadtime to carry out its own reviews. 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 incentivize further alternative operators to move into the investment ladder. However, we'd like to reiterate our concern regarding the margin squeeze tests applied discount rate.

*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 (p174).*

**Digiweb Response:** See our response to Question 25. It may prove difficult to identify which products may have a "material" impact or not prior to launch. Moreover, we would find difficult that Eircom would design a new broadband product aiming at capturing a customer base lower than 20,000 over the lifetime of the offer.

*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 (p179).*

**Digiweb Response:** Digiweb agrees with all of the preliminary views. ComReg should also set-up a procedure which would facilitate the OAO's ability to report a potential case of Margin Squeeze to the regulator. ComReg may therefore associate third-parties in its margin squeeze assessment based on tangible value retrieved from the market place.

*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 (p184).*

**Digiweb Response:** Digiweb agrees with the proposed margin squeeze tests in the WBA market and from the WBA market to the WPNIA market in the context of NGA. We would also find it important that the LLU cost base should be lower than VUA given the OAOs will have made strong commitments in term of capital investment (ComReg only indicates that "consistency" between VUA and LLU pricing). As indicated above, ComReg should also set-up a procedure which would facilitate the OAO's ability to report a potential case of Margin Squeeze to the regulator. ComReg may therefore associate third-parties in its margin squeeze assessment based on tangible value retrieved from the market place.

*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 (p199).*

**Digiweb Response:** Digiweb agrees that a SEO margin squeeze test is the correct approach to follow given the market situation (dominated by Eircom, with little scope for a competitor to reach the same level of economies of scale). We would however have an issue with the Operator volume base set with a market share of 25%. We believe this would ultimately direct the market toward an oligopolistic framework which would be detrimental to consumers. Digiweb would therefore advocate that moving the market share to 15% may



further guarantee the emergence of an optimal level of competition. As for the appropriate cost standard to implement, we have no objections to make against ComReg's preliminary views. Digiweb also approves the use of the DCF model although we may disagree with the discount rate applied into the cash-flows.

*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 (p199).*

**Digiweb Response:** Agreed in theory although it may prove very hard to determine which individual product will attract over 20% of the customer base prior to launch.

*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 (p206).*

**Digiweb Response:** The treatment of voice over NGA is a complex issue and Comreg is correct in identifying it as such. The options presented cover the potential situations that may arise.

The issue of whether voip is identical (or sufficiently equivalent) to POTS voice service is one that we feel will be answered in the positive over the coming years, from a teleservices point of view. From a bearer service point of view, there are fundamental differences especially around codec choice, and also the powering of the line, that could be used as defining points of difference between the two offerings.

We would agree that there is a significant potential for a "broadband divide" situation to arise if the pricing of WLR and voice differs from within NGA areas to non-NGA areas, and that the issues that will subsequently arise will prove hard to overcome. At the same time, the availability of other platforms (e.g. cable) with different service offerings and potentially much reduced prices for voice services compared with PSTN, already creates the conditions for that divide, given that cable is available in only a limited number of urban locations.

For competition to be fostered a means of competing in the relevant areas with the relevant competitors should be enabled. The bundling option presented by Comreg is one potential way of enabling this competition. While Comreg is requesting Eircom to provide notification for WLR+next gen WBA, it is of course essential that any bundling propositions that would adjust WLR prices, also be applied to the WLR+current gen WBA products that are available. Otherwise the proposed bundling is only acting as an incentive to migrate customers to NGA and will cause unnecessary transaction costs to arise for OAOs, and forcing older products to be unsustainable.

*32. Which option do you consider may be appropriate regarding potential co-investment in the context of NGA? Please provide reasons for your response (p216).*

**Digiweb Response:** The commercial model that would support or underpin a joint investment proposal for NGA is likely to be potentially novel and could involve a variety of aspects. Not all of these have been covered in the scenarios outlined by Comreg in its consultation, and indeed would likely prove impossible to list as the commercial model involved is likely to be specific to the given OAO that would be involved.

Given this context, it is appropriate that Comreg be notified in advance of such agreements, so that the requisite level of scrutiny can be brought to bear to ensure no undue advantage is accruing to any party.

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 (p223).

**Digiweb Response:** We believe that a one-off migration charge should be maintained but the fee should obviously be revised downward, and the payment should be due 6 months post migration ensuring that OAOs can maintain a somewhat acceptable cashflow. Digiweb do not generally favour the inclusion of set-up cost into a recurring fee.

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 (p223).

**Digiweb Response:** We believe this is the best and most straightforward solution proposed by ComReg. The other alternatives would be complex to set in place.

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 (p232).

**Digiweb Response:** We can confirm that the table in figure 11 broadly includes all of the major retail cost categories. Further break-down could be made should it be needed down to sub-categories (i.e. customer care, revenue assurance, support, channel distribution) which would split the variable and fixed elements within (i.e. billing may include a cost per transaction and active account, but also a fixed element with the software licence). However, we appreciate that a balance should be reached between complexity and accuracy.

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 (p232).

**Digiweb Response:** We would disagree that an EEO approach should be adopted for any of the retail cost categories on the basis that several players in the market such as Digiweb, Imagine or Magnet fully correspond to the SEO type. Opting for a fully EEO approach for the Marketing costs would ultimately be detrimental to the smaller OAOs, and would reinforce the likelihood for the establishment of an oligopolistic market.

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 (p232).

**Digiweb Response:** One of the key benefits from above the line marketing is the creation of brand equity, where consumer trust and confidence in the brand is developed and managed. This equity is often realised as an intangible asset by those that have been successful in this endeavour (and that have had the resources to do so). Brand awareness is also stimulated by the presence of a brand in multiple media often for non-core reasons (e.g. for sponsoring environmental or CSR activities, or being attached to a building e.g. Aviva Stadium, The O2, etc).

Where the message being used when advertising one product is also applicable to other products within a company's portfolio then cross-leverage will apply. One example could be where a company advertises with the banner of "your communications needs are solved with Company X", then these needs could be in mobile, fixed, cable, enterprise, etc and clearly that message can resonate with customers. Hence it is our view that where a company has these other parts to its businesses, that it can leverage its advertising costs.

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 (p232).

**Digiweb Response:** Digiweb fully agrees with Comreg's view. See response to section 36, we generally believes that all of the retail costs should be adjusted to a SEO unit scenario in order to treat all of the existing OAOs equally. The Irish market is currently characterised by the presence of several "strategic groups" some being at a much earlier stage of development than others. The only way to preserve the change for the recent local entrants to compete effectively is to adopt the SEO scenario across all retail costs.

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 (p232).

**Digiweb Response:** We do not believe we have the necessary experience in term of migration process to provide ComReg with insightful feedback on the relevant help desk costs.

40. Do you agree with the proposed approach taken for determining the IP connectivity costs for NGA services? Please provide reasons for your response (p232).

**Digiweb Response:** We disagree with ComReg's approach. Not all operators in the market would avail of significant economies of scale for IP connectivity, starting by the indigenous telcos. We would therefore invite ComReg to compute a median IP connectivity cost. Digiweb is open to disclose its IP connectivity cost to ComReg should they wish to revise their view.

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 (p232).

**Digiweb Response:** Agreed. We believe those metrics do follow industry standards in term of accounting.

42. What do you consider is a reasonable estimate of the likely installation costs involved with NGA services? Please provide the details as part of your response (p232).

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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 (p232).

**Digiweb Response:** The costs associated with provision of multicast are likely to be quite low. The service is natively supported by the deployed equipment so no additional costs arise from this source. The setup of the service is relatively straightforward from a technical perspective. There would be some overhead costs relating to the administration of the services but we would expect these to be small, as the total number of users of multicast would also be expected to be low.

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 (p233).

**Digiweb Response:** Agreed. The costs proposed would seem appropriate. However we would note that there is the potential for additional ISP services to be included in a fully end-end NGB product and if these are included in the offering, then applicable costs will also need to be added.

46. Do you agree with the proposed approach for determining the cost stack for NGA Bitstream? Please provide reasons for your response (p238).

**Digiweb Response:** Agreed. See previous section.

47. What are your views regarding the parameters for determining the relevant costs for a Multicast service. Please provide reasons for your response (p238).

**Digiweb Response:** The network architecture for TV distribution can vary between providers and this can impact the dimensioning that should be applied to the multicast service. In general, the number of SD and HD channels will be operator dependent, based on content agreements that they have in place. In general, the trend will be towards more channels being transmitted in HD. However there may also be services where channels are being transmitted in SD but transcoded for a particular reason (e.g. to support viewing on certain devices, or to minimise the bandwidth consumed) to a relatively low bit-rate for specific product reasons. In some cases, the minimum bandwidth requirements for a channel may be mandated by the content owner and the operator will have to comply with these. Though encoding solutions continue to evolve and improve, SD channels can be encoded at rates from 700kb/s to 2Mb/s, while HD can be encoded at rates from 2Mb/s to 5Mb/s. We make no comment on the relative quality of the channel at any of these rates, as this is a subjective matter for the operator, and the consumer.

Depending on the number of channels in a typical package bouquet, it would be normal for all channels to be distributed to the level of the DSLAM, but as noted above, variations in architecture can occur. On other costs for Multicast, please see our comments against Q43.

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 (p246).

**Digiweb Response:** Agreed.

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 (p247).

**Digiweb Response:** The LLU model was applicable to the entire Eircom network as any exchange was open to be unbundled if anyone wished to do so. The situation with NGA is different as there are large tracts of the network that will never be upgraded to NGA under the current investment conditions that prevail. This has been acknowledged by Eircom. Hence it would seem appropriate to only consider the costs within the areas where the upgrading will take place. If investment conditions or strategies change, then this decision can be revisited but we would suggest that it will safely apply for the period of the current review. In these circumstances, taking the 95:5 factor into the model may not be correct and the full costs of the lines in the areas likely to be upgraded should only be incorporated.

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 (p247).

**Digiweb Response:** Any increase in cost should be minor where multicast is provided as the service support costs for it are marginal.

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 (p247).

**Digiweb Response:** We do not believe that the LLU charge should be revised upward. Digiweb would invite ComReg to decrease instead the line rental fee to a region of 50 cents in order to promote a stronger roll-out of the technology.

52. Do you agree with the proposed outputs from the NGA Margin Squeeze Model? Please provide reasons for your response (p250).

**Digiweb Response:** First of all, Digiweb agrees with the cost stack methodology. We understand that the values included are not final and that ComReg is in the process of reviewing the SLU and LLU line rental charges as recommended in Comreg D01/10 section 10.1. It is particularly important to review the SLU line rental cost as it forms the basis of all calculations. We have no significant objections to make on the value proposed other than the SLU price itself.

53. Do you agree that the proposed price control period should be for at least three years in the context of NGA services in the WPNIA and WBA markets? Please provide reasons for your response (p252).

**Digiweb Response:** Due to the important of NGA roll-out in Ireland as well as the precedent issues experienced with LLU in regards to excessive line rental costs, Digiweb would believe that the price control period should be reduced to at least two years. This would allow ComReg to react more swiftly should the proposed wholesale framework fail to gain traction in the market place.

54. Do you believe that the draft text of the proposed Decision Instrument is from a legal, technical and practical perspective, sufficiently detailed, clear and precise with regards to the specifics proposed? Please explain your response and provide details of any specific amendments you believe are required (p253).

**Digiweb Response:** Digiweb has no comment to make on this question.

55. Do you believe that the draft text of the proposed Decision Instrument is from a legal, technical and practical perspective, sufficiently detailed, clear and precise with regards to the specifics proposed? Please explain your response and provide details of any specific amendments you believe are required (p275).

**Digiweb Response:** Digiweb has no comment to make on this question

Submissions to Consultation Document No. 12/27

ComReg 12/97

**4 European Competitive Telecommunications Association  
(ECTA)**

Brussels, 13 July 2012



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Ref: Comreg consultation 12/27  
Next Generation Access: Proposed remedies for Next Generation Access Markets

---

Dear Mr. Duggan,

Copy to Mr. Krüger,

The European Competitive Telecommunications Association (ECTA) is the pan-European trade association representing the interests of more than 150 pro-competitive telecoms operators across Europe. Several operators active in the Irish market are ECTA members, and ALTO is an associate member of ECTA.

We are writing to inform you about our members' concerns regarding the implications of options contained in ComReg's consultation document, which entail the phasing-out of a regulatory obligation (and a corresponding wholesale input) in order to accommodate VDSL2 vectoring deployment by the SMP operator, Eircom<sup>1 2</sup>.

ComReg's consultation document states at paragraph 2.4 that *"the appropriateness of the SLU obligation is not certain in NGA footprint areas. This is because Eircom has stated its intention to use vectoring, which is a bandwidth enhancing technology that maximises the broadband speed that can be achieved over copper. It appears that at this stage of technology development, vectoring is incompatible with co-location in the cabinet and hence is incompatible with SLU."*

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<sup>1</sup> ECTA refrains from commenting on other facets of the ComReg consultation as responding to national consultations is not common ECTA policy.

<sup>2</sup> This letter represents the views of alternative operators and cannot be held to reflect the views of those members of ECTA with incumbent interests. This letter is written from a European perspective and does not necessarily address local specificities or local positions of alternative operators.



Further to this statement, Comreg is proposing three different options (A, B and C), each of which ensure that sub-loop unbundling (SLU) is maintained in non-NGA footprint areas (which we support), but each of which also suggests that SLU could be withdrawn under certain circumstances in NGA footprint areas (which we do not support). The options put forward by ComReg are the following:

- A: *“SLU shall be available only on a reasonable request basis, based on certain conditions”;*
- B: *“SLU to be withdrawn. The obligation will be reviewed and may be reinstated after three years in areas where bandwidth enhancing technologies have not been implemented”;*
- C: *“SLU to be maintained. However, Other Authorised Operators (OAOs) that unbundle the sub-loop will do so in the knowledge that the obligation to provide SLU could possibly be withdrawn, following consultation, in favour of facilitating the deployment of vectoring where bandwidth enhancing technologies are not deployed by the OAO”.*

ECTA disagrees with all three of these options, because each option implies, to a different degree, phasing-out of a regulatory obligation and a corresponding wholesale input, or the creation of uncertainty, based solely on assumptions with regard to a potential specific technology choice by the SMP operator.

ECTA considers that the assumptions made by ComReg with regard to VDSL2 vectoring technology development are erroneous (this is discussed below).

More fundamentally, ECTA considers that NRAs are under an obligation, where SMP is found, to impose appropriate specific regulatory obligations to address that SMP (Art. 16.4 Framework Directive). **If SMP operators could escape necessary regulation simply by selecting technologies that make the imposition of appropriate regulatory obligations impossible, the regulatory framework would be unacceptably open to gaming by dominant operators.** The European Commission’s 2010 Recommendation on Regulated Access to Next Generation Access Networks has clarified (Recital 21, Recommend 39) that obligations imposed by NRAs under Article 16 of the Framework Directive are to be based on the nature of the problem identified, without regard to the technology or the architecture implemented by an SMP operator, and that existing SMP obligations in relation to Markets 4 and 5 should not be undone by changes to the existing network architecture and technology, unless agreement is reached on an appropriate migration path. ECTA is of the view that ComReg’s draft proposals are not in line with these fundamental principles, and that ComReg should modify its proposals to bring them in line with these principles.

**VDSL2 with vectoring has, to our knowledge, not been commercially deployed on any meaningful scale anywhere in the world, and the technology has not been standardised.** Adopting de-regulatory decisions at this time, or giving de-regulatory indications at this time, based on assumptions about possible **roll-out of pre-standard VDSL2 with vectoring, is clearly premature and inappropriate, and entails serious risks of undermining competition, as well as undermining the credibility of the regulatory process.** As a matter of fact the first generation vectoring implies that the first operator which will deploy this technology will re-monopolize the area covered by the related DSLAM due to the impossibility to unbundle the cable served by the DSLAM itself. This implies also that the first mover will also have the advantage to make the choice of the vendor that best suits its economics, so the second mover will be able only to adapt its business to the first mover choice due to the fact that in the short term a standardisation for vectoring technology is not likely.

With regard to the technology facts and the roadmap for VDSL2 with vectoring, ECTA has the following points to make.

Vectoring is a technology which cancels cross-noise between copper pairs present in the same cable. The noise cancellation is achieved by monitoring noise levels and actively cancelling cross-noise in the cable by a vectoring processor deployed at the network level (this can be done at different locations in the network) and by equipment (specific modems) located at the customer premises.

The first generation of (non-standard) VDSL2 with vectoring (so-called “Board Level Vectoring) technology does not support the co-existence of multiple DSLAMs at the sub-loop aggregation point. This is valid for a single operator’s multiple DSLAMs, as well as for the DSLAMs of two (or more) operators. In this first generation, deploying multiple DSLAMs would reduce the benefits that can be gained from the deployment of vectoring, but in any case the impact is strongly dependent on multiple parameters (i.e. distance between loops located in different binders). Field tests by an ECTA member have shown that in some cases in which the impact in terms of reduction of bandwidth were very low. This leads to the conclusion that it is not justifiable to withdraw SLU for a very modest speed increase..

The technology roadmap (also driven by incumbent operators wishing to engage in multi-DSLAM deployments in order to be able to serve a greater number of lines) already provides for second and subsequent generations of VDSL2 vectoring technology. Incumbent operators themselves are awaiting the next generation(s) before committing to meaningful roll-out of vectored VDSL2. It is noteworthy in this regard that Eircom has characterised itself as a technology follower rather than as a technology leader, and this position has been borne out in practice, given Eircom’s comparatively late announced development of NGA.

Based on information in ECTA’s possession, **the second generation of VDSL2 vectoring** (so-called “System Level Vectoring”) **technology (still non-standardised) is likely to become available in the near future**, and quite possibly within less than 12 months. Crucially, this second generation is expected to support multi-DSLAM deployment, thereby mitigating or even removing the co-existence problem (for single operator multi-DSLAM deployment and for multi-operator co-existence).

To be more precise, it is our understanding that in first generation vectoring, the vectoring processor is embedded into the DSLAM(s) to be located at the sub-loop unbundling aggregation point (typically a street cabinet in the Irish case). By contrast, in second generation vectoring technology, the vectoring processor becomes a separate component which is located higher up in the network (e.g. at the MDF or metropolitan aggregation node), and is connected to multiple DSLAMs (with the DSLAMs physically residing at the sub-loop aggregation point). In essence, in the second generation, the vectoring ‘intelligence’ is being centralised, and the ability of remotely managing multiple DSLAMs is achieved.

In a second generation deployment, it will therefore be possible for two (or more) operators to co-exist, and use sub-loops, with a limitation (given the lack of standardisation) that they would likely need to adopt equipment from the same technology vendor and agree on management of the vectoring processor function. Such agreement on management of the vectoring processing function should be relatively non-controversial, given that the operators have a joint interest in achieving the highest possible bandwidth. We note in this regard that agreeing on joint technical decision-making and management principles is not new in the telecommunications industry, and has been done in the context of other DSL technologies deployed on copper networks (e.g. copper spectral management).

Further generations of VDSL2 vectoring technology are expected, which would enable co-existence at the sub-loop aggregation point of multiple operators using different technology vendors. This is likely to be achievable on the basis of standardisation.

On the basis of the above, ECTA asks ComReg to:

- a) Fully inform itself of the technology trajectory for DSL vectoring technology, including from neutral (non-vendor/non-incumbent) information sources, prior to taking any decisions on the phasing-out of sub-loop unbundling and/or prior to taking any decisions permitting the deployment of vectored DSL on the SMP operator's copper network.
- b) Refrain from taking any decisions which would phase-out, create an expectation of phase-out, or create a concern about possible phase-out, of sub-loop unbundling, in ANY geographic area of the Irish Republic.
- c) Disallow the deployment of first generation VDSL2 vectoring technology, due to its extremely negative implications for competition. Forcing OAOs to move down in the ladder of investment (i.e. from unbundling to WBA is not a desirable policy direction).
- d) Only allow the deployment of second (and future) generation DSL vectoring technology insofar as a formal offer is made to other/subsequent deploying operators to jointly manage noise cross-cancellation or insofar as a regulatory obligation is imposed on any first deployer to provide noise cross-cancellation to a second deployer. Principles on operational management and cost-sharing of noise cross-cancellation may have to be adopted to enable co-existence.

We hope that our comments on this case are helpful and remain at your entire disposal should you have any queries.

Sincerely yours



**Erzsebet Fitori**  
Director

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*ECTA, the European Competitive Telecommunications Association, is a non-for-profit European telecoms association established to support the regulatory and commercial interests of over 100 pro-competitive telecoms operators including leading alternative fixed broadband and triple-play providers, pan-European business service providers and challenger mobile operators. We work for a fair regulatory environment which allows all electronic communications providers to compete on level terms in order to multiply investment and innovation throughout an effective European internal market.*

Submissions to Consultation Document No. 12/27

ComReg 12/97

## **5 Eircom Limited**

eircom Group

Response to ComReg Doc. 12/27

*Consultation on*

***NEXT GENERATION ACCESS (NGA) Proposed Remedies for Next Generation  
Access Markets***

**EXECUTIVE SUMMARY AND INTRODUCTION**

Date: 13/07/12

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### Annex 1: Response of Frontier Economics to Oxera Paper

#### Related documents in the eircom response:

Answers to Questions raised in the Consultation

Annex 2            NGB and NGA Margin Squeeze Tests: Traffic/Usage Charge

Annex 3            Cost Stack Analysis

Frontier Report: Competitive constraints on eircom from UPC

Frontier Report: Effect of access regulation of eircom in the presence of increasing competition from UPC

## EXECUTIVE SUMMARY

### 1.1. NGA AND IRELAND'S DIGITAL FUTURE

ComReg's consultation comes at an important juncture in Ireland's economic recovery. Forfas and the National Competitiveness Council have identified the roll-out of high speed broadband as the top infrastructure priority for enterprise. The Next Generation Broadband Task Force has endorsed the ambitious EU Digital Economy targets and a New National Broadband Plan is in preparation.

Next Generation Access – universally referred to as 'NGA' - is a major component of the nation's future broadband infrastructure. eircom has clearly committed to construct an NGA network that is best in class *and* open access, providing a critical platform that meets the myriad requirements of consumers and business, as well as enabling diversity and choice of service provider for the country. In all the time devoted to assessing options and alternatives, eircom is the only company that has stepped up and expressed an intention to make this investment.

NGA deployment to 900k homes and 100k businesses is a high-risk investment of more than €400m in the next 3 years in a new infrastructure platform for Ireland. There is no certainty as to what the consumer response will be in a market where a competing fibre-based cable platform is already supplying high-speed broadband services without any commercial access offering or regulatory obligation to develop one.

A commercial return on the investment requires a regulatory climate which recognises these market realities. eircom has encouraged ComReg to use the considerable flexibility it has within the European framework to forge a regime tailored to Ireland and its specific circumstances and needs. Regrettably, this is not reflected in the consultation proposals. Rather, the consultation puts forward an onerous and restrictive approach that simply does not recognise market reality: it is prohibitively expensive for eircom to adopt, costly to administer, and likely to result in higher retail charges for customers. In short, ComReg's approach, if adopted in totality, would make eircom's current investment programme impossible and be a fundamentally regressive step for industry, consumers, policy and the economy.

Specifically, the consultation's approach on the one hand, and the ambitions of the Digital Agenda and Government on the other appear to us to be in direct conflict. If the measures proposed in the consultation are implemented, Ireland risks missing the opportunity to move rapidly – or indeed ever - towards an infrastructure-enabled digital economy.

eircom reiterates its ambitions for infrastructure build and to the support of wholesale competition. The scale and pace will be contingent on both the regulatory framework and consumer demand. To eircom, the market realities that eircom confront in the form of intense competition in urban areas from the cable platform mean that the case for the regulation of



eircom's future NGA network is fundamentally flawed. This is because it rests on a finding, namely that eircom has market power in infrastructure access, that is no longer valid in the urban areas concerned with NGA investment. In this response we offer our proposals as to what a more investment-friendly approach than the approach proposed by ComReg would be so that a way forward may be found in the current regulatory context. However, nothing in eircom's response should be taken to indicate that eircom in any way agrees to the principle of NGA regulation in the presence of strong competition arising from an alternative platform.

## **1.2. TRANSITION TO NGA**

Many of the proposals set forth in the Consultation Document are predicated on ComReg's view that for the next several years conventional copper based services , "... will remain the cornerstone for wholesale access in areas inside and outside the NGA footprint areas" (Doc. No. 12/27, para. 3.26).

Conventional copper cannot provide the superfast broadband speeds that are the aim of the Government's broadband policy. Furthermore, if ComReg intends to encourage OAOs to invest in the services of the nineties and early twentieth century rather than those fit for the future, eircom's investment in NGA will not be possible. For such a large capital investment, rapid adoption and usage are pre-requisites for adequate returns. A policy that actively promotes copper based services over NGA is totally incompatible with both the Government's policy and the Digital Agenda, and is not in any event permitted by the framework. There is no purpose to be served by promoting investment in current generation platforms at the expense of investment in the next generation of technology, and no justification for it. The sole objective should be to encourage all operators to invest capital in optimising the quality and scope of available services, and this means investment, in one form or another, in fibre based networks.

One way this regulatory preference for conventional copper is manifested is through the arbitrary linkage that the Consultation Document proposes to establish between NGA retail charges and those for copper loop services. This linkage requires that price reductions for NGA services are mirrored in the prices for copper loops. The specific mechanism proposed by ComReg will tend to amplify the real value of these reductions as they pass through the value chain. The result will be to produce strong price signals that encourage OAOs to utilise copper instead of fibre and to dampen retail demand for high speed broadband services. This backward looking stance will frustrate migration to NGA.

## **1.3. COMPETITIVE DYNAMICS IN MARKETS 4 AND 5**

In considering the competitive dynamics of NGA, Ireland divides clearly into two geographic markets. Urban areas have a population density and characteristics making NGA infrastructure

build relatively attractive. In rural areas the costs of NGA network build currently outweigh the returns available.

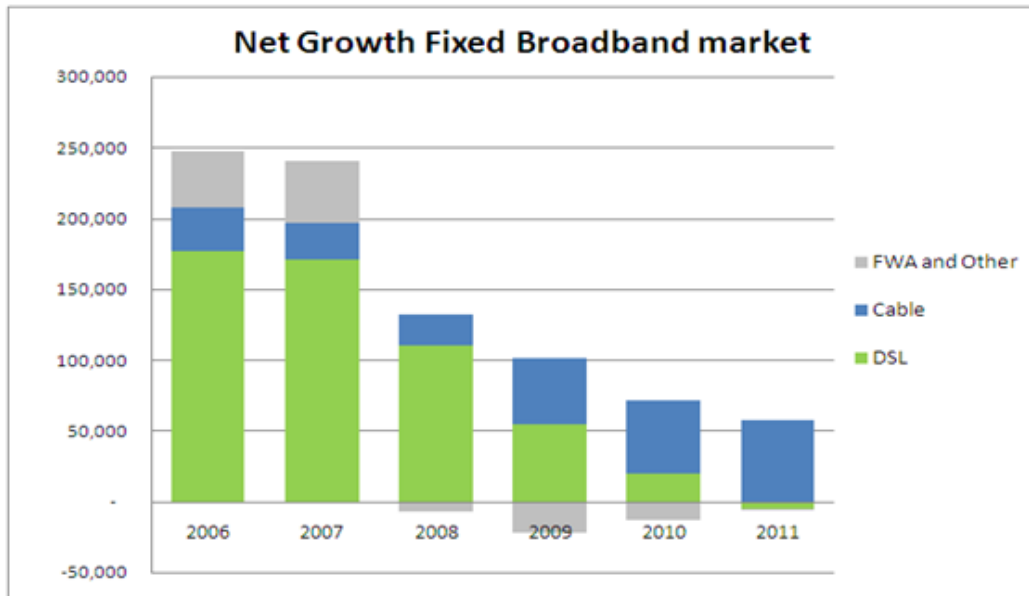
In the urban areas of Ireland the cable operator, UPC, has built and is operating a cable infrastructure offering high-speed broadband services using a fibre-based network. Despite the reality on the ground, the way in which the market analysis has been applied by ComReg has led to a determination that eircom, without an active NGA network, has Significant Market Power in the market for wholesale NGA services. By contrast, UPC, with a network already able to offer access speeds of 30 megabit/sec to over Irish 700,000 homes<sup>1</sup> and with products at 25Mb\s, 50Mb\s and 100Mb\s, is not. To the best of eircom's knowledge, ComReg has never considered whether UPC's network is capable of offering bitstream access or, alternatively, whether the presence of these two platform competitors means that neither UPC nor eircom should be subject to ex ante regulation in urban areas in respect of NGA services. It is regrettable that no new market analysis has been undertaken by ComReg in order to assess the propriety of the market definition and the suitability of the obligations imposed on eircom in light of market and technology developments affecting both eircom and UPC's actual and potential offerings.

For this reason it is rational to look at competition considering both the national market and the separate markets in urban and non-urban areas. Alternatively, it is important to consider differential remedies for high-cost and low-cost areas. For this purpose urban areas are those where UPC has a network. There will be a good correlation between this definition – used because there is data available – and the NGA footprint used by ComReg.

Reviewing the data at a National level and across all markets the stark contrast in the recent performance of DSL based platforms versus Cable broadband platforms is pronounced. As recently as 2008, DSL as a platform added 5 customers to every 1 added by Cable broadband. In the calendar year 2011 the DSL platform saw negative growth while Cable broadband grew by 58k subscribers.

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<sup>1</sup> Dana Strong, CEO UPC Ireland, speaking at a Limerick Chamber event on 27 January 2012



Source: ComReg Quarterly Reports

This market erosion is more pronounced in the urban areas where cable broadband is offered. In these areas both eircom Retail and eircom Wholesale are seeing steep declines in their share of broadband. By way of example, the table below outlines the Consumer Fixed Broadband market movement in the 12 months to Mar-12. The figures in brackets in the table are the relevant market share figures for Consumer Fixed broadband.



The net performance of the eircom Group broadband customers, comprising of multiple operators on eircom's Bitstream / LLU platforms in Consumer broadband in the 12 months to Mar-12 was negative 20k growth, in a market that grew by 20k lines. The performance of UPC broadband in the same area, over the same period was growth of 57k broadband lines.

It is clear that within urban areas, and the NGA footprint, cable already has the majority share of superfast broadband and that share is growing rapidly. The cable network is already capable of providing high speed broadband services and, based on experience elsewhere, of offering NGA services.

In these circumstances, eircom will face challenges in ensuring that its NGA is fully and efficiently utilised. The commercial requirement to generate sufficient take-up of services by wholesale and retail customers to efficiently load the network in the presence of alternative infrastructure means eircom must move quickly to implement vectoring technologies, must raise its bandwidth offers to competitive levels and towards Digital Agenda standards, and must take a pro-active approach towards growing its wholesale NGA offerings. This, in fact, has been eircom's strategy for the past 18 months as manifested in its programme of Wholesale Reforms, designed to grow eircom's wholesale business. eircom's incentive to promote its wholesale

business is developed more fully in Annex 1 to this response, a paper prepared by Frontier Economics in response to Oxera's report.

eircom believes that significant policy implications flow from these developments.

While application of the European regulatory framework for electronic services may in general have focused on telephone company incumbents, the reality of the Irish market is that in urban areas UPC has a very strong presence in the retail broadband market. In determining what remedies flow from the finding that eircom has SMP in the WPNIA and WBA markets, ComReg needs to consider carefully the impact of its conclusions on eircom's capacity to compete. If the obligations imposed on eircom increase its costs, reduce its speed to market, constrain its retail charges or oblige it to share network plans on a non-reciprocal basis, the retail NGA market will be distorted in favour of a wholly unregulated UPC.

It follows that an appropriate regulatory regime is one which recognises the realities of the Irish market and balances the need to support competition by providing access to wholesale services with the need for retail competition. eircom believes ComReg has focussed unduly on the first of these at the cost of the second. The advantages that this approach confers on UPC unfairly, burdens eircom and all of the many operators that use its network at present, and intend to use the NGA, if built, in the future.

In NGA markets eircom has a strong incentive to load its network through as many routes to market as possible. eircom must necessarily have a positive attitude to wholesale opportunities, as the Wholesale Reforms programme confirms. Comments in ComReg's consultation, and in Oxera's report, asserting a strong risk of foreclosure, misunderstand the practical circumstances of the NGA market in Ireland, and ignore eircom's stated objectives in this respect.

These issues are considered more fully in the Frontier Economics analysis in response to Oxera presented at Annex 1, which concludes that:

1. There is significant competition from UPC in urban areas in Ireland, which should be factored in to the analysis of the appropriate regulation to apply to eircom's proposed NGA network. In view of the market dynamics, Frontier questions whether eircom would have an incentive to offer access terms that would foreclose efficient rivals. In Frontier's view there is a much more limited risk of foreclosure by eircom than Oxera's report has assumed.
2. ComReg should consider carefully the costs of the regulatory remedies proposed in the Consultation Document, particularly proposals to impose extensive and prescriptive price controls and "equivalency of inputs" regulation on eircom's provision of NGA products. Imposing these measures on eircom while UPC remains unregulated could have a distortive effect on platform-based competition between eircom and UPC, with the result that the costs of such regulation are likely to far outweigh any benefits.

3. If ex ante price controls are nonetheless imposed at the wholesale level, Frontier questions the need to set access prices at multiple tiers of the NGA value chain, and between VUA and LLU products, as Oxera has proposed. Given the uncertainty about future take up of NGA-based services and NGA costs, there are significant risks to such extensive regulation. In particular, there is no basis for specifying an economic space between the VUA product and SLU/LLU products. Moreover, there are considerable risks in linking the prices of NGA services with those of legacy services as Oxera has proposed.
4. ComReg should adopt a less intrusive approach to regulation which focuses on protecting competition across key parts of the value chain. In particular, ComReg should consider establishing a framework for assessing whether there is sufficient margin between different prices at key levels of the value chain, rather than price controls. Such a framework would provide eircom and OAOs with reasonable certainty about how ComReg would intervene if necessary, whilst also allowing greater flexibility for eircom to adjust its prices to respond to competitive developments in the market.
5. If ComReg believes that prescriptive price regulation is necessary, it should adopt an ex-ante margin squeeze test set to safeguard economic space at the deepest level of the NGA value chain that currently appears feasible, i.e. between NGA retail and VUA prices.
6. If ComReg is concerned with safeguarding efficient competition between NGA and legacy services, it should consider what is the appropriate economic space between NGA retail prices and LLU prices rather than between LLU and SLU, given that experience across Europe indicates that there is no demand for SLU.
7. Finally, given the existence of vigorous platform-based competition in Ireland, an equally efficient operator (EEO) approach should be utilised in any ex ante margin squeeze test. Moreover, Frontier questions whether an average total cost benchmark is appropriate as it includes costs that may not be relevant to a firm's decision to enter or to remain in the market.

#### **1.4. ACCESS OBLIGATIONS**

eircom proposes to provide wholesale NGA access services in the form of NGA Bitstream and VUA, with optional multi-cast capabilities. These services have already been trialled and their nature and functionality have been debated at length with the industry. The services that eircom proposes to offer are very similar to those being provided by SMP operators in most other European markets.

eircom also proposes to provide backhaul and co-location facilities ancillary to its NGA Wholesale services.

However, eircom believes that ComReg is seeking to go further than regulators elsewhere in Europe by mandating further and additional obligations.

Existing obligations to provide access to civil engineering infrastructure, established under the WPNIA regime, are not restricted to the competitive provision of narrowband services. They can be used without further change for other operator provision of access fibre.

New obligations in relation to dark fibre appear ill conceived and unlikely to be of practical benefit. There is scarcely any demand for civil engineering infrastructure access, but eircom is reasonably confident it can meet reasonable demand should it emerge. So the necessity for an alternative remedy, should demand arise that eircom is unable to meet with a civil engineering solution, is far from clear. The likelihood that existing fibre would coincidentally be available in the right place and lying unused is not strong. eircom believes this to be an unrealistic solution to an unlikely problem which is neither necessary nor proportionate.

ComReg raises important questions in relation to the future of sub-loop unbundling. eircom's position on this is very clear. Only the use of vectoring will allow copper based delivery of bandwidths which can meet the Digital Agenda targets, and SLU is incompatible with vectoring solutions. If ComReg insist on maintaining an obligation on eircom to meet requests for sub-loop unbundling in NGA areas, then vectoring cannot be deployed. Of the three Options ComReg set out, only Option B, with some modest adjustments set out below in our detailed response, is compatible with eircom's planned NGA build and use of vectoring.

Eircom plans to commence the rollout of vectoring in early 2013. eircom will be deploying vectoring capable DSLAMs for NGA from this date and will retrofit vectoring to cabinets that have already been deployed. By the end of 2013 it is expected that fifty percent of all cabinets DSLAMs will be vectoring capable. From the end of 2014 on it is intended that 100% of deployed cabinet DSLAMs will be vectoring capable.

ComReg is right to consider the transition from copper to fibre networks, and the eventual withdrawal of copper based access. For some time yet a hybrid position will prevail, with both copper and fibre based delivery in place. There will, however, come a tipping point beyond which it will be both uneconomic and unreasonable for eircom to continue to bear the costs of two networks on a national basis.

How quickly that will arise is far from clear. eircom understands that withdrawal of existing facilities will be a sensitive process, and that notice and close working with industry will be required. We accept ComReg should agree to any such withdrawal. With that safeguard it does not seem necessary, and may prove premature and undesirable at this early stage, to set out a fixed duration for notice periods or the terms under which they might be agreed or varied before the rates of migration are clear.

ComReg is right to stress the importance of effective migration regimes. eircom will play its part, but the issues are broader than eircom and NGA. Effective migration is about ensuring consumers are able to move readily between all operators, including from other operators to

eircom. ComReg should focus on developing a framework for the fair and reciprocal migration processes which all industry players follow. eircom proposes such a framework in its response.

### 1.5. PRICE CONTROLS FOR WPNIA AND WBA

eircom agrees that it is not appropriate to regulate retail NGA prices directly. We welcome ComReg's acceptance that UPC's broadband services and in future LTE act as a constraint on the retail price levels that can be achieved by eircom and the users of its wholesale services. However, we question whether the Consultation Document recognises the potency of, in particular, the constraints from cable broadband competition even at the wholesale level.

eircom also agrees with ComReg that a margin squeeze approach to wholesale broadband access charges is appropriate at this stage of maturity of services and networks. eircom does not agree with either the form of the test or the structure of the margin squeeze model set out in the Consultation Document.

eircom's NGA infrastructure is a new investment and services based upon it are not yet established in either retail or wholesale markets. The value customers will place upon NGA services, and the prices they may be willing to pay, are not known with any precision. The costs of key network elements are not as yet mature, nor are the loading levels they must be dimensioned to support established with any certainty. The costs of operating and servicing an NGA infrastructure under real market conditions are at this stage unknown. This is a new market, with many cost and revenue uncertainties.

It is also clear that there are strong national interest grounds for encouraging NGA investment and take-up. What is needed in this context is a regulatory pricing framework that allows reasonable freedom to eircom to experiment and innovate, ensuring competition is enabled, and providing opportunity for services and their costs to mature. Price regulation must reflect the market circumstances in which it takes place and suits the objectives that are being pursued. It must be forward looking and framed so as to support and encourage those investing in infrastructure and those interested in taking up NGA services.

Regulation of price must, of course, also take utmost account of EU recommendations. The EU recommendation of 20 September 2010 on regulated access to Next Generation Access<sup>2</sup> sets out factors that national regulators must consider in defining an approach relevant to their national market. The recommendation recognises that conditions of competition will change markedly under NGA, but also urges regulators to set a clear and predictable regulatory framework so that investment can be made with confidence. The recommendation stresses the need for cost orientation of access services, while recognising that retail-minus price regulation

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<sup>2</sup> 2010/572/EU

may also have a role to play. But sight should not be lost that the recommendation is just a recommendation and that it is for ComReg, while taking utmost account of the recommendation as required, to determine what is right for Ireland and its particular circumstances.

Against this backdrop it is disappointing that Consultation Document proposes a highly intricate, intrusive and inflexible set of price controls, applying conventional price remedies with exceptional severity. The result gives neither the clarity nor the certainty investors seek. It promotes further copper based services at a cost to NGA and inhibits price innovation and experimentation. The controls proposed are biased towards encouraging further take-up of Line share and full unbundling (rather than simply protecting existing OAO investment) and as a result actively discourage investment in NGA, and take-up of NGA by wholesale customers. ComReg's proposals take little account of the broadband centric and video centric world to which we are moving, which will require high speed broadband solutions.

The central premise of ComReg's approach is that the price structure of NGA should accommodate competition at multiple points in the NGA value chain, and that the NGA value chain should be mechanically linked to copper access services. The rigid concept of a fixed money margin per user at every possible level militates against innovative<sup>3</sup> wholesale pricing structures of the form proposed by eircom (and Vodafone). eircom submits that both of these premises are flawed, and that ComReg's objectives and the national infrastructure would be better served by a much simpler approach. The proposed controls are not sufficiently flexible to allow retail and wholesale NGA prices to respond to market developments by competing platforms, or changes in consumer preferences.

The Consultation Document suggests a multi-tier margin squeeze model, with the starting point of reference being retail charges. A cascade of margin squeeze tests would apply between retail charges and end to end ("white Label") products offered to other operators, between end to end services and NGA bitstream and between NGA bitstream and VUA. The link to copper based services is established through a further margin squeeze test from VUA to SLU and a yet further link from VUA to LLU.

What this means is that for each of the four access products involved (white label, bitstream, VUA and SLU) a price must be set at which the purchaser of that product can compete – with an overly generous cushion of margin -- with the next service up the value chain. The margin to allow this includes an allowance for the cost of the added value element and for any other avoided costs. As a result, the retail price sits atop a pyramid of accumulated regulated wholesale margins. By opting for so many points of intervention on a value chain, the

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<sup>3</sup> These could include the eircm proposals to an industry seminar on 24<sup>th</sup> October 2011, the Towerhouse proposals for Vodafone in "A new approach to wholesale pricing for next generation access networks" (June 2011), or the Deutsche Telekom offer ([http://www.bundesnetzagentur.de/cln\\_1932/SharedDocs/Pressemitteilungen/EN/2012/120704\\_VDSLBitstreamPriceModel.html?nn=48242](http://www.bundesnetzagentur.de/cln_1932/SharedDocs/Pressemitteilungen/EN/2012/120704_VDSLBitstreamPriceModel.html?nn=48242))



Consulation Document proposes to require the pricing of wholesale access services so that like for like competition can take place in five domains:

- For retail NGA services based on integrated platforms, for example, eircom retail and UPC
- For retail NGA services based on end to end NGA wholesale services
- For retail and wholesale NGA services based on NGA bitstream
- For retail and wholesale NGA services based on VUA
- For retail and wholesale NGA services based on SLU

This is unrealistic. NGA competition will not take place at all of these levels.

This byzantine level of complexity is neither necessary nor proportionate. There is no meaningful competition based on SLU in any European market. SLU is incompatible with vectoring and therefore cannot be offered in eircom NGA areas. There is no need to bring SLU into the value chain (we consider below the proposed linking of SLU to LLU charges).

Competition based on NGA bitstream and wholesale end to end NGA services is not simply a matter of buying at a price which allows an operator to price compete with eircom retail. It is also – and from a competition perspective, primarily -- about enabling alternative channels to market, alternative service models, different types of bundles and other forms of innovation. Regulation which simply concentrates on building margins at every conceivable level treats competition as a matter of price arbitrage, ignoring and thereby reducing incentives to innovate and differentiate.

The most concerning aspect of the pricing scheme proposed in the Consultation Document is that the cumulative costs and margins of the model generate a retail price floor that is set to cover all of the allowances included to support (artificially) competition at every point in the value chain. Those margins are not only unnecessarily numerous, they are also inflated by the nature of the model. For example, the costs allowed include compensation for lack of scale, even though many competitors of eircom are part of global corporate groups that are significantly larger than eircom.

eircom has many detailed comments on the specific principles and money amounts proposed:

- At a high level, we are concerned that the costing models make many unverifiable assumptions about build cost and take-up levels; much simpler tests which do not rest upon such assumptions are required.
- The only reasonable and proportionate treatment of retail costs is EEO rather than SEO at this stage of market development. In particular, the treatment of SEO retail costs, assuming a new entrant not currently in the broadband market or related markets, is totally unrealistic. If instead, ComReg makes the much more realistic assumption that existing competitors or potential entrants have a significant customer base, even the

SEO costs would move very close to eircom's cost or an EEO approach. The currently proposed retail costs are grossly overstated.

- There are significant double-counts in the total cost stack which are not obvious because of multiple different costing approaches at each layer.
- The Consultation Document's preferred option for dealing with voice services is backward looking, and unnecessarily complicated. The modern equivalent asset of VoIP will be used by ComReg to set interconnect<sup>4</sup> prices by year end, and there is no reason why it should not equally apply in the context of NGA.
- The consultation incorrectly suggests there are simple and direct linkages between SLU and LLU prices, despite the fact that the derivation of these prices is quite independent.

This "cost floor" means eircom either has to maintain retail charges higher than it might otherwise choose to do, or when it cuts retail charges it has to reduce all its wholesale charges as a result. And here the mechanism proposed requires the reduction to be made in absolute money terms, so that the relative value of the reduction increases as it passes through to SLU – indeed it is quite possible that a response to retail price competition could lead to a *negative* price for SLU.

Although ComReg claim to be granting eircom retail pricing freedom, in practice retail charges are squeezed into a narrow space, if space exists at all, between an inflated accumulation of margins and very powerful UPC retail competition.

eircom believes a much simpler model, based on a single margin squeeze test between a portfolio of retail charges and VUA would ensure sufficient safeguards for competition, better equip eircom to compete with UPC and reduce charges for customers, and offer a simpler and more predictable model to support investment.

The Consultation Document makes much of the value of a linkage between copper based charges and NGA. We deal elsewhere in this response to the damage that a continuing commitment to copper based services causes to NGA. eircom also reject as unreasonable and disproportionate the opportunistic attempts to subsidize migration to full unbundling by means of averaged transaction charges (across a large range of legacy and NGA services), which do not reflect the true cost of activity for each order type.

Finally, eircom welcome the proposal to leave the pricing of certain WPNIA offerings to commercial negotiation. However, we are concerned that the guidelines suggest a mix of depreciated historic cost adjusted for efficiency (for duct), pure LRIC (for dark fibre), and LRAIC (for NGA).

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<sup>4</sup> Refer for example to ComReg document 12/67 sections 2.15,; and throughout section 7.3

## 1.6. NON-DISCRIMINATION AND EQUIVALENCY OF INPUTS

The objective of ensuring fair supply of fit for purpose wholesale NGA services is common to ComReg's consultation and to eircom's voluntary Wholesale Reforms programme.

However, the open-ended Equivalency of Inputs ("Eoi") obligation proposed by ComReg represents a significant and onerous addition to eircom's existing regulatory obligations that is unjustified and without legal foundation. Its adoption threatens the building of NGA infrastructure of any significance and is a major issue.

NGA is a new and uncertain service. Demand levels are unproven. Infrastructure and service costs are immature. How price structures will develop, and how costs will be recovered are matters of estimation at this stage. But there is common consensus that it is important for both national competitiveness and foreign direct investment that competing NGA infrastructures are built out.

In these circumstances regulation is needed which both promotes competition and encourages investment and innovation. That is the model emerging in other economies.

ComReg's Eoi proposal will distort retail competition by placing eircom under a significantly increased regulatory burden when its major fixed-line platform competitor, UPC, is subject to no regulation at all. ComReg's proposal undermines the NGA investment case.

The costs of meeting the proposed Eoi obligations would be considerable, both the one-off costs of reviewing and revising all existing systems, processes and interfaces relevant to the wholesale NGA portfolio life-cycle, and the recurrent costs of operating revised processes and of constantly notifying and reviewing Eoi delivery and Eoi exceptions with ComReg delaying the introduction of products to the market.

These proposals fail to clear a number of important hurdles, all pre-requisites for regulatory imposition. They are not a response to clearly identified market weaknesses. They are not justified by any test of reasonableness or proportionality. They are exceptional measures requiring but lacking specific and objective justification, and do not demonstrate any exceptional circumstances warranting them. As exceptional measures they require, but do not have, clearance through specific and rigorous EU processes designed for this purpose.

In short, the proposed imposition of a sweeping EOI obligation is not warranted, proportionate, or lawful. Were these measures to be introduced, the effect would in theory be a greatly increased regulatory overhead, higher costs of delivering NGA services more slowly, and distorted platform competition, but in practice would thwart eircom's proposed investment so the question would not arise. It is impossible to understand on what basis – for no persuasive case is provided in the Consultation Document – such measures could ever be considered wise, helpful or conducive to creating Ireland's connected society.

The outcomes ComReg seeks can be achieved without this unwarranted intrusion into eircom's business by ComReg:

- Accepting and supporting eircom's voluntary reforms
- Tracking the outcomes through appropriate KPI reporting
- Intervening on a case by case basis if necessary
- Resorting to more formal and onerous obligations if and only if continuing problems are demonstrated that are not resolved through solutions developed in industry fora.

### 1.7. TRANSPARENCY

eircom agrees that transparency is important, especially under the voluntary wholesale arrangements it has proposed. The NGA industry forum is proving a valuable vehicle for clear and shared communications for all wholesale customers, including eircom's downstream businesses. Data already shared with the industry in this way includes product development plans, product descriptions, technical handbooks, service schedules, industry process manuals, systems data contracts, network rollout and systems briefing notes. eircom believes that formal obligations relating to transparency should build upon and reinforce existing good practice and the role of the NGA Forum.

The notification periods proposed by ComReg are extremely long, particularly for product launches and changes, where a seven month notice period is proposed. This is unlikely to be appropriate in a new and immature market where services may evolve and change rapidly. For new product proposals, or changes to existing products, if the NGA industry Forum agrees a project plan or product Road Map which includes launch dates at periods of notice within the backstop period then clearly industry members are comfortable with and accept those timescales as reasonable. Allowing the Forum to agree launch schedules with a more reasonable default period of three months would ensure industry interests are protected, reinforce the role of the Forum, reduce the burden on ComReg, provide greater flexibility, and still retain the ComReg proposals as a safeguard. It would of course remain open to ComReg to override the view of the Forum or override the default, if it judged it necessary to do so.

eircom will face two forms of retail competition for NGA customers. It will compete with customers of its wholesale services, for whom the transparency proposals are an important safeguard. It will also compete with alternative platforms, notably mobile services and cable.

Here the transparency proposals risk distorting competition. Advance notice of network build, service developments and price changes may be used for tactical and strategic advantage by eircom's platform competitors. For example, the ability of wholesale customers to influence the launch schedules of NGA wholesale services could be used to delay services competing with alternative platforms.

These potential adverse consequences of transparency would be damaging to all users of eircom's wholesale services. eircom trusts ComReg will take steps to avoid or mitigate these effects by, for example, intervening to avoid tactical delay to product launch or changes and through limiting access to information to those who "need to know" in order to prevent misuse and anticompetitive consequences.

## 1.8. VOICE OVER NGA

In the immediate future voice services provided by eircom to its retail customers and in response to its regulatory obligations will continue to be based on the existing copper network. POTS based NGA services have been designed to allow conventional voice telephony to co-exist with broadband delivered over NGA.

As ComReg's consultation observes (para 10.10) "many operators now have Voice over Internet Protocol (VoIP) offers in both the wholesale and retail space". The trend towards VoIP is clearly gathering pace. As a data and IP based service VoIP is unconstrained by national frontiers, service can quickly be provided based on existing capabilities or derived from experience in other markets. Unlike voice over conventional networks, market entry is relatively straightforward and barriers are low – hence the finding quoted above.

At this stage, however, for some users VoIP is only a partial substitute for conventional voice telephony. For many other users it is a complete alternative. It would be premature for ComReg to attempt to prejudge these evolving issues in this consultation, which cannot reasonably constitute a proper market review of VoIP or Voice over Broadband.

eircom confirms that it intends to build and operate a VoIP platform; that it will seek to offer from that platform a combination of quality, functionality and cost which makes a mass market migration feasible; and that it intends to offer voluntarily a wholesale service from that platform on commercial terms. eircom cannot at this stage predict when its VoIP platform will be in place or over what timescale it will come to have mass market functionality.

Issues of VoIP quality and functionality are not unique to Ireland. Worldwide, telecommunications companies and their suppliers are working to develop the VoIP platform and its capabilities to ease mass market adoption. As those issues are resolved globally so vendors and operators will come to supply and use platforms of an appropriate standard.

Just as VoIP providers can today offer service in Ireland using existing capacities and experience, so in future they will be able to do so on the basis of mass market compatible platforms. Barriers to entry that are low today will be low in the future.

It is therefore premature for ComReg to conclude, in Para 11.293, that "wholesale IP voice is required by OAOs from eircom to compete in the retail market". First, platforms of the right capability have to be developed. At that stage a proper market review might establish that

barriers to entry are such that no obligations on eircom are required. Our view is that existing and new suppliers will quickly enter the market, as they have done using today's VoIP capabilities. In any case eircom will offer a wholesale VoIP service voluntarily and on commercial terms. Regulatory intervention is not required both because entrants have multiple, accessible sources of supply and because an eircom wholesale offer will be available and competing with others on commercial terms.

## 2. INTRODUCTION

### 2.1. THE STRATEGIC CONTEXT

ComReg has a stated objective to support the ambitious targets that have been set by the European Digital Agenda for achieving increased penetration of super-fast broadband in Ireland by 2020. There is common ground among policy makers that high speed broadband access will be an important driver of efficiency, economic growth and inward investment. This point is well made in the introductory comments of the Minister for Communications in the report of the Next Generation Broadband Taskforce: "...Next Generation Broadband will bring significant development opportunities to Ireland in terms of growth, entrepreneurship, and jobs....The Programme for Government recognises those opportunities and has committed to facilitating the provision of faster broadband..."<sup>5</sup>

Next Generation Access infrastructure will be a critical driver of Next Generation Broadband. eircom's ambition, despite the financial competitive and economic challenges it faces, remains to build a world standard NGA infrastructure over the next three years, with reach extending as far as is commercially viable. How ComReg chooses to structure and operate the regulatory framework will be crucial to the NGA investment business case. Determining regulatory policy for NGA is an opportunity for ComReg to encourage and promote NGA investment, but there is also a significant risk that inappropriate and overly intrusive regulation will inhibit, delay and limit the extent of NGA build.

The commercial, economic and regulatory complexities surrounding NGA deployment in Ireland call for vision and creativity from ComReg, with forward-looking regulation focused on encouraging fibre investment, price and service innovation and efficient, sustainable competition. Any remedies that ComReg applies to eircom's NGA services must be the least intrusive means possible to resolve the competition problem identified. A sensitive approach to regulation is particularly important because eircom faces potent platform competition from cable across the areas where NGA will be deployed, but cable bears none of the costly and restrictive regulatory burdens that the Consultation Document proposes to impose on eircom.

Central to the viability of eircom's business plan is greater pricing flexibility for NGA-based services at both the wholesale and retail levels in a marketplace where there is vigorous platform competition in the NGA area, longstanding experience dealing with *ex ante* margin squeeze assessments and a demonstrated commitment on eircom's part to Wholesale Reforms, including full equivalence between eircom's retail operations and other wholesale customers in accessing eircom Wholesale's OSS system for provisioning, ordering, fault repair etc. In a

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<sup>5</sup> Enabling a Connected Society, Report of the Next Generation Broadband Taskforce, page 4.

statement issued by EU Commissioner Neelie Kroes on 12 July 2012,<sup>6</sup> these three elements were identified as the “right conditions” for regulators to adopt a more flexible pricing approach. This flexibility would include, among other things, forbearing from applying cost orientation to NGA wholesale access products. We wholeheartedly agree.

We also note and support some of the other key principles articulated by the Commissioner in advance of a recommendation that she plans to propose following consultations with stakeholders:

- A level playing field for all competitors is needed, which should include platform as well as intra-modal competitors;
- Too much intervention constrains flexibility, and new possibilities need to be explored to facilitate the transition from one technology to another;
- Price regulation should be focused on key anchor products in the right circumstances;
- Regulators should not pick winners and losers by promoting one form of NGA over another and incremental solutions combining fibre and copper should be supported;
- Use of the Modern Equivalent Assets test in developing NGA cost models should be considered as a way of providing appropriate build/buy signals;
- Adopting a regulatory approach that will stand the test of time and provide a reasonable degree of certainty to all players, while maintaining a sufficient degree of flexibility to allow for changing circumstances during this transitional period, will benefit all stakeholders;
- There is no evidence that a forced decrease in the price of copper-based services would spur NGA investment.

We appreciate and support the Commissioner’s statement and the “loud and clear signal” that it carries to all stakeholders: *that the regulatory framework should be implemented to enable industry players to “invest profitably in the future connectivity of Europe, and compete on the basis of their investment.”*

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<http://europa.eu/rapid/pressReleasesAction.do?reference=MEMO/12/554&format=HTML&aged=0&language=EN&guiLanguage=en>



## 2.2. APPROPRIATE REGULATION

3. The regulatory framework requires that regulation may only be imposed where it is justified and that regulation must, among other things:
- be objective, transparent, proportionate and non-discriminatory (Reg. 6(3) of the Access Regulations),
  - promote regulatory predictability (Reg. 16(2)(a) of the Framework Regulations), and
  - ensure that, in similar circumstances, there is no discrimination in the treatment of undertakings providing electronic communications networks and services (Reg. 16(2)(b) of the Framework Regulations).

Any access and interconnection obligations imposed on eircom must also be designed to promote efficiency, sustainable competition and efficient investment and innovation (Reg. 6(1) of the Access Regulations), while taking into account the initial investment that will be made by eircom (Reg. 12(4)(c) of the Access Regulations).

An appropriate regulatory approach for NGA is therefore one which:

- recognises Ireland's and eircom's circumstances and challenges;
- acknowledges the demand uncertainties of high speed broadband, especially at a time of constrained disposable incomes ;
- supports innovation in both price and service;
- takes due account of eircom's commitments to voluntary wholesale reform and improved wholesale (including NGA) services;
- is consistent and non-discriminatory in its treatment of enterprises investing in NGA to the extent possible; and
- is forward looking and supportive of the Next Generation Broadband Task Force ambitions,
- remains true to the principles of the EU NGA Recommendations, tailored to reflect reality on the ground in Ireland.

As set forth in the Consultation Document, ComReg's proposals do not meet these ambitions and are instead at risk of compromising eircom's NGA infrastructure build. eircom believes that a pro-competitive way forward can be found which is better aligned to national ambition and realities. We set out our suggestions later in this response. But first it may be helpful to explain why we consider elements of the consultation proposals to be counterproductive.

## 3.1. ISSUES OF PRINCIPLE

The Consultation Document proposes a more intrusive and burdensome regulatory regime than has been applied in Ireland to date, and one which is more demanding than regulators elsewhere in Europe have chosen to adopt. This regulatory approach is based on a policy

“cornerstone” that is at odds with the Digital Agenda and fundamentally undermines the business case for eircom’s NGA investment: that regulation should not only protect LLU investments already *made but also promote further LLU investments during the transition to NGA*.<sup>7</sup>

eircom is not proposing a “regulatory holiday.” Rather, eircom is seeking regulation that is workable and appropriate to market circumstances. This is not the case of the form of price regulation and “equivalence” set out in the Consultation Document. These proposals are entirely disproportionate forms of regulation which will distort competition. This is because, among other things, they fail to take any account of the strength of UPC’s position in the high-speed broadband market in the NGA footprint area and of the fact that UPC operates largely unregulated.

The four main areas of concern are outlined below.

### **2.3.1 PROMOTING LLU AT THE EXPENSE OF NGA**

Many of the regulatory levers that ComReg proposes to adopt are predicated on an apparent belief that LLU investment should continue to be promoted – not simply protected -- during the transition to NGA over the next three to five years. (See Doc. 12/27 at para. 3-26, 11.99). eircom believes that this focus on promoting continued investment in legacy infrastructure is misguided and contrary to the principle of technology neutrality which, all things being equal, means that ComReg should not favour one access medium over others in setting its regulatory policies.

All things are not equal, however. The European Commission and the Irish Government have established ambitious Digital Agenda targets for the introduction of superfast broadband. These targets cannot be met by promoting investments in legacy technology. LLU simply cannot support the speeds that policy makers want to deliver to society.

eircom’s business plan for NGA contemplates the roll-out of a network that will deliver speeds of up to 100 Mbps to an area covering over 50% percent of the Irish population by the end of 2014. eircom and its wholesale customers will not be able to compete with UPC’s superfast broadband offerings or with high speed mobile broadband networks without eircom’s considerable investment in NGA. In today’s economic climate, where capital is scarce and demand is unpredictable at best, the NGA business case is at risk.

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<sup>7</sup> See, e.g., CD at para 3.26, (LLU remains the “cornerstone for access inside and outside the NGA footprint areas”).

The business case for eircom's NGA network is cast in serious doubt by the proposal to continue to actively encourage LLU investment even as NGA is deployed. This will encourage competitors and customers to promote and adopt technologies that are incapable of meeting the Digital Agenda targets, at a direct cost to utilisation of NGA based alternatives. This means that NGA fibre deployment is at risk of being underutilised because of regulatory promotion of the LLU alternative.

It is therefore essential for ComReg to reassess the underpinnings of its regulatory proposals. eircom does not question the need for a reasonable transition period for OAOs and their customers to convert to NGA. However, there is no legitimate basis for LLU-centric regulatory proposals that will undermine rather than promote the Digital Agenda objectives that eircom is expected to support. *ComReg should make NGA investment and take-up – not the promotion of LLU investment -- the cornerstone of its regulatory approach, in line with the policies approved by the Government and the EU.*

### 2.3.2 PRICE COMPLEXITY

A highly complex and inflexible price regulation regime is proposed for wholesale and retail NGA services. At every point in the theoretical value chain, an onerous set of rules is proposed for the derivation of charges and to their relationship to one another. It appears unavoidable that this pricing regime will result in repeated dispute and intervention and is likely to inhibit price innovation and development.

In light of the competition that eircom faces in the NGA footprint area, the proposed NGA price remedies, together with ComReg's proposed rules for the pricing of retail bundles, are disproportionate, unreasonable and unworkable. Micromanagement of a marketplace in its infancy will stifle growth and act as a strong disincentive to investment. Furthermore, in light of the unregulated room for manoeuvre enjoyed by eircom's cable platform competitor, the application of these rules will distort rather than promote competition.

The NGA price remedy adopted by ComReg should take the following key factors into account:

1. Retail constraints imposed by UPC's pricing of its broadband services (including as part of pay television bundles) are potent and neither eircom nor competitors utilising eircom's infrastructure can sustain retail prices that exceed those set by UPC.
2. Although the values of retail cost elements are fairly well understood, that is not true for VDSL electronics and related equipment. This is a substantial percentage of the overall NGA cost. As a result, the unit cost per customer is highly dependent on NGA take-up assumptions, migration levels, new wholesale customers opting for VUA vs. LLU, and platform competitors' response to the introduction of NGA services. This means that:

(1) the price/cost relationship between VUA and LLU (or SLU) cannot be forecast at this stage with any degree of accuracy (the swing could be +/- 50%); (2) adding multiple margin squeeze rungs to the wholesale value chain only compounds the problem; and (3) the application of severely constraining margin squeeze test levers (e.g., REO vs. EEO, ATC vs. AVC, bundle vs. portfolio-level assessment) further compounds the problem given the investment case challenges.

3. SLU is not a commercially viable product; assigning a price to SLU for the purpose of determining other wholesale prices is unnecessary, unjustified and unreasonable.

### **2.3.3 UNJUSTIFIED AND DISPROPORTIONATE “EQUIVALENCY OF INPUTS” OBLIGATION**

A wholly new and intrusive access obligation is proposed for NGA. Under this “equivalency of inputs” approach, eircom would have to provide every wholesale NGA service to itself and to wholesale customers through exactly the same systems, processes and interfaces at all points in the relevant product lifecycles.

This is either a new form of access regulation that is not specified in the Access Regulations or an effective requirement for functional separation. In either case, this form of regulation may only be imposed as an exceptional measure, based on a justification that the currently prescribed remedies are incapable of resolving the specific market failure that the new form of obligation seeks to address. It is also subject to a special review procedure at the EU level. ComReg’s proposal ignores the exceptional nature of the proposed EoI remedy and offers no credible evidence that it is necessary or proportionate in the context of NGA services.

The substantial systems and process re-engineering that this new form of obligation would require are difficult to predict because of the open-ended nature of the EoI remedy. It is therefore impossible to calculate the likely costs to eircom, though it is clear that the impact would be substantial.

Exceptions to the EoI obligation would be permitted under the new regime proposed by the Consultation Document, if applied for and justified by eircom well in advance. Product introductions and changes would require seven months’ advance notice to ComReg, with demonstration to ComReg’s satisfaction that the new obligations in all of its manifestations across the internal supply chain would be delivered. Such a regime is likely to raise the cost of introducing new services or to slow the pace of innovation by diverting scarce technology resources from NGA deployment to EoI reconfiguration.

eircom does not disagree with ComReg’s intention of ensuring that there is no unfair discrimination in the supply of wholesale NGA services. But the regulatory remedies should be

proportionate to the scale of the relevant competition concerns and reasonable in the burdens they impose.

In the case of NGA -- where eircom has yet to build the infrastructure, where UPC is already an established player, and where eircom has already voluntarily introduced improved wholesale structures and services -- there are few current or prospective concerns to remedy. And for legacy services in the relevant markets, the introduction of a KPI reporting regime and other safeguards are working well. The proposed approach is therefore unjustified and wholly disproportionate.

#### 2.3.4 ASYMMETRIC REGULATION OF COMPETING PLATFORM PROVIDERS

eircom believes that the proposals do not take sufficient account of the realities of competition in the likely areas of NGA build and as a result risk distorting retail competition.

In urban areas, cable broadband has a 38% market share on a rising trend (volumes up 38% between March 2011 and March 2012). Cable broadband is NGA ready and indeed is already delivering speed of 100Mb/s to UPC customers. eircom's current generation broadband has a 38% share of the urban areas with volumes declining 38% year on year. eircom's broadband is not NGA ready: a new build of fibre to the cabinet or home is required, and broadband enhancing technologies will need to be applied to the copper subloop connecting the cabinet to customer premises.

ComReg concluded that cable should be excluded from the WPNIA market because the unbundling of cable networks "at this stage"... "did not appear technologically possible or economically viable, so that an equivalent service to LLU cannot be provided over cable networks."<sup>8</sup> This leads to a circular argument: eircom has SMP in wholesale WPNIA because cable is ignored and no wholesale obligations are placed upon it. eircom regrets that ComReg has not undertaken a new market review in order to determine, before specifying the form of NGA regulation, the propriety of the market definition for WPNIA, the extent of any market power held by eircom and consequently, the continued relevance or not of obligations imposed in different market circumstances.

ComReg's conclusion that cable should be excluded from the WPNIA market has been overtaken by events. In an NGA world the relevant comparison is with VUA, not LLU. Cable bitstream is a viable alternative to VUA. As is shown above, UPC's retail market share is growing fast and has already overtaken eircom's. Cable operators in other regimes are choosing to offer wholesale services (UK) or are being required to do so (BEL).

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<sup>8</sup> D05/10, para 4.92.

The rationale for regulating eircom and not UPC has been overturned. Regulation 16(2)(b) of the Framework Regulations requires ComReg to ensure that, “in similar circumstances, there is no discrimination in the treatment of undertakings providing electronic communications networks and services”<sup>9</sup>. At the retail level, eircom and UPC are direct competitors in the broadband market in urban areas, as ComReg has found.

At the wholesale level, neither UPC nor eircom depends on the other’s platform for wholesale inputs; both networks operate independently. Although eircom has been found to have significant market power in certain wholesale markets in relation to certain fixed line competitors that cannot replicate eircom’s network, eircom holds no such power in relation to UPC, which runs a parallel network. These two companies are therefore unquestionably “in similar circumstances” and thus, ComReg may not discriminate in the regulatory treatment that it imposes on the two operators, which is prohibited by the requirements of the Framework Regulation.

Should ComReg decide that there is a reasonable basis for deviating from this important principle, it must, at a minimum, make every effort to minimise the competitive distortions that will result from treating similarly situated operators differently. Imposing highly burdensome regulatory obligations on eircom (including intrusive price regulation and EOI obligations, as well as advance notification of new wholesale product plans and prices to its NGA platform competitor) while UPC remains unregulated distorts retail competition and places a disproportionate burden on eircom, to the ultimate detriment of effective competition and consumer welfare. This is a further ground for scaling back ComReg’s heavy-handed approach to the regulation of eircom’s NGA services.

#### **2.4 AN ALTERNATIVE APPROACH TO ADDRESS NON-PRICE DISCRIMINATION CONCERNS**

We are certainly critical of the approach in the Consultation Document, but we also wish to be constructive. A balance is needed which preserves ComReg’s policy intentions while also dealing with eircom’s legitimate concerns. In the detailed proposals which follow we put forward a pragmatic alternative, building on eircom’s voluntary commitments. We show how investment can be delivered, the right wholesale and retail products and services supplied and the appropriate level of non-discrimination safeguards relating to quality of service, all with suitable transparency and within a robust governance framework. The approach we set out is one eircom is willing to adopt if the right regulatory regime is in place.

The core elements are:

- A commitment to the continued development of its wholesale capability and services

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<sup>9</sup> SI 333/2011 – European Communities (Electronic Communications Networks and Services) (Framework) Regulations 2011, para 16(2)(b).

- A commitment to the launch and support of fit for purpose NGA wholesale services, as agreed in the appropriate industry forum.
- The migration of eircom’s retail services to the Unified Gateway for all elements of provision, repair and maintenance of NGA bitstream
- Non-discrimination principles and practices to at least the same standards as for existing wholesale access services for all other aspects of NGA wholesale services.
- Publication of appropriate NGA KPIs
- A company-wide Code of Practice with rigorous compliance governance

ComReg would of course be able, as now, to intervene on any specific issue of concern and, if discrimination concerns returned, to intervene to impose appropriate further remedies.

eircom’s commitment to this package [of non-price safeguards] would be voluntary, but we would expect ComReg to closely monitor progress and to be ready to intervene if necessary. Regulation would remain an important safeguard, but interventions would be only as required to resolve specific concerns that arise in the NGA context rather than wholesale and pre-emptive. Transparency, robust KPIs, and the improved functioning of industry fora would be a key element in this process, and has eircom’s full support.

ComReg’s approach should be to apply the least onerous forms of regulation possible to an inchoate NGA marketplace. Over a transition period, NGA products and services will become better defined, their underlying costs better understood, and levels of demand more predictable and better understood. Such an approach is much more rational and beneficial for consumers and OAOs under the circumstances, promotes effective inter- and intra-modal competition, and represents a coherent approach from industry and regulator in support of the Government’s intent to “facilitate the provision of faster broadband to every home and business in the state<sup>10</sup>”.

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<sup>10</sup> Pat Rabbitte, T.D., Minister for Communications, Energy and Natural Resources, from the Foreword to Enabling a Connected Society, Report of the Next Generation Broadband Taskforce, May 2012.

eircom Group

Response to ComReg Doc. 12/27

***Consultation on***

***NEXT GENERATION ACCESS (NGA) Proposed Remedies for Next Generation  
Access Markets***

**Answers to Questions raised in the Consultation**

Date: 13/07/12



**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.**

eircom has been exploring options for deployment of NGA for several years. In common with other operators internationally, it has found the business case to be very challenging.

Despite the helpful experience of a small Fibre Pilot in south Dublin and Wexford, and further refinements of business case assumptions, uncertainties remain. These include technology futures, customer adoption, price elasticity's, the future evolution of services and their cost recovery models, national economic circumstances, shareholders' stance towards long term investment, and the regulatory framework. These all make NGA investment a high risk activity.

eircom's planned NGA network is based on FTTC and will only deploy FTTH in locations where, for technological reasons (primarily the absence of street cabinets) FTTH is the more cost effective solution. The deployment plan is for an overlay network, with existing copper based services maintained in parallel for a period of time.

This is a necessarily pragmatic approach: immediate implementation of a full NGA vision would have required several disruptive changes that eircom, wholesale customers and retail end-users would currently find challenging, for example:

- withdrawal of existing POTS based services;
- securing agreement for use of VoIP as a primary line voice service;
- building a full scale VoIP platform capable of supporting a mass migration of all customers within the NGA footprint;
- reconfiguring, rebuilding and investing in eircom's network and systems to support large scale VoIP rather than current POTS voice;
- Re-building or replacement of existing billing and CRM systems to support a mass migration of all customers within the NGA footprint, and
- A similar range of challenges for other operators' networks and systems.

NGA products, including NGA POTS based services, were proposed by eircom so as to avoid these disruptive changes, and in the expectation that transition arrangements would be worked out with industry stakeholders over the medium term.

These are complex matters and likely to take some time to resolve, especially given the uncertainties described above. On the other hand, maintaining two networks will be a

significant cost for eircom which, if maintained longer than necessary, would lead to retail and wholesale customers paying higher charges.

For all these reasons eircom believes that a transition period of up to 5 years would be appropriate, given the issues to be addressed and the need on all sides for certainty. However it should be possible to move quicker by agreement – see our answer to Q12.

A transition span would facilitate the following:

- rollout of the NGA over a 3 year period;
- migration of customers from established services to new NGA based services;
- assessment and determination of an agreed industry approach to the deployment of VoIP as a first line service;
- better understanding of customer demand and service/application requirements;
- providing operators with adequate time to reconfigure networks and systems;
- identification by industry stakeholders of other practical issues that need to be addressed; and
- assessment and determination of solutions for cases where initial NGA technologies may not be able to support broadband service, e.g. Long lines.

eircom agrees it will be important to maintain existing copper services in the NGA footprint area to provide continued service for those customers where NGA is not yet deployed or who are served by lines or cabinets where NGA is not currently feasible, and for the maintenance of voice based services until such time as VoIP alternatives are agreed and available.

But during the period of transition it is also important that a momentum is maintained positively encouraging the adoption of NGA based solutions where these are available. Otherwise it is highly likely that Ireland will fall behind in its delivery of the 2020 Digital Agenda targets. And in this respect eircom believes ComReg's approach falls short of what will be required. We further develop our views on this in our response to Q.2.

**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.**

In order to meet the Government's Digital Agenda objectives, ComReg should incentivise migration to the NGA network over the transitional period. The trigger for such positive incentives should be the availability of viable NGA alternatives to traditional copper based delivery.

But that is not what is currently proposed. The consultation says that during the transition period "LLU will **remain the cornerstone** for wholesale access in areas **inside** and outside the NGA footprint areas" (para 3.26). It adds that "...**when** the new network is **fully** rolled out over the NGA footprint areas and all relevant services are supported over the new network operators **could** be incentivised to migrate..." (Para 3.31) (*eircom's emphases*).

Continued positive support for LLU even when an NGA alternative is available, and subjecting the possibility that incentives be given to migrations to the full roll- out the NGA network will harm both NGA take-up and NGA build.

NGA take-would be harmed since the regulatory framework positively would favour broadband delivered over older technologies supported on conventional exchange based copper networks. NGA build would be harmed since the extent of NGA build will in part be driven by the level of adoption experienced in the earlier deployments.

The pending move from copper based technologies is the natural consequence of technological evolution. Digitisation made fixed networks equally adept at transmitting voice and data services: fibre technologies offer greater capacities than conventional copper and thus a better ability to economically transmit bandwidth intensive digital services. Together these factors drive a natural evolution of the fixed market, one consequence of which will be a migration from copper based technologies to NGA based services.

In addition, market forces are also causing fixed networks to adopt NGA solutions. DOCSIS 3.0 gives customers a powerful alternative based on cable TV platforms. LTE will shortly do the same for mobile networks. Both technology and markets are driving towards a migration to NGA based solutions.

Beyond these twin drivers there is a social and an economic agenda. The potential contribution of NGA networks to economic growth and inward investment is well recognised, and reflected in Europe's Digital Agenda and the imminent National Broadband Plan. The targets set by the Digital Agenda require the rapid adoption within Ireland of broadband solutions operating beyond the capacity of conventional copper networks.

For all these reasons eircom sees it as vital that the European and national broadband agenda is effectively supported by an appropriate regulatory regime. That is not one which distorts technological evolution by artificially preserving the economic viability of older exchange and copper based technologies or by constructing new regulatory burdens for emerging NGA technologies. Rather eircom looks for a regime which supports rather than impedes migration to NGA, and which does not continue to offer positive support to older exchange and copper based technologies in areas where a viable NGA alternative is available.

A transition period should be primarily directed at facilitating practical implementation of new technologies rather than artificially sustaining the old. Customers (retail and wholesale) should be encouraged to migrate to new NGA services as soon as possible to maximise utilisation of the new NGA infrastructure. That needs a forward looking view, including incentivisation during the transition period to foster NGA take-up, and recognition that continued reliance on the exchange and copper based broadband.

The question of retirement of the traditional POTS service is separate to the issue of supporting migration, and more complex. As our answer to Q.1 makes clear, a number of issues (those outlined in Q.1 are almost certainly not exhaustive) remain to be addressed before it will be possible fully to retire the copper network in NGA footprint areas. While these issues need to be considered, a reluctance to make the necessary systems and process investments, or an inability to do so, on the part of a minority of operators should not be allowed to protract the process.

Operating two networks will cause substantial continuing costs for eircom and for other operators – costs which eircom’s platform competitor, UPC, does not have to bear. But the scale of those costs can and should be mitigated. With regulatory support for incentivised migration the size of the residual customer footprint on copper will be minimised. Regulatory recognition that, where wholesale NGA services are available, wholesale narrowband services can be withdrawn would help to reduce costs and also avoid sending unhelpful signals to market entrants.

**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.**

eircom understands that ComReg’s proposals in terms of mandating access to civil engineering infrastructure relate to NGA Footprint areas and that in Non-NGA Footprint Areas, existing WPNIA obligations continue to apply. For the reasons set out below, eircom does not believe that it is necessary or appropriate to impose any additional or specific obligations in terms of access to civil engineering infrastructure in NGA Footprint Areas. Without prejudice to this, and

to the extent that ComReg does impose or specify the obligation of access to civil engineering infrastructure, then the Decision Instrument should be amended to reflect the proper scope of the obligation, namely that its application is limited to NGA Footprint Areas.

## **Summary**

In stating that “access to civil engineering infrastructure is crucial to the deployment of parallel fibre networks”, ComReg also acknowledges that “there have been relatively few requests for access to civil engineering infrastructure since it was mandated” and expresses the view that “it is unlikely that the demand for access to civil engineering infrastructure will increase significantly in the short to medium term”. eircom agrees with this and in this context, 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. In eircom's experience, requests for access to civil engineering infrastructure, whether in the access network or elsewhere, are infrequent and highly bespoke. Such low levels of demand do not warrant the costs and overheads of standard reference offers.

The dark fibre proposals seem unlikely to be of practical use. It is hard to see circumstances under which access to duct infrastructure would be both required and incapable of delivery, and where nonetheless existing spare fibre would be available over the specific routing required. A new set of obligations based on this improbable sequence of events fails the test of proportionality.

eircom notes ComReg's references at paras 5.20 and 5.21 to the Regulatory Impact Assessment (RIA) in Section 14. The RIA, however, does not offer any specific reason as to why ComReg's proposals set out in the Consultation Document are either necessary or proportionate.

## **Duct Access**

eircom is willing to provide access to passive duct infrastructure where there is space available. It is a feature of this type of access that the terms and conditions, including the pricing, will depend on the particular circumstances of the request. In this context, the terms and conditions should be left to commercial negotiation between the parties, subject to intervention by ComReg if the parties cannot reach a mutual agreement within a reasonable period of time. Indeed, commercial arrangements for the access to eircom's ducts have been successfully renegotiated recently between eircom and other parties and no difficulties have arisen.

The provision of access to ducts in the access network that falls within the scope of the market regulated under Decision D05/10 is an existing obligation<sup>1</sup>. There has been little, if any, demand and eircom believes that it will remain the case, including in NGA areas. In particular, it is hard to see where future demand for duct access will arise in the context of eircom's NGA investment. To the extent that a commercial case can be made and space is available, eircom will negotiate a commercial arrangement with the OAO concerned.

In this regard, were demand to arise, Then eircom will deal with such future requests according to the standard commercial terms that normally apply in these circumstances, subject to there being space available and the request being otherwise reasonable. If commercial agreement cannot be reached, of course resort can be had to ComReg.

eircom also notes that it does not possess the only duct infrastructure capable of accommodating fibre services. A broad range of utility and cable ducts can be used to accommodate fibre services.

ComReg has proposed that Civil Engineering Infrastructure should be included in the Access Reference Offer. This is unnecessary and would be disproportionate to address competition concerns that may never materialise. There would be a significant development effort required - in terms of staff costs of product management, regulatory and legal costs, opportunity costs of IT/Product Development - to meet the standard of documentation required to be included in the ARO as set out in section 9.2 of the draft decision instrument. As any request for civil engineering infrastructure (should one arise) is likely to be bespoke, setting out a standard generic offering is not likely to be helpful to industry in any event. As such the requirement would impose considerable cost without delivering commensurate benefit and it is accordingly a disproportionate obligation.

eircom proposes that the obligation to provide Civil Engineering Infrastructure continues as set out in Decision D05/10 and that the requirement to publish a reference offer should not be established. ComReg itself notes in paragraph 5.31 that there have been relatively few requests for access to civil engineering infrastructure since it was mandated. Commercial negotiation in relation to access to ducts has worked to date and the imposition of the 3 months timeframe to conclude such negotiations including price will ensure that Operators requirements are met in a timely manner. We believe that the 3 month period is reasonable assuming that Operators engage in a positive manner and do not attempt to frustrate the negotiations simply to ensure referral to ComReg.

## **Dark Fibre**

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<sup>1</sup> Section 7.2 of ComReg Decision No. D05/10.

In section 5.26, ComReg asserts that Dark Fibre is not civil engineering infrastructure. By definition, however, dark fibre is not an active service. . As ComReg observed in 2007 “Dark Fibre is not considered to be a communications service...” (Consultation on Leased Lines Market Review, 07/77, para 3.55).

ComReg’s proposal that dark fibre should be provided where civil engineering infrastructure cannot otherwise be provided seems ill considered in the context of remedies relating to NGA. If infrastructure access is required on the D side of the network (for example poles and local access duct) there will be no fibre, dark or lit, available. The network is copper only. (A very small number of FTTH exceptions may arise: these are covered in our answer to Q4 below.)

On the E-side of the cabinet, fibre may be available where the cabinet has been enabled for NGA. As this fibre will run from the exchange to the cabinet, it is therefore only of value to an operator seeking to operate their own fibre connection over the same route. This means that a requirement to access dark fibre would only arise in relation to an Operator intending to implement sub-loop unbundling: eircom does not envisage any such requirement emerging.

It follows that dark fibre as a solution will be required very rarely if at all. There are very few demands for civil engineering infrastructure access. For those that do arise there is no reason to believe eircom will not be able to satisfy an operator’s needs. In the unlikely event of demand arising which eircom cannot satisfy it is highly improbable that unlit fibre will be available over the routing required. So the prospect of dark fibre supply actually arising under ComReg’s proposals is extremely small.

In these circumstances imposing a dark fibre obligation is entirely disproportionate. Making that obligation subject to equivalence of input obligations is even more unreasonable.

For the same reasons noted above in relation to civil engineering infrastructure, it would be disproportionate and unnecessary to impose an Access Reference Offer in respect of dark fibre.

If, however, ComReg were to mandate access to dark fibre as well as access to ducts, then eircom notes that any requirement on eircom to provide such access as part of its obligations under the WPNIA Decision does not entitle operators to obtain such access for the purpose of providing leased lines services, in relation to which neither access to duct nor to dark fibre is an obligation that has been imposed on eircom.

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

eircom agrees with ComReg that access to the terminating segment of FTTH should not be mandated, for the reasons outlined in the Consultation Document.

As noted by ComReg, eircom may deploy FTTH in a limited number of locations. The architecture used will be GPON based, with a splitter in the access network. We are examining on a case by case basis whether to use FTTH offers a cost effective solution to exchange areas that are currently served by directly fed copper. Our assessment to date indicates that FTTC provides a more cost effective solution for a range of practical considerations including:

- The current access network is not accessible to enable overlay with fibre causing cost and delay in an FTTH design
- Network connection to individual homes is direct buried, which would drive high costs into the homes connection activity
- The overlay of fibre in apartments is generally not possible, mainly driven by the absence of standard or specified in-home architectures.

Our current expectation is that FTTH deployment will be at very low volumes and distributed through the NGA build rather than concentrated at a small number of sites.

This dispersion coupled with the very low level of build makes unbundling a disproportionate response. Indeed the likely consequence of an unbundling obligation is that FTTH would be a less likely solution, since unbundling would further raise the already considerable costs of FTTH deployment.

eircom notes that FTTH unbundling has not been mandated in a number of European countries. BEREC's Report on the Implementation of the NGA Recommendation, published in October 2011, notes (page 40)

*"In some countries fibre is included in Market 4, however unbundling it is not imposed: Czech Republic, France, Macedonia, Ireland, Malta, Norway, Portugal, Romania, Switzerland, United Kingdom. In other countries fibre is not included in Market 4: Austria, Belgium, Denmark, Greece and Spain".*

The report goes on to note that:

*"Fibre unbundling is not imposed in a number of MS with different reasoning and due to different circumstances such as:*

- *Fibre is not included in the market (e.g. Austria, Belgium, Denmark and Spain)*



- *Fibre unbundling in a GPON architecture at the passive optical splitter at a distribution point between the street cabinet and the end user premises was considered likely to be costly and impractical, given the large number of passive splitter locations and the switching process for disconnecting/reconnecting end user fibres requiring significant manual intervention (e.g. UK).*
- *Fibre unbundling is not considered imperatively necessary in view of symmetric measures (e.g. France). It is considered that access to the terminating segment in less dense areas comes close to unbundling. “*

This forbearance by national regulators from mandating unbundled fibre access for FTTH reflects the limited current build of FTTH, concerns over the costs of this regulatory obligation and the impact on deployment. . Given the size and demographics of Ireland, there is every reason to expect that the economics of fibre unbundling would be even more challenging than in most other European countries. ComReg does not offer any persuasive evidence, in the main consultation or the RIA, to show that FTTH unbundling is either necessary or proportionate.

The evidence that is available indicates just the opposite. eircom’s NGA Pilot, which has been running for almost a year, has shown no market demand for the FTTH unbundled product offered. ComReg will doubtless be advised by other operators about likely demand for FTTH, but eircom notes that the absence of demand to date seems to reflect a strong preference for VUA, which enables operators to continue to utilise their co-location and backhaul facilities and a concern about the additional costs of FTTH unbundling to the operator, These costs include, for example, the installation of their own exchange based OLT equipment for what is likely to be only a limited number of FTTH lines. On current expectations of the scale of FTTH build, obligations to unbundle and prepare a Reference Offer would be wholly disproportionate. The costs of developing a product to the standards required in the ARO will be high with no possibility of recovering these costs given the limited market demand.

There would be the cost of the additional infrastructure required to be installed in the network such as additional splitters, larger cabinets and fibre cables would make the case for investment in FTTH even more difficult to sustain. The requirement for larger cabinets would be driven by the need to have a much higher level of possible inter-connections within the cabinet to enable individual customer fibres to be connected to each unbundling operator’s splitter. The requirement for this connectivity at the cabinet means that the cabinet cannot be stabilised at installation. This would result in significant cost being incurred to enable each customer connection or migration, as well as requiring impractical field-based manual activity at cabinets which would be wholly inappropriate for a modern network.

**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.**

As a threshold matter, we note that any proposal that would have the effect of imposing an Sub-loop Unbundling (SLU) obligation on eircom in a NGA environment would be disproportionate and unreasonable. Experience to date in Ireland and elsewhere in Europe shows that the business case for SLU in the legacy network is not commercially viable, though technically possible, even in countries with substantially greater population density than Ireland. The cost to OAOs of installing, managing and maintaining the equipment necessary to make use of unbundled sub-loop simply cannot be justified by the returns achievable. The economics are even more challenging and uncertain in the context of NGA, a fact that is acknowledged by Oxera in its report for ComReg (at p. 25) as well as a separate study undertaken for ComReg by Analysys Mason. As discussed in section 3.2.2. of the Frontier Economics paper accompanying this response, the minimum efficient scale needed to recover the fixed cost investments required for SLU are not likely to materialise, especially given the unpredictability of demand for ultra-fast broadband services. On top of these commercial challenges to SLU take-up, there are technical obstacles as well in the NGA (FTTC) environment. As ComReg has recognised (5.107), “at present, the use of VDSL2 vectoring technology at a cabinet is mutually exclusive to concurrent unbundling of the copper sub-loop by other operators at the same cabinet.”

It is important to recall in this context that eircom has been required to offer SLU since the early 2000s but that at the time ComReg’s consultation document was published, no operator had ever sought to avail of that service up to very recently. eircom in this regard does not believe that SLU is properly characterised as a Current Generation WPNIA service. It is intrinsically linked to the roll-out of fibre in the access network and as such rather appears as a service for Next Generation WPNIA. In particular, while it is true that with SLU, OAOs unbundle the copper pair at the level of the street cabinet and are not provided with fibre access between the cabinet and the end-user, the provision of SLU by eircom in areas where fibre has been rolled out to the cabinet includes the provision of access “over fibre access network infrastructure and its associated facilities”. In particular, SLU backhaul would require the use of fibre in the access network. eircom notes that this is consistent with the definition of Next Generation WPNIA under ComReg Decision D05/10 which states that Current Generation WPNIA “includes where the fibre access network infrastructure and copper access network infrastructure are combined with the Local Loop or Local Sub-Loop”.

In terms of regulation, the question accordingly is more properly framed in terms of whether it is appropriate and reasonable to specify eircom's access obligation as including an obligation to offer SLU, rather than as a matter of removing eircom's SLU obligation. In both instances, however, the essential element to consider is, in accordance with the Regulation 12 of the Access regulations, whether *the absence* of access by way of SLU would hinder the emergence of a sustainable competitive market at the *retail level*, would not be in the interests of end-users or would otherwise hinder the achievement of the objectives set out in section 12 of the Act of 2002 (which includes encouraging efficient investment in infrastructure) and Regulation 16 of the Framework Regulations. In both instances, the answer is clearly that competition at the retail level and the interest of end-users would not be adversely affected were SLU not available. On the contrary, the existence of an access remedy in the form of SLU would hinder competition at the retail level and the interests of end-users.

In this regard, in addition to the commercial challenges to SLU take-up identified above, there are technical obstacles to SLU in the NGA (FTTC) environment. As ComReg has recognised (5.107), "at present, the use of VDSL2 vectoring technology at a cabinet is mutually exclusive to concurrent unbundling of the copper sub-loop by other operators at the same cabinet." For eircom, there is little doubt that the availability of increased bandwidth is critical to ensure that the eircom platform can meet customer demands and compete effectively with the established cable network. Increased bandwidth is also critical to ensure that Ireland meets the Digital Agenda's targets for consumer broadband speeds. It is essential, in order that NGA build not be discouraged, that the form of access that is imposed on eircom in NGA areas recognises the detrimental impact that SLU would have on NGA roll-out. In eircom's view, among the options offered by ComReg, only '*Option B: Access to the sub-loop withdrawn in NGA areas, conditional on the roll-out of bandwidth enhancing technologies by eircom*', subject to a number of amendments set out further below, is a viable form of regulation. This is because NGA rollout is needed to enable all operators using eircom's network to offer market competitive services and NGA roll-out would be significantly compromised under any of the other two options.

Currently, broadband services supported by eircom's network include entry level speeds of up to 8M, with up to 24M also being available but with a smaller effective footprint. NGA is required to meet market demand and to respond to competition from the cable operator offering entry level broadband of 20M, with 50M and 100M also being currently available, and with even higher speeds possible in the near term. Vectoring combined with other bandwidth enhancing technologies provides an opportunity for eircom's FTTC solution to offer broadband speeds of up to 100M. These other technologies include, for example, Bonding and Phantoming, which are likely to be deployed to address particular challenges such as longer lines. Because of the importance of vectoring and other bandwidth enhancing solutions to eircom's NGA roll-out plans and the commercial success of its NGA investment, we provide a description of some of the main technical features below.

## Bandwidth enhancing techniques

The DSL performance delivered over a copper pair is constrained in the main by three factors:

- a) copper loop attenuation,
- b) the amount of spectrum available to the DSL modems to encode the user information and
- c) the noise level including crosstalk on the copper line.

Recent developments in DSL technology provide the means to deliver improved high speed broadband performance for customers by tackling all three constraining factors.

Improvement in high speed broadband performance is best addressed by tackling the above three factors (attenuation, band plan and crosstalk) in unison.

**Attenuation** is addressed by deploying fibre closer to the customer (FTTC) to reduce customer copper loop lengths.

An example of increasing the amount of **spectrum** used by the VDSL2 modems is the new 17MHz band plan announced in the revised Copper Loop Frequency Management Plan (CLFMP). The 17MHz band plan capability is available now on VDSL2 CPE and the eircom deployed cabinet DSLAMs.

**Vectoring** is the key development that addresses degraded performance attributable to far end cross talk (FEXT). FEXT leads to two very noticeable problems on DSL, namely reduced speeds and variances in the speed achieved by customers with similar copper loop lengths. Vectoring addresses both of the crosstalk problems so that the performance achieved by a vectored customer is substantially improved and the vectored performance is also more predictable with reduced variances between best and worst performance at a given loop length. A further benefit of vectoring that has been reported following operator testing is that poor cables perform better when vectoring is enabled. Poor cables in this context are cables that suffer more from crosstalk than the norm.

eircom's supplier of VDSL2 cabinet DSLAMs is scheduled to make vectoring generally available in early 2013 and eircom intend deploying vectoring capable cabinet DSLAMs from then forward and also to retrofit all prior deployments with vectoring capability.

Vectoring is a huge leap forward for DSL. The combination of vectoring and a 17MHz band plan will allow 100Mbps or close to 100Mbps high speed internet for customers on short copper loops and will increase the percentage of copper loops that can deliver a 30Mbps service to customers.

## Other Future Technologies

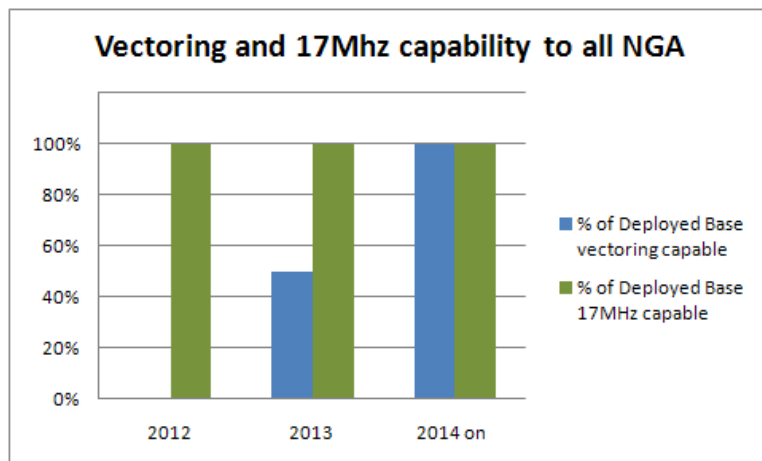
In the early 2013 time frame, eircom’s supplier is also planning to deliver the capability to turn on vectoring and bonding simultaneously for the customer and this would allow an almost doubling of the vectored performance delivered to the customer over two copper pairs. This requires the use of two copper pairs, but this may offer a cost effective solution where spare pairs are readily available. Bonding requires a second DSL port, new CPE that supports bonding and a second copper pair. Bonding comes with restrictions such as chip level only or board level only which has cost implications for service provision. Over time these restrictions will be addressed by vendors. To date bonding offerings have been based on 12MHz band plans and this is mainly a CPE availability issue that is likely to be resolved over time. eircom sees bonding as an evolving complementary technology that may address particular customer requirements or line lengths.

Vendors continue the research and development work on virtual circuit techniques (ALU refer to this as “Phantom mode”) whereby a third virtual circuit is realised in addition to the two physical circuits associated with the bonded pair. However, this capability is not yet on published vendor roadmaps and it appears that this is still a few years away from commercial availability but offers potential for further bandwidth enhancement in the medium term. Similarly, G.fast, also known as fibre to the DP, is some time away as a commercial proposition but also offers additional potential in the medium to long term.

### **Vectoring and 17MHz band plan in NGA**



eircom’s supplier for VDSL2 cabinet DSLAMs delivered 17MHz band plan capability from commencement of rollout and is scheduled to make vectoring generally available in early 2013. eircom will be deploying vectoring capable DSLAMs for NGA from this date and will retrofit vectoring to cabinets that have already been deployed.

The rollout of vectoring capability is summarised in the Figure 1 below. At the end of 2013 it is expected that fifty percent of all cabinet DSLAMs will be vectoring capable. From the end of 2014 on it is intended that 100% of deployed cabinet DSLAMs will be vectoring capable.



**Figure 1 Vectoring and 17MHz capability to all NGA**

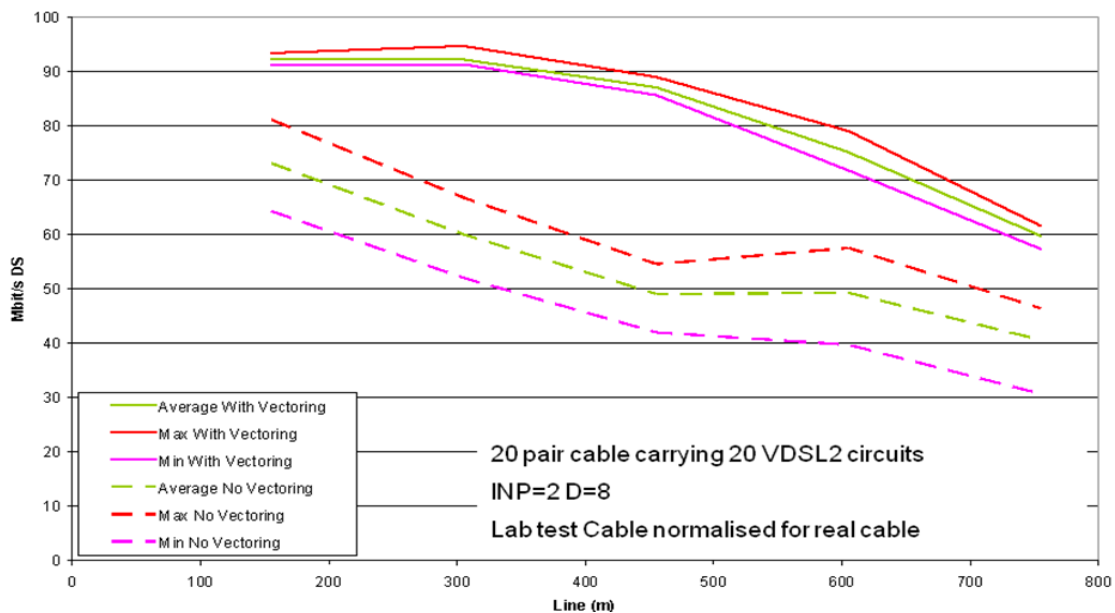
**eircom and other operator test results for vectoring**

eircom conducted lab tests on a prototype vectoring DSLAM in October 2011. In addition to eircom’s own lab testing, eircom as part of a European multi-operator group commissioned  in the Netherlands to carry out independent lab testing of vectoring in the Netherlands during the second half of 2011. Results from eircom’s lab testing and the preliminary results from the  testing are presented and discussed below.

**eircom lab results for prototype vectoring capable DSLAM and 17MHz Bandplan– October 2011**

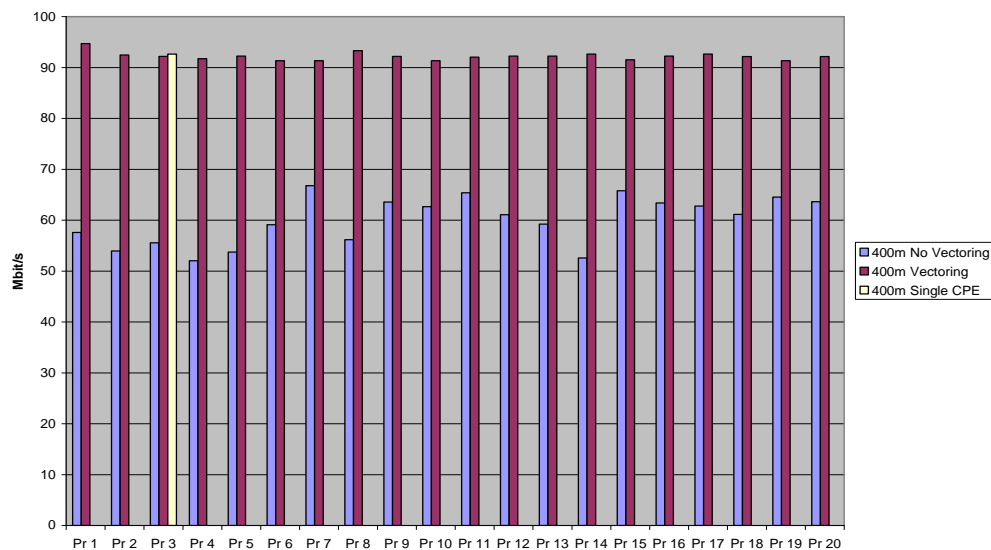
The rate reach results (broadband speed at distance) show substantial gains for vectoring over non-vectoring downstream speeds with a 17MHz band plan used in both vectoring and non-vectoring cases.

Gains of 40-80% are achieved at around 400M, see figure 2 below for more detail. The downstream speed is capped at ~ 90Mbps in the example shown in figure 2. Higher speeds can be achieved but there are tradeoffs between speed and stability and between the upstream and downstream portion of the overall aggregate performance. In the results shown below impulse noise protection and delay are employed to stabilise the line. There are additional standardised stability features (G.inp and SRA) that were not available last October but are becoming available now which will enable 100Mbps performance on short loops for the 17MHz and vectoring combination.



**Figure 2 Downstream vectored performance compared with non-vectored on 20 Pair cable and 17MHz bandplan**

Figure 3 below highlights that the performance of each pair within a defined cable bundle shows much lower levels of variation when vectoring is enabled than is the case in a non-vectoring environment. This is a significant benefit of vectoring as it not only delivers greater speeds but also makes the availability of those speeds to individual customers more predictable.



**Figure 3 - Vectored performance improvement for each the individual cable pairs in a 20 pair cable at 400M**

**✂ lab results for vectoring capable DSLAM and 17MHz Bandplan– April 2012**

The table below is taken from ✂ preliminary vectoring results. The different colour plots show the downstream performance for a range of stability settings. The cable type and stability settings are not the same as used in the eircom lab however the results convey the speeds achievable with vectoring and the tradeoffs between stability and speed.

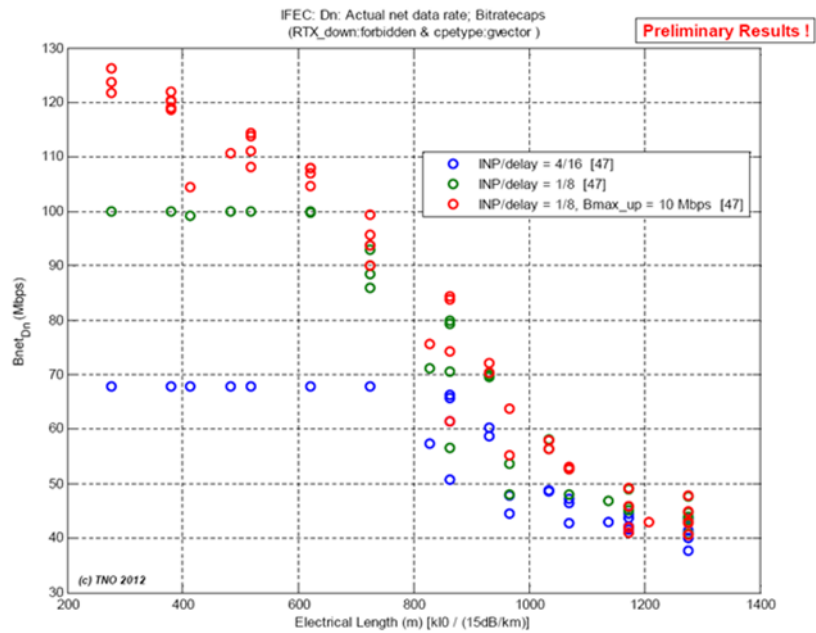


Figure 4 - ✂ rate reach results for a range of stability settings



## Conclusion

Delivering high speed broadband performance to customers over DSL requires the deployment of technologies that address the three main factors of attenuation, spectrum and far end crosstalk that impact DSL performance. eircom plans to address all three factors by deploying vectoring capable cabinet DSLAMs using a 17MHz band plan. With this technology combination, customers on short loops can expect 100Mbps downstream high speed internet service. Preliminary test results from ✂ suggest that 100Mbps could be achieved on loops lengths up to 600M which would mean that 60% of eircom D-sides would deliver 100Mbps or better. eircom, to date, has no lab figures for distances greater than 800M. The lab results from ✂ and ✂ suggest that 30Mbps downstream at 1000M is a realistic target which would mean that 80% of eircom D-sides would deliver 30Mbps or better. Vectoring and the 17MHz band plan should be deployed to achieve these performance figures.

Bonding is currently seen as an emerging complementary technology that will address particular customer requirements and line lengths. Other emerging technologies also offer medium term opportunity including Phantoming, and G-fast. Collectively, these technologies offer great potential



to continue to increase broadband speeds to customers based on mixed fibre and copper technologies.

Vectoring over a 17MHz bandplan is a key component to improving high speed broadband performance in a FTTC network and should be exploited. Other opportunities for further improving DSL performance from NGA cabinets are not likely in the short to medium term. Beyond the cabinet, an option would be to deploy fibre to the DP but this would require another significant increase in network investment.

Currently eircom does not anticipate that fibre deployment to the DP is likely to become economically viable in the near term.

As explained above, the development of a sustainable competitive market at the retail level requires that eircom enhances the bandwidth that can be supported by its access network. This is also clearly in the interests of end-users. Not only would the absence of SLU not hinder this in any way, but the requirement on eircom to offer SLU in NGA areas would act to their detriment. Each of the options proposed by ComReg is analysed in further detail in this context.

#### **Option A: Modification of the obligation of SLU in NGA Areas**

eircom understands that under Option A, ComReg proposes in effect that any operator which indicates that it plans to deploy vectoring in *eircom's* access network will be given control of that part of the network, subject to the requirements that it offers other operators, including eircom, wholesale access products – it is not entirely clear what eircom's position is, in relation to deploying bandwidth enhancing technologies.

It is unclear if this option makes provision for eircom to take the initiative to propose the deployment of bandwidth enhancing technologies.

Paragraph 5.84 of ComReg 12/27 states in relation to Option A that

*“ The SLU obligation would be amended in NGA footprint areas, **such that an OAO may make a request for access, on the basis of a reasonable request. This option would accommodate an operator planning to unbundle the sub-loop and deploy a bandwidth enhancing technology, such as vectoring. The OAO would be required to make a request to deploy the bandwidth enhancing technology, in particular exchange area(s). Similarly, Eircom\_would also be required to notify ComReg of its intentions to deploy vectoring during this three year period, across the NGA footprint area.***

The highlighted elements of paragraph 5.84 appear to suggest that the initiative can only be taken by an OAO, and that eircom would only be requested to set out its plans in response to a proposal submitted by an OAO.

eircom is of the view that there are very significant legal and regulatory issues which arise under this Option and that this Option is entirely unsuitable. In particular, eircom is of the view that the Option infringes upon the constitutionally protected property rights of eircom, that it is incompatible with the principles of SMP underpinning the regulatory framework and that in any event, there would be very significant impediments to its practical implementation. As such, eircom believes that Option A is unreasonable and unworkable. To the best of eircom's knowledge, this approach has never been considered or attempted anywhere else. There is a high risk that resort to this option would create complex and costly arrangements that create many more technical, operational and competition problems than they are meant to resolve.

Under Option A (and likewise Option C), there is the possibility that one and possibly more operators would essentially take over eircom's access network at the cabinet. ComReg proposes in effect that wholesale regulatory regimes are put in place to address the means by which other operators – including eircom – would access these operators' wholesale services.

Quite apart from the operational issues discussed below, the applicable legal framework does not give ComReg the authority to permit another operator to effectively take over eircom's cabinet and copper link to the customer premise and thus stand in eircom's shoes, while placing eircom in the position of having to request access to its own network from that third party.

In this regard, eircom is of the view that Option A represents an unjust attack over its constitutionally protected property rights. While ComReg's objectives may be consistent with the exigencies of the common good, and possibly relate to "concerns pressing and substantial in a free and democratic society", as required by the Supreme Court, the means that it proposes to achieve its objective do not pass the proportionality test that must also be met. Costello P in *Heaney v Ireland* ([1994] 3 IR 593) explained that the means employed to be considered to be proportionate, they had to (a) be rationally connected to the objective and not be arbitrary, unfair or based on irrational considerations, (b) impair the right as little as possible, and (c) be such that their effects on rights are proportional to the objective.

This is clearly not the case of Option A. Any arrangement as proposed under Option A would intrude unreasonably on eircom's legitimate property rights to an extent that is greatly more than is required to ensure that operators may compete with eircom and it would adversely affect the value of eircom's interest in its NGA network. Amongst other things, under this scheme, eircom would be deprived of the right to implement and evolve its own bandwidth enhancing technologies, which will add unnecessarily to eircom's operating costs (substantially reduced efficiencies in rolling out the network, including the unpredictability of where eircom will be forced to act as a reseller on its own network) and of the right to offer a full range of services over its own network. eircom submits that these effects on the exercise by eircom of its property rights are wholly disproportionate and that the objectives of ComReg may be achieved by implementing other options that will not impair eircom's right to the same extent.

In addition, eircom is of the view that an obligation which effect is to give control of eircom's facilities to another operator far exceeds the scope of the obligation of access that can be imposed under Regulation 12 of the Access Regulations. In addition, eircom does not believe that ComReg may lawfully impose access obligations on operators which have not been designated as having SMP in accordance with the procedures set out in the Framework and the Access Regulations. As such, the implementation of Option A would be fraught with legal difficulties. ComReg's proposal envisages that the third party standing in eircom's shoes would be expected to offer "similar" wholesale terms and conditions to those that eircom is obligated to provide to OAOs as an operator designated as having SMP.

Paragraph 5.6.1 in ComReg 12/27 thus proposes that:

*"5.93 Non SMP Operators who deploy vectoring agree to the supply to other operators fit for purpose NGA wholesale inputs; comparable with similar, available regulated inputs, allowing other operators to develop a uniform retail product offering."*

Not only is it doubtful that this obligation could lawfully be transferred from eircom to the third party operator who is not an SMP operator, but the practical implications of this requirement would be daunting. While eircom recognises that this proposed condition is intended to ensure that other operators, including eircom, would be able to continue to offer retail services, the Consultation Document does not specify how "similar" the obligations would be to those imposed on eircom. For example, would the same price controls and/or or prices apply? The obligation is very general in its articulation, leaving unspecified and unclear the vast array of regulatory obligations for wholesale access services that have been developed over many years.

Significant operational difficulties would also arise. Wholesale products, pricing, system interfaces, notification processes, and other critical aspects of a new wholesale regime, could potentially be implemented in a way that differs in detailed implementation, while still being 'comparable with similar' currently mandated wholesale services. Resolving these issues could take several years of evolution and review. The requirement on all operators including eircom to be able to operate through two different wholesale regimes would be unreasonable and unworkable.

**Option B: Access to the sub-loop withdrawn in NGA areas, conditional on the roll out of bandwidth enhancing technology by Eircom.**

As compared with Option A and Option C, only Option B, in eircom's view does not constitute an unjust attack on eircom's property rights while allowing for the deployment of bandwidth enhancing technologies for the benefit of downstream competition and the interests of end-users. This is subject to the following changes.

A period for deployment of vectoring by eircom needs to recognise normal variations in implementation that may arise

In ComReg 12/27, in relation to Option B, paragraph 5.93 states:

*“5.93 Permission to exclusively deploy vectoring at a cabinet or in an exchange area **would be granted for a reasonable period agreed by ComReg**, during which time vectoring would have to be deployed. This requirement would need to be reflected in Eircom’s SLU deployment plan.”*

eircom accepts that ComReg should seek to agree with eircom a reasonable period for the deployment of vectoring and that this should be reflected in eircom’s NGA deployment plan. Any established time periods for the deployment of vectoring by eircom during the various phases of deployment would need to have some flexibility to accommodate normal variations in implementation. Please see comments below on adherence to a rollout plan.

Recognition should be afforded to reasonable variations in implementation of the plan

In ComReg 12/27, paragraph 5.94 states:

*“eircom would be required to furnish a rollout plan including milestones for deploying vectoring **on a cabinet by cabinet and an exchange by exchange basis**, to be considered and approved by ComReg. Provision of NGA wholesale services (such as WBA) in order to allow services to be offered by OAOs to the retail market would be required in accordance with Eircom’s obligations. **Adherence to the rollout plan would be required for eircom to retain exclusive access.**”*

eircom does not believe that the fact that eircom would not be required to provide SLU in areas where vectoring would be deployed can be appropriately characterised as amounting to eircom “retaining exclusive access”. From a regulatory law viewpoint, the situation is more adequately described as a situation where a requirement to provide a certain form of access is not deemed to be reasonable in the circumstances. This does not mean that other forms of access are not available or could not be required where necessary. Indeed, OAOs will be granted access to eircom’s network on extremely attractive terms pursuant to the NGA wholesale remedies that ComReg proposes to apply in relation to eircom’s VUA and WBA+ offerings.

eircom accepts the need to provide ComReg with a rollout plan including information on an exchange by exchange and cabinet by cabinet basis. While furnishing a rollout plan is reasonable, a requirement to adhere to the plan is reasonable only if provision is made to cater for the variations that are bound to arise. Any roll-out plan will be subject to delays arising from securing way leaves, changes identified during detailed deployment planning, technical issues arising during rollout that may require modification of equipment by its manufacturer, or other project management issues that may arise during the rollout.

eircom proposes that any requirement to adhere to a rollout plan be qualified accordingly, for example, **Reasonable adherence** to the rollout plan would be required for eircom to retain [so-called] exclusive access’.

Need to balance transparency requirements with protection of commercially sensitive information

In ComReg 12/27, in relation to Option B, paragraph 5.92 states:

*“This approach would give clarity to eircom, which is currently taking the risk of investing in NGA. The process would require that the NGA exchange or cabinet areas where eircom intends rolling out vectoring technology would be identified by Eircom, through the obligation of transparency, **by making network development plans available to OAOs.**”*

While eircom accepts that other operators would need to be informed of NGA network development plans, the process by which this would be done needs to be carefully considered to avoid, or at least mitigate, the potential for operators of competing platforms to exploit such obligations to obtain commercially sensitive information. Consideration needs to be given to what information should be disclosed, when it would be provided, and to which operators the information would be given.

We note that ComReg has sought to make provision for the protection of commercially sensitive information. However, there are inconsistencies between the analysis set out in the consultation, and the proposed text of the Draft Decision Instruments.

Paragraph 14.20 of the Regulatory Impact Assessment, states the following:

*Protection of the intellectual property and confidentiality of eircom has been taken into consideration. For example, the WPNIA Decision and the WBA Decision recognise that there may be commercial sensitivity surrounding the provision of certain information and services to all undertakings. It was therefore proposed that it was reasonable to restrict the obligation regarding non-discrimination to the provision of services and information to **Access Seekers**<sup>165</sup> and this applies to NGA products and services.*

The associated footnote<sup>165</sup> states:

*‘See paragraph 7.106 of the WPNIA Decision Instrument which states that —**It should be noted that the above requirement is to provide WPNIA services or information to Access Seekers’ rather than OAOs**’ where an Access Seeker is an OAO which has already agreed a Wholesale Broadband Access Reference Offer (WBARO) with eircom, or has signed a Non-Disclosure Agreement with eircom and paragraph 7.106 of the WBA Decision.’*

However, this intent as described above is not carried into the paragraph 9.12 of the Draft Decision Instruments for WPNIA and WBA which states the following:

*'eircom shall make publicly available, on a quarterly basis or such other suitably regular basis as may be specified by ComReg, sufficient information regarding the introduction of new infrastructures, technologies, services or facilities which could reasonably be expected to support services or facilities in respect of Next Generation WPNIA. Without prejudice to the foregoing, where such information to be provided is of a commercially sensitive nature, eircom is obliged to publish details, on a case by case basis, identifying the category and a description of such information which **will be made available to OAOs** upon the signing of a Non-Disclosure Agreement (—NDA//). The NDA shall also be published by eircom.'*

Apart from the inconsistency between what was intended and the drafting of the proposed Decision Instrument, the process would not provide adequate safeguards for confidential information for two primary reasons. First the owner of a competing platform could be a legitimate Access Seeker outside its own network footprint, but it would not be reasonable that they would be afforded access to information concerning eircom's NGA within the footprint of their own network. Secondly, an NDA agreement that would prevent the owner of a competing platform from disclosing information to other parties would not protect commercially sensitive information concerning eircom's NGA network being made known to the owner of that competing platform.

eircom proposes that two levels of information would be provided. On announcement of a rollout, a high level description would be provided including the overall scale envisaged, technology to be deployed, and expected phasing, on the understanding that some change may occur during detailed planning.

For each phase, detailed information would be provided including exchange areas, cabinets, and timelines. However, this information would only be provided to those who have a demonstrable need for it. Procedures would be developed to ensure that commercially sensitive information would not be provided to those operating competitive platforms, other than where they may have a genuine need for wholesale services beyond their own network footprint. To reflect the need to protect commercially confidential information, eircom proposes that the wording in paragraph 9.2 of each of the WPNIA and WBA Draft Decision Instruments is amended as follows:

*"eircom shall make publicly available, on a quarterly basis or such other suitably regular basis as may be specified by ComReg, sufficient information regarding the introduction of new infrastructures, technologies, services or facilities which could reasonably be expected to support services or facilities in respect of Next Generation WPNIA. Without prejudice to the foregoing, where such information to be provided is of a commercially sensitive nature, eircom is obliged to publish details, on a case by case basis, identifying the category and a description of such information which **will be made available to Access Seekers i.e.subject to (i) A Wholesale Broadband Access Reference Offer (WBARO) having been agreed with eircom, (ii) An NDA is signed to protect against commercially sensitive information being passed on to another party, and (iii) the Access Seeker has a with a demonstrable***

***interest in using the services concerned such that a reasonable basis for requesting this information exists, noting in particular that requests by an owner of a competing network for information on eircom's NGA network within that competing network footprint would in the first instance be presumed to be unreasonable and rejected. The NDA shall also be published by eircom."***

These comments and concerns apply also to all subsequent references to transparency in ComReg's consultation.

### **Option C: Access to the sub-loop continues to be mandated**

By contrast to Option A, under Option C, eircom would have the "right" to request withdrawal of access to subloops in order to deploy vectoring (para. 5.104), and in the event of competing claims, ComReg would decide which operator's plan had the greatest merit from a consumer perspective (para 5.101).

A key requirement of NGA regulation is that the regulatory regime provides certainty for all operators in the market but particularly for those investing in NGA. Option C is entirely unsuitable as it creates uncertainty for any operator investing in FTTC. It creates a risk that the investment will be stranded if another operator were to seek SLU under Option C that would have the effect of maintaining the existing SLU obligation in the medium term.

It could result in two Operators investing in VDSL technology at the same cabinet with the decision on which of their investments would be stranded being taken by ComReg based on a set of yet undefined criteria. Option C raises the same set of legal and regulatory issues that have been identified above in relation to Option A.

### **The description of Option C appears to be internally inconsistent**

The description of Option C seems to be internally inconsistent. For example, in relation to Option C, paragraph 5.97 of ComReg 12/27 states (emphasis added):

***"ComReg's policy objective is to prioritise the requirements of any operator that invests in bandwidth enhancing technology to serve end-user demand in the most effective way. An OAO that considers implementing SLU should be aware that unless it also deploys bandwidth enhancing technologies (in circumstances where ComReg considered it appropriate) and provides wholesale access to other operators, then we would consider the withdrawal of the SLU obligation in respect of that operator."***



The above description implies that an OAO could be granted SLU within its proposed rollout area, and provided that the OAO was proposing to deploy bandwidth enhancing technology, they could expect that the SLU option would never be withdrawn. This is inconsistent with the stated intent of maintaining the SLU option **for the medium term**, and **until bandwidth enhancing technologies mature** as set out in section 5.96 of the consultation.

This would appear to provide OAOs with the potential to secure control of the SLU while depriving eircom of a similar option.

In ComReg 12/27, in relation to Option C, paragraph 5.98 states (emphasis added):

*“5.98 Our deliberations on the withdrawal of the SLU obligation would be informed by a request from eircom or another OAO to deploy such a technology. Where bandwidth enhancing technology had not been implemented and another operator was willing to invest (and could demonstrate this) in the same area, we believe that in order to maximise consumer welfare, such investment should be facilitated.”*

In a similar vein, in relation to Option C, paragraph 5.99 of ComReg 12/27 states (emphasis added):

*“In addition to the deployment of bandwidth enhancing technology, the OAO implementing SLU should provide other operators with fit for purpose NGA wholesale inputs, comparable with similar, available WBA products, thereby allowing operators to develop uniform retail product offerings, a uniform retail offering would allow an operator to achieve scale in an efficient and cost effective manner.”*

These statements seems to be more relevant to Option A and do not appear to be consistent with Option C , which proposes to maintain the existing SLU obligation until bandwidth enhancing technologies would be determined to be mature.

For the reasons discussed under Option A, Option C is neither compatible with the protection of eircom's property rights under the Constitution nor with the basic principles of regulation under the framework and the implied potential new wholesale regime would be equally unreasonable and unworkable under Option C.

In ComReg 12/27, in relation to Option C, paragraph 5.100 states (emphasis added) :

*“Thus if an OAO unbundled sub-loops and deployed bandwidth-enhancing technology, for example vectoring, and offered NGA wholesale services to other operators, it may not be necessary or justified to remove the SLU obligation. This approach would incentivise all operators to deploy bandwidth-enhancing technology.*

The discussion in ComReg 12/27 implies that an SLU obligation would continue to exist, but that an OAO could potentially have deployed vectoring, and as discussed above, would potentially not face a risk of having SLU withdrawn. Also as discussed above, once an OAO had secured the



right to unbundle in a particular cabinet, and would have deployed bandwidth enhancing technologies, eircom would effectively be precluded from deploying vectoring technologies, since Option C does not provide for the withdrawal of SLU obligations even where eircom would propose the deployment of bandwidth enhancing technologies

Option C would impose significant risk on eircom's announced NGA plans

eircom has already commenced the rollout of its NGA network on the assumption that vectoring will be allowed and SLU will be no longer mandated. Option C would preserve the SLU obligation into the medium term until bandwidth enhancing technologies mature as perceived by ComReg. This uncertain state of affairs would create significant investment risk for eircom and significantly undermines the NGA business case.

eircom has based its investment decision on anticipated benefits and competitiveness resulting from NGA deployment that includes vectoring. If there were a risk that these broadband speed and competitiveness benefits could be undermined through granting SLU to other operators, the already challenging investment case for NGA would be severely undermined.

This lack of regulatory clarity would also impose risk on other operators committing to launch retail services based on wholesale services from eircom's NGA.

In ComReg 12/27, in relation to Option C, paragraph 5.96 states:

*"The obligation to provide SLU would remain in the medium term, until bandwidth enhancing technologies mature and their benefits and network impacts are well understood. ...."*

It is eircom's belief that vectoring is a very beneficial bandwidth enhancing technology that is currently available for deployment. Maintaining the current SLU obligation until bandwidth enhancing technologies are considered mature would create very considerable uncertainty and an unacceptable investment risk.

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

Definition of the NGA Footprint Areas

The options set out by ComReg in relation to SLU would all apply in "NGA Footprint Areas". NGA Footprint Areas are defined in the draft Decision Instrument as

*“the geographic areas served by eircom’s largest Exchanges i.e. those with more than 1,800 connections”.*

This definition produces a footprint which is broadly similar with the deployment proposed by eircom to pass 900k homes and 100k business premises. However, the definition proposed in the Decision Instrument could differ significantly from the actual eircom NGA rollout, leading to uncertainty of regulatory treatment of areas that are not common to both.

In addition, any definition will need to allow some flexibility so as to accommodate the reality of NGA roll-out. eircom has identified a list of exchanges that it expects to include within its rollout programme. These exchanges have been identified taking into account the following factors:-

- The need to respond to competition from UPC
- An objective to maximise the NGA footprint to be able to offer NGA services to the greatest number of customers
- Consideration of the number of lines in exchanges and cabinet sizes within those exchanges (Our selection includes exchanges down to about 2,000 working lines, with a small number below that volume of working lines)
- Estimation of the costs of equipment and network deployment

Although the definition of the NGA Footprint Area in the consultation document produces a footprint which is broadly similar with eircom’s proposed NGA rollout, in our opinion, it is not a reasonable basis on which to specify NGA remedies

The eircom proposed footprint will be based on the criteria outlined above. It should be seen a strong indication of the expected final rollout, though it should also be recognised that changes are likely to arise during detailed planning and as a result of evolving commercial needs arising during implementation of the proposed NGA programme. The following are examples of situations that may give rise to changes from the initially planned rollout:

- Input from Wholesale customers on coverage sought
- Detailed planning that would be carried out at the level of individual cabinets
- Improved understanding of equipment and network deployment costs
- Practical difficulties that may be encountered during detailed planning or implementation e.g. individual cabinets might prove to be unviable at the time of survey
- The potential need rollout NGA in small areas that would not be economic to avoid footprint discontinuities that would introduce too much complexity in marketing and sales

In addition to the above potential instances of change, we expect to identify further exchanges that could be included in the NGA rollout through assessment of exchanges that were not included in the initial list referred to above. We will carry out an assessment of exchanges that might be expected to prove in, for example, on the basis of working lines, on the basis of being

close or adjacent to included exchanges, or that may be required to achieve a better geographic distribution to support approaches to sales and marketing, or exchanges that would help demonstrate a commitment to maximising a national rollout.

Accordingly, it would not be practical or reasonable to define the NGA rollout by reference to a threshold number of connections in exchanges.

eircom suggests that the definition of the NGA Footprint Areas be amended as follows: *“the geographic areas served by eircom’s exchanges **within eircom’s NGA rollout plan that has been notified to ComReg**”*.

*Application and Notification procedure needs to be straightforward and practical*

The application process may become burdensome and time consuming unless a simple process can be put in place to notify ComReg of intended rollout. As discussed above, the notification process and obligations to adhere to the rollout notified should make provision for normal planning and implementation flexibility.

*The scope of a future review of the Option for SLU needs to be clarified in order to support investment*

ComReg paragraph 5.6.2 also includes the following proposed condition:

*“The appropriateness of the Option for SLU would be reviewed by ComReg three years after it is enacted.”*

This proposed condition is open ended and as such creates significant investment risk for eircom. It does not provide any indication of the scope of the review or what options may arise at that time. As drafted, without some indication of scope or potential outcome, it is possible that the regulatory option implemented in the interim could be cancelled or changed. eircom accepts that some adjustment of the chosen option may be necessary if technology developments permit. However, this should not be without constraint and a suggested revised wording is proposed below.

*“The appropriateness of the Option for SLU would be reviewed by ComReg three years after it is enacted, to determine if adjustments are necessary for the effective operation of the option that is expected to be maintained in substance.”*

**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.**

eircom intends to rollout VDSL technology with enhanced vectoring capability to approximately 1 million premises over the coming 3 year period.

Where an alternative operator indicates an interest in obtaining access to the sub-loop, some regard must be given to the seriousness of their intentions. In particular, it is critical that any such Operator would have the ability to support their request with a documented statement of business decision that is formally verified by an officer of the company, such as a written certification of business decision from the CEO. Otherwise, competitors could easily abuse the process in order to maintain the SLU obligation without actually availing of it.

**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.**

As with other European operators, eircom is keen to deploy standardised technologies which provide performance improvements to DSL customers and can offer a roadmap to faster speeds. Two standardised technologies that we intend deploying in the coming months are VDSL2 on a 17MHz band plan and Vectoring. The cumulative benefit of these two improvements is to move DSL towards downstream speeds of 100Mbps over short copper loops and increase the percentage of customers than can reasonably expect to achieve 30Mbps downstream speeds. For details please see our Answer to Q5.

Platform competition has emerged strongly in urban areas from UPC that has diversified from its core market into fixed line telecommunications services. UPC operates primarily as an urban service provider of triple play services (Broadband, Telephony, and TV) that currently include broadband speeds of up to 100M. Implementing technologies that can offer competitive broadband speeds is essential to NGA deployment and essential to ensure that other Fixed broadband operators can compete and will exist in the future in Urban areas. The viability of any operator that can only offer broadband speeds of up to 24M against the 100M capability of the cable operator is in doubt.

In a speech delivered at the Limerick Chamber Event on Securing the Future of Shannon Airport, on Friday 27th January 2012 at the Radisson Hotel, Dana Strong, CEO of UPC Ireland stated:

*“We’re also driving broadband access in the residential sector. Through UPC’s 400 million euro plus infrastructural investment, well over half a million households nationwide are now capable of 100 megabit Internet access. This includes 97% of cabled households in Limerick. Nationwide, over 700,000 homes are already capable of 30 megabit access speeds. And we will be increasing these speeds in the future.”*

UPC offer 25M fixed broadband as an entry level offering with speeds of 50M, and 100M also available. In addition to fixed broadband UPC offer a fixed telephony service and are unique in this market with their ability to offer Digital TV services in a large number of Irish homes to complete the 'triple play' offer of Broadband, Telephony and TV.

Key highlights for UPC Ireland within Liberty Global's recent report of Q1'12 performance

- Broadband subscribers increased by 17,300 (+6.8%) to 272,700 compared to Q4 2011 continuing the strong quarterly growth in Broadband subscribers. Year-on-year (Q1 2012 compared to Q1 2011), broadband subscribers have increased by 57,800 (+26.9%)
- Homes capable of broadband service increased by 11,800 (+1.7%) in Q1 and increased by 43,600 (+6.4%) year-on-year to 720,800.
- 37.8% of homes who can have UPC broadband are availing of it (272,700 / 720,800) (up from 36.0% in Q4 2011 and up from 31.7% in Q1 2011 )
- Telephony subscribers show a record quarterly increase of 25,000 (+15.4%) to 187,200 compared to Q4 2011. This is the largest quarterly increase of telephony subscribers and along with strong growth in the previous two quarters, telephony subscribers have increased by 66,000 in the last 9 months. Year-on-year telephony subscribers have increased 78,300 (+71.9%)
- Homes capable of telephony service increased by 16,600 (+2.5%) to 691,200 compared to Q4 2011 and increased 73,200 (+11.8%) year-on-year.
- 27.1% of homes who can have telephony are availing of it (187,200 / 691,200) (was 24.0% in Q4 2011 and 17.6% in Q1 2011)

Cable has grown its share within the overall Fixed Broadband national market, with its share growing from 20.8% to 25.2%, an increase of 4.4% in just 12 months. By comparison, eircom's retail share has fallen back from 47.8% to 43.4%, a reduction of 4.4%.



However, competition is most intense from UPC within its cable footprint where it is focused on the Consumer Market. The table below sets out the situation in this Urban Consumer market.



Within the UPC footprint, the Consumer Fixed Broadband market grew from ~~20.8~~k at the end of Mar'11 to ~~25.2~~k at the end of Mar'12, an increase of ~~4.4~~k or ~~4.4~~% which is a stronger growth than the ~~4.4~~% growth for the national consumer market.

While the consumer market within UPC's footprint grew by 3k, UPC grew its base by 57k, by growing its share from 3% to 4%, an increase of 1% in just 12 months. Correspondingly, eircom has seen significant retail market share erosion from 3% to 2%, within the UPC footprint, a reduction of 1 percentage points. The market share held by other operators relying on eircom's network fell back from 3 to 2. When all the market share of all operators relying on eircom's network is taken into account their combined share fell back from 3% to 2%, a reduction of 1%, the same magnitude as the gain secured by UPC, and in a short period of only 12 months.

While competition has many dimensions, it is clear that broadband speed is key and an ability to offer headline broadband speeds of up to 100M is an urgent necessity. Today, UPC can offer speeds of 100M to over half a million homes. Taking advantage of bandwidth enhancing technologies is therefore imperative to enable eircom's wholesale customers compete with the cable network. Not being able to do so would leave the eircom network at a significant disadvantage and in reality would mean it could not compete with the cable offering.

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

eircom is of the view that there should be no obligation on eircom to provide SLU in the NGA footprint and therefore, that the issues of co-location at the cabinet and of backhaul from the cabinet do not arise.

eircom currently offers both exchange co-location and backhaul services in the context of the current LLU service. eircom proposes that these products continue to be made available in the context of NGA in conjunction with the proposed VUA product. The current product definitions will work with VUA without amendment.

In section 5.114, ComReg states that backhaul should be priced on a BU-LRAIC basis, consistent with the Copper Access Network Model. This is not the current basis for pricing LLU backhaul. eircom is of the view that the current pricing model is the appropriate model for pricing backhaul. This would ensure regulatory consistency across Ethernet services, and avoid the risk of tactical switching between backhaul options to exploit the arbitrage opportunities that the proposed change would create.

**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.**

eircom agrees that NGA Bitstream and NGA VUA services (including exchange co-location) are the appropriate mandated products to support other operators' utilisation of its NGA infrastructure build. It should be made clear that the obligation to supply relates only to those areas (and cabinets) in which eircom has built and is operating an NGA infrastructure, and where the access infrastructure will support such services.

NGA Bitstream and NGA VUA have been effectively tested on the NGA pilot which has been operational for the past nine months and was subject to detailed engagement with industry for at least another nine months prior to that. These products have been refined over recent months through the NGA industry forum managed by ComReg but the core product specifications have remained stable for quite some time. This fact should carry considerable weight when determining the period of formal notice required by industry prior to the formal launch of NGA services.

eircom notes that ComReg proposes that both services should be mandated under Market 5. In the case of VUA, there are grounds for arguing that it is a remedy that is appropriate under either Market 4 or Market 5. Different regulators have reached different conclusions. Having regard to the fact that SLU is not a form of access that is reasonable in the NGA Footprint Areas, eircom is of the view that VUA should be considered to be the appropriate form of access to mandate as a remedy in the context of ComReg's finding of SMP in the WPNIA market. However, eircom recognises that ComReg's proposal to mandate VUA under the WBA decision is pragmatic in the current circumstances. It may be appropriate at some point in the future to review whether the development of the VUA products and the adoption of these new wholesale services cause the initial view to change.

In section 6.25, ComReg lists the characteristics which a VUA product must include. eircom is generally in agreement with the characteristics listed, with the following exceptions:

- Flexible CPE: an Operator can supply its own CPE and such CPE could differ from that supplied by the incumbent CPE. However all CPE deployed **must** be vectoring compliant in order to ensure that the benefits of vectoring can be enjoyed by all customers on the particular cable bundle. This will be achieved by the compilation and publication of a list of compliant CPE or alternatively non-compliant CPE.
- ONT installation: the ONT installed in the customers home will be standard and supplied by eircom, as compatibility between different GPON manufacturers is not clearly defined
- Flexible Interconnection: ComReg's description is not entirely correct. Interconnection will only be available at the serving NGN aggregation node for any individual end customer. The interconnection available at that node will be flexible in that both in-building and customer sited interconnection will be available at each node.

eircom agrees that Multicast is an “enhanced service characteristic” and that it should be mandated as an associated facility of both VUA and Bitstream Plus. As ComReg notes (para 6.36) eircom already proposes to offer multi-cast service on a wholesale basis as part of its NGA Bitstream plus and VUA services. It should be noted that eircom does not intend to offer a stand-alone Multicast service, and does not interpret ComReg’s consultation as suggesting it should.

**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.**

eircom agree that backhaul and co-location services are associated facilities of VUA and that is reasonable that they be mandated in that context. ComReg is correct to note that eircom intends to use its Wholesale Ethernet Interconnection Link (WEIL) services to interconnect with other networks. ComReg also indicates at paragraph 6.47 that it intends to mandate WEIL handover at local and national level for both VUA and NGA Bitstream Plus. For the avoidance of doubt, WEIL is an interconnection service, not a backhaul service, and should be separately treated from the proposed backhaul remedy. It is accordingly not appropriate to include WEIL in the definition of Backhaul as proposed in the Draft Decision Instrument.

**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.**

The main elements of ComReg’s proposals for overarching remedies applying to both WPNIA and WBA are familiar from previous WPNIA and WBA regimes, and with the exception of the points immediately below and in our following answers on migrations and equivalence of inputs eircom accepts their continuing application to NGA WPNIA and WBA services.

eircom notes that ComReg proposes a period of 5 years prior notification for the withdrawal of MDF facilities and services. ComReg has noted that eircom has already proposed that permission should be sought from ComReg prior to withdrawal of facilities, and we have outlined scenarios in which the notice period could and should be shortened. We also note and agree with ComReg’s point that eircom cannot be expected to bear the expense of maintaining dual networks for an unreasonable period of time.



eircom proposes amendment of the conclusion set out in section 7.16 to include a reference to a shorter notice period where a commercial settlement has been reached as contemplated in section 7.12. The exact conditions associated with agreeing a shorter notice period do not need to be specified in advance: how the NGA marketplace will evolve, and precisely how eircom and other operators will manage migrations are as yet uncertain and it would be unhelpful at this stage to seek to anticipate under what circumstances a shorter notice period might be helpful to competition, NGA build or consumer welfare. The provision for ComReg's agreement is sufficient as a safeguard.

eircom notes ComReg statement in para 7.23 that "we propose that Eircom must ensure that any future IT developments evolve such that both Eircom's down-stream arms and OAOs access OSS in exactly the same manner. This should be provided in accordance with the principle of –Equivalence of Inputs". eircom's position on equivalence of inputs is set out in detail in our response to Question 14. eircom does not agree that it would be appropriate, necessary and proportionate - or consistent with the applicable rules -- to impose such a sweeping new remedy in relation to future systems development.

**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 WPNIA market (Market 4)? Please provide reasons for your response.**

eircom proposes to provide a full suite of migration capabilities for migrations to and between NGA products. Because the initial migration to NGA service requires an intervention in the access network and most likely a visit to the end customer premises, the scope for bulk migrations will be extremely limited.

The possibility to migrate from NGA to legacy products will also be provided but this movement should be exceptional and discouraged through appropriate migration charging as such migrations will involve further interventions in the access network with associated costs.

Efficient and swift migrations are key to the operation of a competitive market and require pan-industry processes and agreements. ComReg's consultation is concerned with NGA remedies for WPNIA and WBA markets and therefore understandably concentrates on eircom's wholesale services. But the issue is broader and needs to be considered in a wider context. Migrations from other operators to one another, and to eircom, have also to operate swiftly and efficiently. eircom expects ComReg to apply migration principles reciprocally and seeks a clear commitment to that effect.

**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.**

SUMMARY

eircom does not agree with ComReg's analysis and conclusions regarding the obligation of non-discrimination. In essence, ComReg proposes to impose an equivalence of input ("EoI") obligation in relation to eircom's provision of all regulated NGA, WPNIA and WBA services (other than civil engineering), unless eircom proves to ComReg's satisfaction that the costs of a particular implementation would outweigh the benefits. The obligation would apply to all elements, systems, interfaces and processes, of the NGA wholesale service product lifecycle. It is eircom's view that ComReg's proposals are clearly unnecessary, disproportionate and damaging to both effective competition and investment in fibre based broadband.

ComReg has neither considered the scale of costs nor inquired of eircom as to feasibility or practicality. This is difficult to understand, having regard to ComReg's own comments submitted to the European Commission, that "any requirement for EoI would need to be based on rigorous cost-benefit analysis."<sup>1</sup> In this regard, it is clear that the costs of ComReg's proposals would be considerable, although eircom has not yet had time to assess them in full. Indeed a full assessment may not be possible: the obligations proposed are open-ended and if taken literally would require fundamental restrictions on eircom's business and business processes.

The regime proposed would also be costly to operate and sustain, and it would be disruptive to eircom's operations, potentially diverting scarce technical resources needed for NGA network roll-out to endless rounds of EoI reviews. Every system and process touching the range of wholesale NGA services would have to be restructured. Should eircom find any one change impracticable or unduly costly it would have to go through a burdensome application process before learning whether it would be permitted an exception. This reverses the established principle of regulation being applied only where proportionate and necessary, opting instead for onerous blanket obligations which may only be lifted where an exceptional case is made.

It also materially handicaps eircom in competing with UPC, its established but unregulated competitor and provider of high speed broadband services over a cable platform (as well as mobile broadband competitors). As such, the proposal is hostile to eircom's planned NGA investment. The business case for NGA is fragile. Demand levels are uncertain. What is required is a regulatory framework that is conducive to NGA investment, especially NGA investment which, like eircom's, will support retail broadband competition. This plainly is not true of the far

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<sup>1</sup>See Answer 11 on p. 8 of ComReg's response to the EU Commission's Questionnaire on Non-Discrimination dated 28 November 2011

reaching and open ended set of EoI obligations proposed in the Consultation Document. In the sections which follow we explain in detail why we believe the legal foundation for ComReg's proposals is unsound; why the proposals are disproportionate and damaging and how ComReg's objectives can be achieved in a more reasonable and proportionate manner.

The remainder of this response is divided into the following sections:

- ComReg's proposal to impose an open-ended EoI obligation on eircom does not meet the requirements of the applicable legal and regulatory framework:
  - ComReg's proposed EoI obligation is not specified by the Access Regulations
  - The applicable regulatory framework imposes significant limitations on ComReg's authority to introduce a new remedy not specified by the Access Directive, including EoI
  - There is no justification for ComReg's proposal to impose an EoI remedy on eircom
- ComReg's EoI proposal is neither proportionate nor necessary:
  - eicom's voluntary adoption of a focused equivalence solution
  - The basis for regulatory intervention is unsound
- The difference between voluntary reform and ComReg's proposals
- Conclusion

## 1 COMREG'S PROPOSAL TO IMPOSE AN OPEN-ENDED EOI OBLIGATION ON EIRCOM DOES NOT MEET THE REQUIREMENTS OF THE APPLICABLE LEGAL AND REGULATORY FRAMEWORK.

### 1.1 *ComReg's Proposed Equivalency of Inputs ("EoI") Obligation Is Not Specified by the Access Regulations.*

Apart from the UK<sup>2</sup>, ComReg's proposal stands out as the only instance in which a national regulator has attempted to impose EoI as an SMP obligation in the European Union. ComReg

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<sup>2</sup>The only country in which an EoI obligation has been imposed by a national regulator in the EU is the UK, in respect of BT's NGA (VULA) service, and the situation there cannot be considered precedential due to several factors unique to the UK. First, BT originally committed voluntarily to a form of EoI as a means of implementing its functional separation Undertakings under the UK Enterprise Act 2002, and thus was already required to offer equivalent access to OSS pursuant to those Undertakings. Second, Ofcom was operating under a different non-discrimination provision than the rest of Europe. Section 87(6)(a) of the Communications Act 2003, which transposed Article 10 of the Access Directive, materially changed the Directive's non-discrimination obligation (condition) by more generally requiring the "dominant provider not to discriminate unduly against particular persons . . . in relation to matters connected with network access to the relevant network or with the availability of relevant facilities." Ofcom itself recognised this significant discrepancy and its uniqueness as a feature of the UK framework in its Guidance on Undue discrimination by SMP Operators (at para. 4.10) issued in 2005. Ofcom there acknowledged that "[t]he term 'non-discrimination' is transposed into the Act by the term 'undue discrimination' reflecting previous telecoms regulation in the UK." In its comments on the equivalency obligation imposed by Ofcom on BT to provide VULA services using the "same systems and

characterises the proposed Eol remedy as a "further specification of the obligation of non-discrimination" (12/27, para. 8.38). It is, in fact, a completely *different* remedy.

The distinguishing feature of Eol – use of the same systems and processes – falls well outside the scope of the non-discrimination obligation specified by Regulation 10 of the Access Regulations and imposed on eircom in relation to the WPNIA and WBA markets. As defined by ComReg, this distinguishing characteristic of Eol is, rather, an intrinsic element of the functional separation obligation (albeit not the only defining feature), as discussed below. Thus, ComReg's proposed Eol remedy is neither non-discrimination nor functional separation (except as discussed below) as defined by the Access Regulations. It is instead a new form of remedy not specified by the Access Regulations.

The distinction between the non-discrimination obligation specified in Regulation 10 of the Access Regulations and ComReg's proposed Eol obligation is clear. The non-discrimination obligation requires an SMP operator to:

- (a) apply equivalent conditions in equivalent circumstances to other undertakings providing equivalent services; and
- (b) provide 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.

The first part of this non-discrimination obligation requires the SMP operator to treat all similarly situated wholesale customers equivalently. The second part requires eircom to provide services and information "under the same conditions and of the same quality" as it provides to itself. Thus, eircom may provide different services and use different means of providing information to its competitors as compared to its downstream operations, *so long as* the quality and the applicable conditions (prices, timescales, etc.) are the same. ComReg's proposed definition of "Equivalence of Output" corresponds to the non-discrimination obligation specified by the Access Regulations insofar as it requires eircom to provide wholesale access products to access seekers and itself "*in a manner which is comparable or identical to those it provides to itself in terms of functionality and price*" (12/27, para. 8.40 (emphasis added)).<sup>3</sup>

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processes" as its competitors, the EU Commission observed that this Eol obligation, "stemming from the Undertakings agreed between Ofcom and BT . . . [would] constitute regulatory obligations" subject to its review (Commission Decision concerning cases UK/2010/1064 and UK/2010/1065, dated 1 June 2010, pages 7 and 8). However, neither Ofcom nor the Commission gave any consideration to the procedures and evidentiary thresholds that should apply, quite likely because of the unique circumstances.

<sup>3</sup> It is noteworthy the form of "equivalence" described in Annex II of the Commission's NGA Recommendation on access to NGA networks (dated 20 September 2010) is EoO not, Eol. The Commission there indicated that NRAs should provide access on a "strictly equivalent basis", and that NRAs should require the SMP operator to provide access "under the same conditions to internal and third-part access seekers" and require the SMP operator to "apply the same procedures for access ordering and provisioning." The Commission did not require use of the same systems for ordering and provisioning.

ComReg's proposed EoI obligation would require eircom to provide NGA services and information to OAOs "on the same timescales, and on the same terms and conditions (including price and service levels)" as it provides to itself (12/27, para. 8.40). This component of the EoI definition is effectively a restatement of the non-discrimination obligation set out in the Access Regulations and imposed on eircom in relation to the WPNIA and WBA markets .

However, in a clear departure from the non-discrimination obligation, the proposed EoI obligation would also require eircom to "*use the same systems and processes . . . in the same way and with the same degree of reliability and performance*" (12/27, para. 8.40 (emphasis added)) as its competitors. Elsewhere in the Consultation Document, ComReg defines the EoI obligation as extending to "*interfaces*" as well as systems and processes(12/27, para. 8.42).

The "*same systems and processes*" requirement is one of two principal elements of the functional separation obligation, which was recently added to the obligations specified in the Access Regulations as an "exceptional measure" (the other element being the establishment of an "independently operating" wholesale business entity).<sup>4</sup> A business entity that is subject to the functional separation obligation must:

*supply access products and services to all undertakings, including to business entities within the same parent company, on the same time scales, terms and conditions, including those relating to price and service levels, **and by means of the same systems and processes.***

Regulation 14(2) of the Access Regulations (emphasis added).

The remedy of functional separation also involves the establishment of an "independently operating wholesale business entity". Allegedly, this is not part the EoI obligation proposed by ComReg. However, as a practical matter, it is difficult to envisage how an EoI requirement as broad as that proposed in the Consultation Document, covering all NGA services, could be met otherwise than through the formation of an "independently operated wholesale business entity." The creation of such an entity is the only way in which an SMP operator could deliver access to *the same* systems and end-to-end processes in the *same* way to both its downstream operations and competitors across the wide range of NGA activities covered by an open-ended EoI obligation.

An open-ended EoI obligation such as that proposed by ComReg is accordingly a highly intrusive and onerous measure insofar as it dictates how an operator organises its internal operations and processes. As BEREC has observed, "[t]he concept of 'Functional Separation' is often linked with the concept of 'Equivalence of Access', by which the separated unit is required to supply

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<sup>4</sup> Functional separation may only be imposed if the regulator provides a strong justification, including clear evidence that the other obligations specified by the Access Regulations have failed to achieve effective competition.

access products and services on an equivalent basis to all communication providers, including the downstream arms of the separated undertaking,”<sup>5</sup> which would be treated as if they were unaffiliated wholesale customers in all respects.

In proposing to impose an EoI obligation, ComReg appears to rely on an EU Commission Consultation and *Questionnaire* that were circulated in October 2011 (12/27, paras. 8.12 & 14.55). No results have been reported – and certainly no recommendations have yet been adopted – following that consultation; nor has a more recent BEREC consultation on non-discrimination, also referenced by ComReg, progressed beyond the information gathering stage. It is axiomatic that a consultation is not a recommendation, position or a reasoned decision. However, it is important to note that BEREC's Consultation paper recognises that EoI may only be imposed if fully justified under the circumstances and specified precisely in order to resolve actual competition problems that have been identified<sup>6</sup> – a basic requirement that ComReg has failed to meet. In any event, any ensuing recommendations or common position in favour of an EoI remedy would, in any event, need to be implemented in accordance with the evidentiary requirements and special review procedures applicable to any new obligation not specified by the Access Regulations, as described below. Neither the Commission nor BEREC's Consultation address the process by which an EoI remedy may be imposed.

In summary, ComReg's proposed EoI obligation is not merely a minor adjustment to the non-discrimination obligation specified in the Access Regulations and imposed on eircom in relation to the WPNIA and WBA markets. It is either a completely new obligation, or in its most extreme implementation, it is the effective equivalent of functional separation. In either case, as explained in further detail below, it is not lawfully possible for ComReg to impose such a remedy on eircom in the manner proposed by ComReg.

### 1.2 The Applicable Regulatory Framework Imposes Significant Limitations on ComReg's Authority to Introduce a New Remedy Not Specified by the Access Directive, including EoI.

The non-discrimination obligation set forth in Regulation 10 of the Access Regulations is one of five prescribed measures (along with transparency, accounting separation, access to network facilities, and price controls) that national regulators may impose on SMP operators. Application of these remedies follows the normal review procedures prescribed by Article 7a of the Framework Directive, including review by the European Commission and BEREC.

A national regulator may not impose any other access or interconnection or access obligations on SMP operators (apart from the functional separation measure, as discussed below) unless it

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<sup>5</sup> BEREC Guidance on functional separation under Articles 13a and 13b of the Access Directive and national experiences, BoR (10) 44 (February 2011) (“BEREC Guidance”), para. 2.1.1

<sup>6</sup> BEREC Consultation paper dated 1 March 2012, para. 3.35

can show that such measures are justified by exceptional circumstances.<sup>7</sup> This is clearly an even higher hurdle than that set by the proportionality requirement of Regulation 6(3) of the Access Regulations, which applies to the access and interconnection obligations specified in Regulations 9-13.

Furthermore, any such exceptional measures are subject to a special review process pursuant to Article 8(3) of the EU Access Directive. Specifically, the national regulator must first seek permission of the EU Commission to impose a new obligation. The EU Commission would then be required to follow the Advisory procedure set forth in the New Comitology Regulation (Articles 4, 10 & 11 of Regulation 182/2011). Under the Advisory procedure, the Commission must seek an opinion from the Communications Committee (“Cocom”) on the proposed measure. Moreover, the European Parliament and Council have a right of scrutiny and the opportunity to render their opinions on the proposed measure (since it is essentially an amendment to the approved legislation).

Likewise, functional separation may be imposed only under certain very limited conditions – in particular, where the standard obligations "have failed to achieve effective competition and, . . . there are important and persisting competition problems or market failures identified in relation to the wholesale provision of certain access product markets."<sup>8</sup> The national regulator is required to provide evidence supporting its assessment of the need for functional separation as a remedy of last resort, and special review and approval procedures apply at the EU level. As described by BEREC, functional separation is:

*. . . an exceptional measure [that] requires specific conditions and special procedures before it may be imposed. The procedures are set out in Article 8(3) of the Access Directive and empower the Commission, taking the utmost account of the opinion of BEREC, to take a decision to authorise or prevent an NRA from imposing functional separation as a remedy.<sup>9</sup>*

### 1.3      *There Is No Justification for ComReg's Proposal to Impose an Eol Remedy on eircom.*

ComReg's consultation document offers no justification for imposing an exceptional Eol remedy on eircom. That is because there is no basis for imposing this highly intrusive and burdensome form of regulation on eircom. As discussed below in section 3.1, concerns in relation to ordering and provisioning processes, fault repair and maintenance and quality of service are already

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<sup>7</sup> We further note that ComReg is not permitted under the regulatory framework to impose on an operator a new obligation save in the context of a market analysis. While ComReg purports to "specify" the obligation of non-discrimination imposed on eircom in its WPNIA and WBA decisions, for the reasons already explained, the requirement of Eol proposed by ComReg goes significantly further than what is included in the obligation of non-discrimination prescribed by the Access Regulations and imposed on eircom on the basis of ComReg's market analyses that led to the adoption of the WPNIA and WBA Decisions. These market analyses provide no justification for an Eol remedy of the kind that ComReg proposes to impose. As such, a new market review is required before an Eol can be imposed.

<sup>8</sup> Regulation 14(1) of the Access Regulations

<sup>9</sup> BEREC GUIDANCE, para. 2.1.



being addressed, including by means of ComReg's introduction of KPI reporting requirements that will cover both legacy and NGA services (12/27, para. 8.56), as well as a number of important Wholesale Reform measures that eircom has implemented on a voluntary basis. This includes eircom's commitment to reconfigure its internal systems so that eircom's retail businesses access NGA ordering, provisioning and fault reporting and repair systems in the same way as eircom's wholesale customers.

ComReg observes that the introduction of NGA offers an opportunity to deliver a "higher standard of equivalence" (12/27, paras. 8.42 & 14.53). Similarly, ComReg has indicated that it desires to "raise the standard applied to the non-discrimination obligation" (para. 14.57) because "the move to a next generation network provides the possibility of upgrading or replacing . . . legacy systems."

Opportunity, however, does not amount to justification, particularly as the basis for imposing such an intrusive and onerous measure.

ComReg speculates that "OAOs are vulnerable to being at a disadvantage in terms of delivering both products and services to their customers" if they do not have access to systems that are equivalent to those used by eircom's downstream arm (12/27, para. 14.55). However, ComReg has offered no evidence to demonstrate that there has been any measurable, sustained difference in outcomes as between OAOs and eircom's downstream operations with respect to provisioning or repair times for legacy services as a result of the use of somewhat different systems and processes. ComReg has given no consideration to the impact of the KPI reporting regime that it has recently introduced, together with the changes made as a result of eircom's voluntary Wholesale Reforms Programme.

The Consultation Document makes vague reference to "a number of issues . . . [in Markets 4 and 5] that have raised concerns with eircom's compliance with its non-discrimination obligation" (12/27, para. 8.47 & fn. 115). However, upon review of the five decisions and complaints referenced by ComReg in a footnote in apparent support of this assertion, it transpires that the only recent allegation of non-compliance (from 2010) related to pricing issues, not quality of service (the focus of the EoI remedy) in the market for terminating segments of leased lines, not the WBA or WPNIA markets; in addition, as ComReg would be aware, eircom does not accept that any of its obligations under the relevant decision, ComReg Decision D06/08, were breached and eircom has made lengthy representations in relation to this. eircom similarly opposed ComReg's findings in the other matters referred to by ComReg and/or resolved the issues concerned. None of these matters were ever the matter of orders of compliance by the Court.

The Consultation Document also observes that "a significant number of the product related developments offered by eircom or reflected in Statements of Requirements ("SORs") presented



by operators relate to these concerns" (12/27, para. 8.48). ComReg, acknowledges, however, that some of these issues only emerged "as operators actively used the wholesale inputs." ComReg appears to have overlooked the fact that over the past few years, eircom has expended considerable resources to upgrade the Unified Gateway interfaces used by OAOs and has worked cooperatively with them to enhance their access to eircom's OSS systems. In particular, eircom has added real time access capabilities to the Unified Gateway to ensure that response times are the same for wholesale customers as for eircom's retail operations. The evidence therefore favours retention of the existing regulatory approach, not a more intrusive one.

Systems and process developments require time and experience to work through. It would be impractical in the extreme to require eircom to attempt to anticipate and deliver all permutations of possible EoI solutions seven months prior to the launch of every new service, and to prepare detailed justifications for any and all deviations. Such a requirement would impose substantial and needless delays on the launch of new products and services.

The Consultation Document attempts to find support in ComReg's 2010 WPNIA decision (D05/10), where the signal was given that ComReg would consider it "appropriate that future IT development takes place in a manner which results in both OAOs and eircom's retail arm having the same mode and quality of access to OSS and associated facilities" (12/27, para. 8.27). However, this clearly was a proposition left open for future consultation in the context of NGA services. ComReg certainly offered no justification at the time for imposing an exceptional EoI remedy on NGA, but rather identified various high level obligations, including the non-discrimination requirement set forth in the Access Regulations.

The Consultation Document provides no evidence of any exceptional circumstances, persistent competition problems or unworkable conventional remedies that would justify the imposition of an EoI or functional separation obligation in respect of NGA services. It would be premature for ComReg to impose such an obligation in light of developments in the marketplace. eircom recently has voluntarily implemented a series of wholesale reforms, as discussed in more detail in the following section. eircom is also in the process of a major systems reconfiguration for NGA services which will result in eircom's retail units accessing the Unified Gateway via the same interfaces that are used by eircom's wholesale customers. These voluntary reforms should be given time to work.

eircom has not yet even begun to offer wholesale NGA products, so there can be no basis for ComReg to conclude that application of the non-discrimination obligation specified by the Access Regulations has systematically failed to deliver effective competition in the provision of NGA services. Moreover, with respect to legacy services, ComReg has only recently implemented a quarterly KPI reporting regime for Markets 4 and 5. The KPI process thus far appears to be working well as a means of identifying issues that need to be addressed and, in any event, no major systemic concerns have surfaced. A similar set of KPIs will apply to eircom's

NGA services. There is no credible evidence that the existing remedies are ineffective and thus there is no basis for subjecting eircom's NGA services to an exceptional EoI measure.

Finally, it is significant that the Consultation Document nowhere attempts to assess the potential impact that an open-ended EoI obligation of the kind proposed by ComReg would have on eircom in terms of cost, diversion of resources from other critical infrastructure projects, and disruption to the business. Instead, ComReg proposes to shift the burden to eircom to prove – on a case by case basis and subject to a highly complex and burdensome procedure – that the EoI obligation should be waived for specific implementations. This is completely incompatible with the requirement *placed on ComReg* by the Framework and Access Regulations to justify the imposition of any remedy not specified in the Access Directive as an exceptional measure.<sup>10</sup>

## 2 COMREG'S EOI PROPOSAL IS NEITHER PROPORTIONATE NOR NECESSARY

Apart from the legal and process concerns raised by ComReg's proposed EoI obligation, it is clear that there is no valid reason for imposing such an intrusive and onerous obligation on eircom.

### 2.1 *eircom's voluntary adoption of a focused equivalence solution*

eircom is well advanced in implementing a comprehensive, voluntary programme of wholesale reforms designed to improve eircom's wholesale business proposition and address perceived discrimination issues. A new ring-fenced wholesale structure is in place. Within it a separate product team deals with wholesale regulatory access products. As referenced earlier, as a result of ComReg's recent Decision, KPI reporting is now in place to identify variations in the performance of wholesale services and eircom's retail equivalents so that their causes may be established and any systemic differences in outcomes addressed. Improvements have been made to account management and wholesale service support. Wholesale product fora (including the NGA forum) are working well.

These are significant and material advances and their actual and potential impact should have been considered as part of ComReg's analysis. If proper weight is attached to them, it would be fair to conclude that a proportionate regulatory framework for NGA ought to be less, not more, onerous than that already in place for legacy wholesale services.

In addition, eircom has volunteered to implement a focused form or equivalence by using as an input for its retail NGA services key wholesale products supplied externally, ordered, provisioned and supported for fault handling and repair through the same business to business gateway as is used by other operators. This voluntary initiative would mean eircom producing

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<sup>10</sup> This proposal to shift the burden of proof to eircom also is incompatible with the stringent evidentiary requirements imposed on national regulators by Article 8(3) of the Access Directive for the imposition of a functional separation remedy.

and maintaining retail NGA services using the same systems interface as external wholesale customers.

This additional voluntary move means that eircom has adapted its NGA development plans to include an enhanced form of equivalence in the systems interface for ordering, provisioning and fault repair processes.

ComReg's proposals and eircom's voluntary reforms have the shared intent of delivering fit for purpose wholesale services fairly to the industry. But they differ hugely in the scale of the burden placed on eircom. The open-ended EoI obligation proposed by ComReg is prescriptive and would demand process and system audit, reform and reporting. The regulatory overheads would clearly be considerable but at this stage are incalculable. It is also unclear whether and to what extent any such changes could impose costs on eircom's wholesale customers. The voluntary arrangements are we believe equally effective in delivering the right results to industry but are shaped by what is reasonable and achievable: they are a focussed and specific set of actions, affordable, capable of timely implementation and proportionate.

Encouraging and supporting eircom's voluntary approach would create a far better climate for NGA investment while still ensuring a strong and vibrant competitive market. And should ComReg find in future that some aspect of the market was not operating satisfactorily, it would of course remain open to it to take the necessary regulatory action to resolve the matter. What is not warranted is a major intensification of regulatory interventions and obligations ahead of any specific issue of substance identified as warranting a remedy and against a background of substantial and voluntary wholesale improvements. This is particularly the case where, as discussed in the previous sections: (1) ComReg has provided no factual basis for a finding of market failure requiring such a sweeping change; and (2) there is no corresponding burden on eircom's major platform competition, UPC, which creates significant competitive distortion.

## 2.2      *The basis for regulatory intervention is unsound*

ComReg's analysis extrapolates from previous experience of wholesale services, assuming that the past is a reliable guide to the future. But this fails to take account of clear progress and improvements on a number of fronts including:

- eircom has accepted the need to provide wholesale NGA services (see paper entitled 'Discussion Document for Industry, eircom group, Proposed Programme of Wholesale Reforms, 9<sup>th</sup> Dec'11)
- Wholesale NGA products have been tested in an open-access pilot mode with wholesale customers
- The industry NGA forum is established and functioning well, and covers product specification, process design and deployment

- A voluntary programme of wholesale reform is well underway, with real improvements already delivered to wholesale customers (for example LLU improvements, real time access)
- eircom has committed to use the same gateway and service as wholesale customers for NGA services supplied to retail customers

This is clear evidence that NGA wholesale services are being delivered through a collaborative commercial approach, including newly implemented verification procedures such as KPIs and SLAs. It cannot, therefore, be right to conclude that the imposition of additional and more onerous forms of regulation is necessary or warranted.

ComReg has no evidence of non-price discrimination issues in relation to NGA. The vague references made in the consultation do not provide a basis for imposing EoI. As noted above, five cases are cited (12/27, page 108), three of which between 5 and 6 years old and the most recent concerned with the market for terminating segments of leased lines and the application of obligations in the context of tender processes and accordingly not relevant to the imposition of an EoI obligation as a remedy to competition issues in Markets 4 and 5.

In this regard, this evidence can be viewed very differently from ComReg's analysis: namely, that for the best part of four years there has been no evidence of any serious non-discrimination issues, let alone systemic problems meriting a new form of remedy.

There is no evidence or other reasonable basis from which to conclude that the regulatory measures that are currently in place are not working, or to extrapolate the high risk of market failure that is required by the Access Regulations for the imposition of an EoI obligation as proposed by ComReg.

There is also an underlying fallacy in ComReg's non-discrimination analysis. The logic appears to be that NGA is new; therefore all associated systems and processes are new; therefore they are being designed from scratch and the incremental cost of designing the same systems and processes for internal and external use will be small; and therefore a blanket requirement for all systems and processes to be identical internally and externally is reasonable.

This is wrong. As ComReg later recognises (12/27, para. 8.42) "NGA products will also use some existing processes". In addition, not all systems or processes provided externally are required or used internally. This is particularly the case in relation to products and services offered on Market 4. eircom Retail, for example, does not require dark fibre.

### 3 THE DIFFERENCE BETWEEN VOLUNTARY REFORM AND COMREG'S PROPOSALS

We agree that the development of eircom's NGA services and systems provides an opportunity "to deliver a higher standard of equivalence" (12/27, para. 8.42). The full extent of the opportunity provided is captured in our voluntary migration of retail services to use of the UG

for NGA bitstream. Our developments are not designed to deliver identical treatment for all NGA wholesale services over each and every conceivable system, interface and process throughout their lifecycles. This would require multiple new systems, processes and interfaces which we have neither contemplated nor costed. The costs are, in fact, impossible to foresee given the exceedingly broad scope of the remedy.

Justifying a departure from EoI in each and every instance would be a huge administrative burden and not just a matter of a few exceptions which can be dealt with through the proposed mechanism of an application to ComReg. Either eircom would face large and as yet uncertain costs (both current and opportunity) in process and system development, or eircom and ComReg would be jointly burdened by high volumes of "exceptions" and the associated reporting and notice arrangements.

An extensive systems and process mapping would be required to identify what systems and processes would need to be modified, purchased or developed in order for everything to be "equal". Development is a limited resource and there are already more demands than can be satisfied. An open ended obligation of the form proposed would consume disproportionate development effort, at a cost to the priorities already identified by the industry.

Costs are both direct and indirect. A system or process has to be analysed and then restructured to operate identically internally and externally. There will be subsequent requirements for changes to related processes, retraining of staff, production of new manuals etc. This can quickly become a major programme of process re-engineering.

It is already clear that systems and processes relevant to non-discrimination are those to do with the flow of relevant information and with the order and fault handling gateway. These are addressed within eircom's voluntary reforms. Information flows already work well through the industry fora. Use of the UG for retail NGA bitstream has already been offered. In contrast, ComReg's blanket approach would bring in a host of other processes and products of dubious relevance and value to discrimination, each requiring analysis, remedy identification and change.

#### 4 CONCLUSION

The objective of ensuring a fair supply of fit for purpose wholesale NGA services is common to ComReg's consultation and to eircom's voluntary wholesale reforms.

However, the open-ended EoI obligation proposed by ComReg represents a significant and onerous addition to eircom's existing regulatory obligations that is unjustified and without legal foundation.

ComReg's EOI proposal would distort retail competition by placing eircom under a significantly increased and onerous regulatory burden when its major fixed-line platform competitor, UPC, is subject to no regulation at all. ComReg's proposal would also constrain NGA investment and inhibit the building of infrastructure.

The outcomes ComReg seeks can be achieved without this unwarranted intrusion into eircom's business and the unwanted effects described above, by ComReg:

- Accepting and supporting eircom's voluntary reforms
- Tracking the outcomes through appropriate KPI reporting
- Intervening on a case by case basis if necessary
- Resorting to more formal and onerous obligations only if serious and systemic problems are demonstrated that are not resolved through solutions developed in the industry fora.

We note that in a statement released on 12 July 2012, Commissioner Kroes has indicated that she is planning to issue a recommendation that will "underline that equivalence of inputs is the best guarantee of non-discrimination, to assure equivalence of access."<sup>11</sup> The Commissioner's statement focuses on EOI in relation to OSS systems for NGA services but does not address the procedural and evidentiary requirements that are required by law to impose such an obligation.<sup>12</sup> We understand that BEREC is also considering this issue.

We note further the Commissioner's suggestion that the provision of EOI should be a key factor leading to the relaxation of price controls on NGA wholesale access products.

Although eircom believes that ComReg has not met its statutory obligations in proposing to *impose* an EOI obligation under the Access Regulation, eircom has in any event *committed voluntarily* to implement EOI for ordering, delivery, and fault repair for NGA services via a unified OSS gateway – and is in fact in the process of implementing the necessary changes to move eircom's retail operations onto the very same system used by other wholesale customers. eircom therefore urges ComReg to give full consideration to this important development as it considers the concerns raised by eircom in other parts of its response (in particular, Questions 18–53) with respect to the onerous and inflexible price controls proposed in the Consultation Document.

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<sup>11</sup> <http://europa.eu/rapid/pressReleasesAction.do?reference=MEMO/12/554&format=HTML&aged=0&language=EN&guiLanguage=en>

<sup>12</sup> We note that under the EU regulatory framework, the EU Commission is *not* the final arbiter of SMP remedies, including interconnection and access obligations.

**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.**

eircom recognizes the importance of transparency but has concerns about elements of ComReg's approach to its delivery. There are three main issues.

First, in practice transparency is delivered through the NGA industry forum. Regulation should reinforce and support this process. Second, NGA is a new and uncertain market place. eircom and its wholesale customers need to be able to respond swiftly. Lengthy and complex advance notice periods act against the interests of consumers and wholesale customers by delaying the introduction of retail services. A more flexible approach, with much shorter default minimum notices as safeguards, is required. Third transparency needs to take account of vigorous retail platform competition that eircom faces from cable broadband and the risk that disclosures can distort fair retail competition. These points are considered further below.

*Transparency through the Industry Forum.*

As both eircom's wholesale activity and the industry it serves mature, mechanisms are developing for appropriate communications relating to regulated wholesale services. In the case of NGA the industry forum is established and operating, and is one of the main channels for seeking input from industry and cascading of information about NGA products and their availability, both to eircom's downstream, businesses and to external wholesale customers.

Through the forum eircom has shared an NGA Project Implementation Plan with Industry which covers all of the key milestones throughout the product development process through to launch. This is regularly updated as that plan evolves.

Further information that has been shared with industry includes Product Descriptions, Technical Handbooks, Service Schedules, Industry Process Manuals, UG data Contracts and Briefing Notes; SLAs remain to be discussed but are on the Project Plan. All of this shows that there has been a very open constructive engagement from all parties in the process and that all relevant information in respect of the product set and network rollout will have been shared with Industry well in advance of both the period for the Beta launch and the full product launch. We look to ComReg to continue to support, consolidate and build upon these arrangements rather than impose rigid and administratively complex alternatives.

*Responsiveness and Reasonable Notice*

NGA services and markets are new. There is likely to be a rapid evolution of the wholesale portfolio as eircom and its wholesale customers gain experience of customer reactions to and experience of their retail NGA portfolios. 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.

### Transparency in an era of established Platform Competition

Substantial platform competition to eircom is already in place and gaining a strong position in retail superfast broadband access services. There is further prospective platform based competition from mobile services. In these circumstances, 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.

This is an issue that has been recognised in other regimes, where limits are placed on transparency obligations and measures such as controlled and limited release of information ("confidentiality circles"), and binding non-disclosure agreements are developed to prevent abuse. eircom expects ComReg to adopt a similar approach. See our detailed proposals on this in our answer to Q5.

Turning to the detail of the relevant sections of the consultation:

### Notification of new services

A seven month notification is excessive and risks compromising the interests of consumers and wholesale customers. Industry agreed periods, with default to a two month minimum, would give the required flexibility while still ensuring account is taken of the notice periods wholesale customers need.

Notification periods are required to allow wholesale customers to prepare for and use new services. Under the non-discrimination rule the notification periods must bear the same for eircom's downstream businesses and for external customers. We expect that there will be circumstances, particularly in the context of the introduction of new NGA products and services, in which the industry as a whole, as represented at the NGA industry forum, sees an urgent need for a new service, or a change to an existing service, and wants this to be delivered to market quickly. Assuming eircom is able to do so, there seems no merit, and considerable disadvantage to both operators and end-customers, in an inflexible regulation that mandates a far longer period. eircom suggests that the introduction dates for new or changed services should be as agreed at the industry forum, with ComReg retaining a right to intervene and set a different schedule should circumstances warrant. A default minimum notice period of two months could act as a safeguard, and would be consistent with the price notification requirements.

A safeguard would be needed to prevent tactical delay at the industry forum should an operator seek to slow or frustrate the launch of a wholesale service for tactical rather than objective reasons.

Such arrangements would have the effect of ensuring industry's notification needs were met, limiting regulatory brakes on innovation and reinforcing the work of the NGA industry forum.



eircom 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. (As discussed above in response to Question 3, however, this obligation should not be extended to civil engineering works, including duct access, or dark fibre.)

For example, the industry forum might agree that product X is required. If eircom is able to deliver that in, say, four months time that timescale could be agreed subject to production of the appropriate ARO/WBARO within one month. Should ComReg feel that the service in question was likely to raise difficult policy issues it could require a longer period than three months to consider the reference offer; otherwise the faster timescale would be met.

eircom welcomes the recognition at para 9.29 of the need to provide for the possibility that NGA services will be introduced before a final Decision is reached on NGA regulation.

#### Notification of changes to existing services

eircom agrees that changes to existing services will generally require shorter periods of notice than wholly new services. A default minimum of one month is an adequate safeguard.

A change to an existing service will result from a discussion at the NGA industry forum. It may result from an eircom Wholesale proposal or from a suggestion from an eircom Wholesale customer. But in either case the issue will have been raised and discussed before any final eircom commitment to proceed. The change will not be novel or unexpected.

Some changes will be relatively trivial: minor changes to contract terms, technical specifications etc. It would benefit no-one for these to be caught by notice obligations excessive for their circumstances, delaying or discouraging rapid responses to customer requirements.

eircom suggests that rather than mandate a uniform three month notice period (one month to ComReg and two months to industry) for all changes regardless of impact or significance ComReg instead gives industry players (and ComReg itself) the right to request a deferral of a launch date agreed by or notified to the industry forum where there are objectively justified grounds for doing so.

#### Price Changes

eircom agrees that at this stage it is reasonable to give industry a two month notification of price changes. Addition of a further month for ComReg review seems onerous, given that any concerned industry player could ask ComReg to intervene during the two months notification. We suggest the proposed two months notification period is reviewed after a year of operational experience with a view to reducing it where practicable and reasonable.

#### Changes to the network, introduction of new technologies

These are advised to industry and to eircom's downstream businesses through the industry forum. The non discrimination obligations requires there to be no difference in the timing or quality of information released internally and externally. Such arrangements are working well and do not require additional regulation, but if obligations are introduced they should confirm existing practices rather than re-arrange them.

#### Publication of differences between ARO/WBARO and services self provided

eircom agrees that, under its voluntary proposals, publication of known and material differences between the terms for self provided services and relevant reference offers will help industry understand where such differences lie and what impact they may have. However, it should be clear that such differences will only be deemed material where equivalency of outcomes cannot be assured by eircom as a result of these differences. (Please see our response to Question 14 for the reasons why the imposition of an equivalency of inputs obligation on eircom would be disproportionate and contrary to the applicable legal framework.)

#### Publication of KPIs, SLAs and performance metrics

eircom agrees that appropriate KPIs, SLAs and performance metrics should, with appropriate safeguards, be made available to wholesale customers as verification of compliance with the non-discrimination obligation. (Although we strongly object to the proposed adoption of an equivalency of inputs obligation for eircom's NGA services, we note that the application of this new form of remedy would, by its terms, obviate the need for KPIs in cases where eircom's downstream operations are using exactly the same inputs as other operators).

An open obligation to publish these metrics is no longer appropriate given the potential for misuse in downstream markets (see below).

#### Platform Competition

eircom will face two forms of retail competition for NGA customers. It will compete with customers of its wholesale services, for which the transparency proposals are an important safeguard. But it will also compete with alternative platforms, notably cable and mobile broadband services.

Here the transparency proposals are at risk of distorting competition. Advance notice of network build, service developments and price changes may be used for tactical and strategic advantage by platform competitors. The ability of wholesale customers to influence the launch schedules of NGA wholesale services could be used to delay services competing with alternative platforms.

These potential adverse consequences of transparency would be damaging to all users of eircom's wholesale services. ComReg should take steps to avoid or mitigate these effects by, for example:

- requiring release of information in confidence and under non-disclosure terms
- intervening to avoid tactical delay to product launch or changes
- ensuring that information is only provided where there is a demonstrable need and that controls are in place to ensure it is not subsequently mis-used.

**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.**

eircom agrees with the principles outlined by ComReg in relation to In-home activity and CPE standards. We have made substantial efforts to develop wholesale processes which will ensure that all retailers are treated in a non-discriminatory manner in relation to any in-home activity necessary to migrate customers to NGA services. ComReg is correct in stating that migration to NGA service will require a home visit in most instances. However, subsequent migrations between operators are unlikely to require further home visits.

eircom has developed a range of options to ensure efficient and non-discriminate home installations. These include options where:

- eircom's wholesale and retail in-home activity and the eircom access network activity are co-ordinated through appointment management facilities offered via the UG;
- a facility whereby the complete in-home activity could be undertaken by the retailer and this would be co-ordinated with the eircom access network activity through appointment management facilities offered via the UG; and
- the likelihood that eircom would provide a commercial facility whereby eircom would undertake the in-home activity on behalf of other retailers.

All these options, with the exception of the commercial in-home service, are being developed in detail within the NGA forum with significant input from operators and this will ensure that the resulting processes are both efficient and non-discriminatory. eircom pricing for regulated connection and migration services will support and encourage such coordination. In addition

eircom will offer wholesale services at attractive commercial rates for internal wiring, CPE fitting and end-to-end service enabling.

eircom also agrees with the principles outlined for the management of CPE and has already advised industry of the relevant industry standards for CPE to be utilised on the NGA network. In addition, eircom will provide a facility to enable operators to test their CPE to ensure its compatibility with the network elements deployed by eircom.

The implementation of vectoring technology will require closer alignment between VDSL electronics in the eircom cabinet and the operator modem/router deployed at the customer premises. eircom is currently engaged with other European operators deploying this technology and we are developing our understanding of the best way to advise other operators on the CPE that will be compatible with eircom's implementation of vectoring. eircom will bring the results of this work to the NGA forum at the earliest feasible stage so that operators can make the most efficient CPE sourcing decisions.

**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.**

eircom believes that barriers to entry to the retail VoIP market are low. However, the Consultation Document does not appear to properly represent the marketplace realities as eircom sees them. eircom's position would be better summarised as follows, and as discussed further below:

- Entry barriers for VoIP, have already been demonstrated to be low and consequently, eircom believes it would be unlikely that a case could be made to lawfully mandate the provision of a wholesale VoIP offering.
- eircom would in any event expect to offer a wholesale VoIP service on a commercial non-regulated basis
- If it would facilitate the rapid transition from POTS based services to NGA services, eircom would be supportive of entering into discussions with the industry to provide certainty on the provision of a wholesale VoIP service
- In addition, the inclusion by eircom of POTS-based services within its NGA portfolio will facilitate a migration to NGA based services

Entry barriers for VoIP, have already been demonstrated to be low

In paragraphs 10.10 ComReg notes the evident increase in the number of operators offering VoIP:

*10.10 Many operators now have Voice over Internet Protocol (VoIP) offers in both the wholesale and retail space. There has been a manifest increase in the number of VoIP technology users in recent years, particularly with OTT (Over the Top) service providers. This is noticeable in the international calls market where OTT providers such as Skype and Google Voice have made significant inroads. Managed VoIP offerings, where the service is provided and guaranteed by the subscriber's local access service provider, has also increased substantially in the past number of years through operators such as UPC and Blueface.*

eircom agrees. The financial barriers to market entry are low. In fact, it may be possible for operators to utilise platforms located in the UK or even mainland Europe to provide services in Ireland.

eircom expects to offer a wholesale VoIP service on a commercial non-regulated basis

In line with eircom's commercial objectives and the development of its range of Wholesale services, eircom expects to offer a VoIP service.

Paragraph 10.11 of ComReg 12/27 states:

*10.11 "eircom has announced that it intends to offer a retail NGA VoIP product and that it does not plan to offer a direct wholesale equivalent."*

This is a mis-interpretation of statements that eircom has made. As explained above, it is eircom's expectation that mandatory provision of VoIP would not be required, but eircom fully intends to offer wholesale VoIP services on a commercial basis.

To facilitate rapid transition from POTS based services to NGA services, eircom would be supportive of entering into discussions with the industry to provide certainty on the provision of VoIP services

In paragraph 11.293 of ComReg 12/27, the following is noted:

*11.293 However, the introduction of a mass market residential IP based voice service will present significant challenges to the main fixed voice wholesaler, eircom, and other OAOs. While POTS has been in existence for many years, even decades, the interconnection principles and configurations of various networks has evolved over many years to ensure consumers benefit from a seamless service with all the bells and whistles required of a*

*voice service. The consumers will expect no less from an IP based service. In addition, OAOs will require the same level of interconnection and wholesale service from the SMP provider of voice where POTS is replaced and wholesale IP voice is required by OAOs from Eircom to compete in the retail voice market.*

eircom agrees with ComReg that the introduction of mass market residential IP based voice service will present significant challenges for both eircom and other large scale operators active in the Irish market. However, eircom does not hold any advantage in this area and indeed it could be argued that other large multi-national operators will be able to leverage off developments in other markets and thus ensure a smoother migration to IP based voice service. Already, UPC are effectively at scale with IP based voice services today with more than 150,000 customers relying on UPC's offering for their primary fixed-line voice service.

As acknowledged in the Consultation Document, industry is moving very quickly to adopt OTT voice services. This can be seen from the strong growth in Skype and Google Voice over recent years. These offerings confirm eircom's view that voice will be regarded as just another application provided in a broadband centric environment. Although the rise of VoIP may mean that indirect access modes like Carrier Pre-Selection will become obsolete, end-users will continue to have available to them a choice of voice services in the offerings of multiple VoIP providers.

eircom does not consider that the introduction of VoIP based consumer services is directly related to the continuation of Termination and Transit services. The availability of media gateways enables the translation of IP voice to TDM prior to routing across networks and effectively allows individual operators to migrate their customers to IP voice independently of the development of an IP interconnection in the market.

Recognising the absence of clarity on how IP interconnection services will be provided in Ireland (or regionally and nationally), eircom is willing to enter into discussions with industry as soon as technical specifications are available, with a view to providing certainty on the availability of these IP services.

*eircom's inclusion of POTS-based services within its NGA portfolio will also facilitate a migration to NGA based services*

eircom had been exploring various options for deployment of NGA for several years but, in common with other operators internationally, has found the business case to be very challenging to justify. During that time, eircom also sought to increase its understanding of the business case through a review of business models and through the launch of the Fibre Pilot in 2011. eircom had to make a commercial decision in the context of multiple uncertainties including technology, customer adoption, future services, economic, shareholder, and

regulatory. Ultimately, eircom opted to invest in an NGA network based primarily on FTTC with possibly a small FTTH component.

Immediate implementation of a full NGA vision would have required significant changes that eircom and other operators would not have been able to sustain, for example:

- Immediate withdrawal of existing POTS based services
- Securing agreement for use of VoIP as a primary line voice service
- Building of a full scale VoIP platform that could support a mass migration of all customers within the NGA footprint
- Reconfiguring, rebuilding and investment in network and systems to support large scale VoIP rather than current POTS voice
- Re-building or replacement of existing billing and CRM systems to support a mass migration of all customers within the NGA footprint

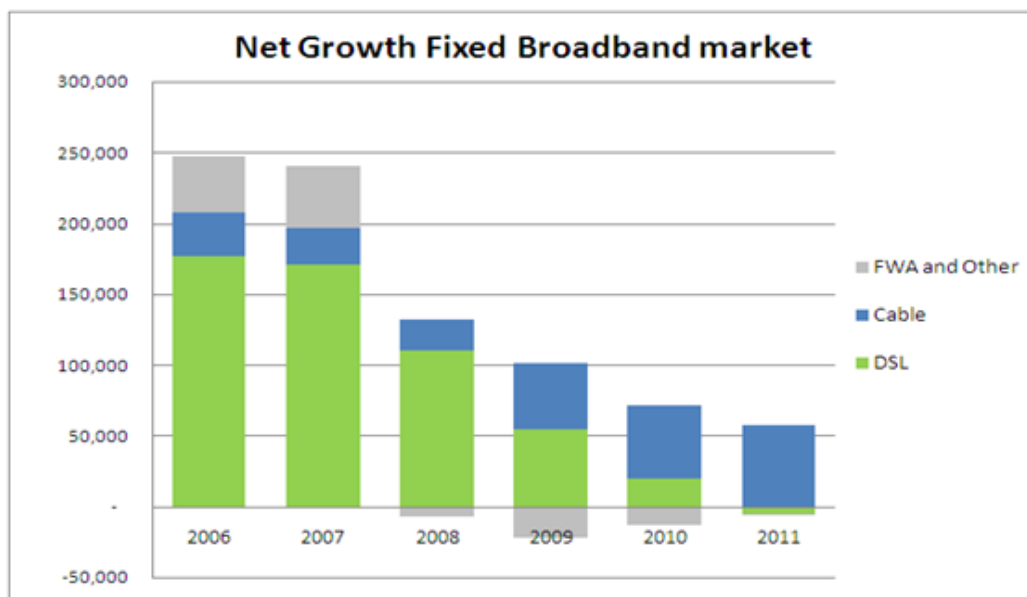
The POTs Based (PB) NGA products proposed by eircom avoid disruption and provide the time for industry to work out transition arrangements

The practical advantage of this approach is that in the short term, all ancillary services (such as mailbox, call waiting etc.) can continue to be available with no change in ordering processes or prices. In eircom's view, a strong case exists that the best outcome for operators is to have all of the processes and ancillary services of the traditional product remain available for a transition period. There is of course no compulsion on any operator to purchase the voice service as the standalone version of the products will be available to those who do not require a voice service at all, or wish to provide it themselves. Operators will be able to provide a Voice over Broadband (VoB) service on the standalone product if they wish to do so. In addition, an end user could take the standalone product and subscribe to an independently provided VoB service such as Skype. In the emerging broadband centric world, the PB product is, in effect, the voice add-on to the Stand-Alone broadband offering. Initially, the voice service will be a traditional circuit switched service, but ultimately it will be a VoIP service.

**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.**

eircom accepts in principle that a reasonable form of price control may be required for wholesale NGA products, and we welcome the proposal to extend the current retail-minus approach of D01/06 to NGA, 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.

However, we take issue with the statement (in 11.46) that UPCs broadband share is modest, and do not reflect competition in the national market. According to recent UPC press releases, 272,000 or 37.8% of homes who can have UPC broadband are availing of it. This is about 27% of the overall national fixed broadband market. When their market share is viewed within the areas they operate (as outlined in the response to question 8) we can see that in some markets they have over 50% broadband market share which under no circumstances can be considered 'modest'. By way of further example if we review recent years Comreg data on the Fixed broadband market we can see that Cable is the only Fixed broadband platform that is experiencing growth, and this growth is apparent even given the fact that Cable broadband is not available on a Nationwide basis.



As recently as 2008, DSL as a platform added 5 customers to every 1 added by Cable broadband. In the calendar year 2011 the DSL platform saw negative growth while Cable broadband grew by 58k subscribers.

This represents a strong level of platform based retail competition in the likely NGA deployment areas. eircom believes 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 competitor.

eircom agrees with ComReg's approach to the WPNIA Market in so far as it relates to the pricing principles for NGA WPNIA products. We do not agree with the linkage ComReg seeks to establish between NGA and copper based services (paras 11.58- 11.60), 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.



eircom also agrees that a retail margin squeeze test could form a reasonable approach to WBA pricing. However, the form that the margin squeeze test takes will be of crucial importance to the success of NGA build, and to the scale of reach of commercial deployment. A test which leads to excessively generous margins between wholesale and retail prices, as ComReg's present proposals do, will encourage inefficient market entry and unduly constrain eircom in competing with UPC.

We comment on these issues in more detail under questions 19 -30

**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.**

We understand that ComReg considers that the appropriate form of price controls is cost orientation for the WPNIA market, and margin squeeze tests from retail to NGA bitstream, within WBA, and between WBA and WPNIA. While ComReg consider in section 11.152 that a cost orientation obligation is not deemed appropriate for now in the context of NGA rollout in the WBA market, we note that the proposed margin squeeze approach will set a cost floor above SLU, and a ceiling below Retail. The very limited range of flexibility proposed by the scheme set out in the Consultation Document is likely to be such that the absence of an actual cost orientation obligation is almost irrelevant.

*NGA and Copper WPNIA Services*

We welcome the fact that ComReg recognises that, for a variety of reasons, there is not a one-for one pricing relationship between LLU and SLU. However we are not confident that this is subsequently recognised in the detail of what has been proposed.

In seeking to establish a direct link between NGA retail charges and copper based WPNIA products 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.

The objective appears to be to ensure that LLU charges are reduced if retail competition for NGA services forces retail prices down. This is an ambition of doubtful merit for two reasons. First, it would artificially improve the prospects of copper based broadband in areas of NGA build. Second, the methodology proposed (involving fixed money amounts) would be likely to lead to exaggerated SLU and LLU price reductions, inviting inefficient and misplaced investment and inhibiting NGA take-up. This is because a given money amount could be a small percentage of a retail bundle price, but a large percentage of the SLU wholesale price.

These issues were recognised recently by the European Commissioner, Neelie Kroes. In her speech to ECTA (European Competitive Telecommunications Association) in Brussels, on 28 November 2011, she said:

*“In fact, we should not forget that, in some places, copper and NGA are in a close competitive relationship. Where consumers haven't yet seen what fibre offers, they might still be unwilling to pay a premium. In that case, fibre prices mirror copper prices; and lowering copper access prices would send us in the wrong direction. That's why we consider that, in places where there is a firm and credible commitment to invest in NGA, it may not be appropriate to reduce copper access prices. Instead they could be an anchor for higher returns on fibre. That is the first plank of the approach we are exploring.”*

eircom's NGA deployment plans are (assuming a reasonable regulatory environment) “firm and credible”. We urge ComReg to revisit the proposed linkage between NGA and LLU pricing and to adopt an approach that is consistent with the Commissioner's stance.

eircom is nonetheless open to a review of LLU pricing at the appropriate time if that is a matter of concern to ComReg. But the resulting charges should be objectively derived, not reached through exercise of an artificial regulatory construct. And in considering the appropriate level of copper based WPPIA services in NGA areas eircom believes account should be taken, as the Commissioner suggests, on the impact on fibre based service take-up in light of the Digital Agenda targets adopted by the EU and endorsed by the Irish Government.

We note that ComReg agrees that in the medium to longer term, “it may be appropriate to encourage users to migrate to fibre based services” and this “could be done by simply allowing eircom to break the link between copper and fibre based access pricing” .We are deeply concerned, however, that the price control mechanism set out in the Consultation Document will do just the reverse by deterring migration to NGA during a crucial transition period.

#### Cost methodology

We welcome the fact that ComReg agrees that the BU-LRAIC plus methodology (with 2009 costs and cost trends or tilts) is not the only possible form of cost orientation, and that actual historical costs may be an alternative basis for cost orientation. However, historical cost models may take some considerable time to refine, due to the complexity of changing asset lives, and taking account of efficiency improvements.

#### NGA Footprint

eircom also welcomes the intent to apply the proposed price remedies only within the NGA footprint areas. But it is important that this is interpreted to include only those areas where

eircom NGA infrastructure is built and actually available for use. ComReg's text and description of the NGA footprint could perhaps be taken to mean that such controls would apply in all potential NGA areas, irrespective of whether eircom has or has not actually rolled out NGA services in those areas.

In support of our position, we note that no margin squeeze can exist between an NGA WBA service and a WPNIA offering in an area where eircom does not launch NGA. eircom believes the price controls and associated obligations should apply only where eircom has built an NGA infrastructure and is offering services based upon it.

If ComReg were to define some potential NGA footprint separate from the area in which eircom has actually built, there will be several different scenarios to deal with:

- (a) Area included in ComReg's NGA footprint, but eircom decides not to launch NGA in that area
- (b) Area included in ComReg's NGA footprint, and eircom has launched NGA in that area
- (c) Area included in ComReg's NGA footprint, but eircom plans to launch NGA in that area at some future point in time but has not yet done so
- (d) Area not included in ComReg's expected NGA footprint, and eircom has launched NGA in that area
- (e) Area not included in ComReg's NGA footprint, but eircom has announced plans to launch NGA in that area at some future point in time

Similarly, there may be areas where other operators launch "NGA" (for example, using eircom sub-loops, eircom duct or their own infrastructure).

eircom considers that a margin squeeze can only potentially occur in cases (b) and (d) above, so that any required adjustment of SLU and LLU prices should only be required in areas where NGA is actually launched, at the time of the actual NGA launch.

The confusion is best avoided and will not arise if the NGA footprint is clearly defined as that area where NGA services have actually been launched by eircom. eircom's proposed definition of the NGA Footprint is addressed in our response to Question 6.

#### Commitment to LLU

There appears to be a suggestion in 11.104 that eircom wishes to cease to provide LLU or Line share at this time. This is not the case. eircom has made significant improvements to the LLU product and its associated processes, which are expressly designed to encourage use by our wholesale customers.

However, when and where NGA services become available, eircom would like to encourage early migration to NGA services, while ensuring LLU services remain viable in those areas for operators and end users who cannot or do not wish to avail of NGA services during the transition period.

LLU and SLU (11.75 – 11.104)

In essence, the primary form of control proposed is a rigidly framed retail minus control, where the NGA retail price, minus the relevant costs of

1. retail activity,
2. end-to-end bitstream,
3. basic bitstream,
4. traffic related costs, and
5. fibre from MDF to the cabinet

gives rise to a new maximum price limit for SLU rental.

Thus (in 11.94) the Consultation Document proposes 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 Copper Access Model 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.*

The Consultation Document further proposes (in 11.95) 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 Copper Access Model, in the NGA Footprint Areas.*

This proposed control sets an additional maximum price, but there would also appear to be an implicit minimum SLU price, perhaps based on adjusted historic cost or derived from the Copper Access Model.

We note the Consultation Document refers to a linkage between SLU and LLU, “where appropriate”, and claims (in 11.97) that::

*“Price consistency between SLU and LLU is important. As recognised in Section 3 of the Oxaera Report, if the relative price for LLU and VUA are not consistent, OAOs’ and end*

*consumers' decisions will be distorted. For example, if the LLU price is too low then OAOs and end-consumers will have limited incentives to migrate to the NGA solution.*

We share this concern that incentives to migrate to NGA could be undermined. We note however that SLU prices could be reduced for many reasons, without impacting on the LLU price, and vice versa. The Copper Access Model has a number of common elements in calculating the costs of LLU and SLU, but there are also a number of important differences.

In the Copper Access model, SLU is regarded primarily as that portion of the loop between the cabinet and the end-user, for users served from cabinets. In setting the price for SLU, it was assumed that all sub-loops are viable.

However, in setting the price for LLU, two adjustments were made in the cost model. Firstly, those MDFs with a small number of working lines were given a lower weighting. Secondly, those individual lines which are too long to support an acceptable ADSL service were given a low weighting. We note that the "long line" was defined as 5km, and that few sub-loops would exceed this distance.

If similar adjustments were made to the SLU price calculation (i.e. small cabinets were judged unviable, both lines at such cabinets and lines too long to support an acceptable VDSL service were given a low weighting) then the SLU price could change with no impact on the LLU price.

It is quite important to understand that the copper access model does not construct the LLU price by adding a sub-loop price to a price for the segment linking the MDF to the cabinet. LLU prices and SLU prices are derived independently for a common cost pool.

Subsequently, the threshold parameters for either LLU or SLU could be varied resulting in the LLU and SLU prices varying almost independently of each other. We note however that changes to the underlying cost elements common to both SLU and LLU would affect both prices.

We do not accept the rigid links proposed between "copper" and "fibre-based" prices that that the Consultation Document implies. We also consider that these arguments might be sustainable if copper loops were being replaced, but in fact the vast majority of eircom's currently planned build will be FTTC – so that much of the existing copper continues to be utilised.

We note that ComReg agrees that in the medium to longer term, "it may be appropriate to encourage users to migrate to fibre based services" and this "could be done by simply allowing eircom to break the link between copper and fibre based access pricing". We believe that it is essential to the NGA business case for ComReg to adopt remedies that will instead encourage migration to NGA in line with the Digital Agenda or, at the very least, remain technology neutral.

### Promotion of LLU versus Protection of past investments

eircom is concerned that ComReg's policy to date of promoting Line Share and full unbundling, in preference to NGA, "continues for now" (11.99). We can fully understand that ComReg might wish to protect investments already made, but in the light of the Digital Agenda targets it is past time for ComReg to cease actively promoting these services, and begin promoting technology which can contribute to the targets.

ComReg is mistaken that the promise of a transparent migration path to NGA infrastructure at some point in the future will encourage investment in NGA – by either eircom or other operators- now. On the contrary, deterring NGA migration now will encourage investment in obsolescent ADSL technology on copper loops, and set Ireland back at least five years.

### Unbundled Fibre (11.105-11.110)

Our response to question 3 sets out eircom's position in relation to the proposal in this consultation that an unbundled fibre product should be offered. Notwithstanding our concerns about the adoption of such a remedy under the circumstances prevailing in Ireland, we provide the following response in relation to the proposed price approach.

While we recognise that the earlier WPNIA decision requires that unbundled fibre be offered at a cost oriented price, we have concerns about the approach to costing unbundled fibre based on the copper access model, adjusted for costs of fibre rather than copper cables, on several grounds.

Elsewhere, ComReg have suggested that this model might no longer be appropriate. Certainly, it would be inappropriate to use this model for costing fibre build without adjusting volume forecasts, price trends for inputs, and updating current costs.

It is also not exactly clear how the model can be adapted to the situation where eircom plans to build a combination of FTTH and FTTC (given that FTTH might not use the copper access models as a cost basis). Furthermore, although the model is adjusted for fibre costs, the adjustments made to cost data to arrive at copper prices (such as the weightings for probability that a site would be unbundled, or that lines beyond a certain length would be unbundled) would need to be amended. An initial adjustment to LLU/SLU prices could be calculated based on assumptions about take-up and build costs, but the reality could be very different. Therefore, the longer term effect of this proposal is quite unclear and the resulting prices quite uncertain.

We welcome the suggestion that it is open to eircom to offer different prices for unbundled fibre from different exchange areas, "if appropriate, or if required by the margin squeeze tests"

as suggested in section 11.108. It is not immediately clear how the margin squeeze test would set upper limits for unbundled fibre prices, or how (if there is a common VUA price for FTTC and FTTH in all NGA areas) the margin test could lead to different limits in different exchange areas.

Civil Engineering Infrastructure (duct and pole access) (11.111-11.123)

We welcome the proposals to allow requests for duct access to be dealt with on a negotiated basis, and ComReg's preference that regulatory intervention should not be the default procedure. However, if ComReg is seen by industry to be keen to intervene and revise negotiated arrangements, the process of negotiation will quickly become undermined. eircom intends to negotiate in good faith, and hopes ComReg will recognise this and forbear from intervention.

eircom does not agree that civil infrastructure (duct and pole) pricing should be on the basis of depreciated historic cost, plus "incremental costs associated with remediation and ongoing maintenance".

It is not clear what exactly is proposed, but if the intention is to allow only:

- (a) incremental costs associated with remediation, and
- (b) incremental costs associated with ongoing maintenance,

then there would be no recovery of or contribution to common costs or overhead costs. This is not consistent with the approach used for pricing access to unbundled copper loops, contrary to Annex 1 of the NGA recommendation.

We note ComReg's suggestion that the Copper Access Model may be reviewed at some future point in time, to eliminate or reduce the inconsistency. Any such review proposing radically different approaches and large step changes in both prices and eircom's revenue would require substantial and detailed consultation. Its results should not be anticipated or pre-empted now. eircom considers that consistent treatment is required at all times, and that inconsistency giving rise to arbitrage opportunities cannot and should not be rationalised by promising a future review.

Dark fibre (11.124-11.125)

eircom has set out its position in relation to the proposed Dark Fibre remedy in the response to Question 3.

We do not agree that the cost oriented price proposed for dark fibre (current cost for the fibre element, plus depreciated historical cost for civil engineering access) is appropriate. At a minimum, dark fibre should cover costs of the civil infrastructure used (including relevant common cost allocations) plus the current replacement cost of the fibre cables (including cable materials, installation labour, and relevant share of common costs).

### SLU Backhaul (11.126)

We note ComReg's proposal that the copper access model be used as the basis for SLU backhaul, consistent with D01/12 leased lines decision. However, we also note the proposal to review the copper access model mentioned above. We agree that consistency of approach is of value, but, for the reasons set out above in regard to civil engineering infrastructure, eircom would not support a change to the principles of use of the copper access model in anticipation of the outcome of consultations yet to be held.

### Migrations and Fault Repair (11.127-11.128)

The Consultation Document proposes that Migrations and Fault repair are to be cost oriented, and deals further with each item in later sections. We respond to the proposals in the relevant section below.

**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.**

If by network costs the question refers to the costs of the physical connection to the end customer property excluding electronics, power and the costs of the cabinet we agree that the cost of the sub-loops used for FTTC will (a) be lower than the costs of fully unbundled local loops and (b) be lower than the average cost of sub-loops throughout the country.

Notwithstanding our concerns with the Consultation Document's proposal to use SLU as the basis for determining NGA prices at each rung of the value chain, we note the following with respect to SLU. 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 which gives a lower weighting to long lines and smaller MDFs. Nor does the SLU pricing model include the costs of directly fed-loops, which are in any case unlikely to be served with FTTH (current thinking is that most direct fed loops will be "cabinetized" and fed using FTTC, with some possibly served by FTTH or proving uneconomic to serve at all).

FTTC is likely to be provided only to end users who have a loop length less than 1.5km from a large cabinet, so the average sub-loop will be quite short. This can be contrasted with the viable loop length of up to 5km assumed in the LLU pricing model. In some areas, (where a cabinet is



close to the MDF), most of this distance could be in the sub-loop. So, longer lines from cabinets should not be included in the NGA SLU cost.

Small cabinets may not be served by FTTC, so they should be excluded from the NGA SLU cost. However, small cabinets may have short or long loops, so a priori it is not clear that excluding small cabinets would reduce or increase the average SLU cost. However, this adjustment may not be straightforward in the Copper Access model, as it tends to spread lines evenly across the cabinets in a given housing area, rather than reflecting the reality that every area may have larger and smaller cabinets.

Finally, cabinets in areas that will not be served by NGA are included in the legacy SLU cost calculation. Average costs per line in such cabinet areas are related to the density of lines in the cabinet area – so even cabinets in small rural towns may have a cost per line similar to the national SLU cost.

Initial estimates suggest that excluding both small cabinets and longer loops (over 1.5km) excludes less than 10% of lines, but over 20% of costs, so that the average SLU cost for FTTC reduces by about 20% compared to the current “national” SLU price.

The bulk of this difference is explained by excluding longer lines, rather than by excluding smaller cabinets or specific geographic areas.

In some cases, eircom may “cabinetise” directly fed lines to enable FTTC. There may be additional cost of new cabinets which can accommodate FTTC equipment (rather than installing additional cabinets beside existing ones). However, to the extent that the Copper Access Model already includes the costs of these cabinets (as the model uses different engineering rules and volume data than applied at the time the network was built) the extra cost should not be added to the cost stack.

**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.**

We understand the argument that duct and trenches might not be replicated, therefore covering replacement costs may not be a primary consideration in price setting. We would point out that the date of construction, and the treatment of asset lives since that time, will have a large bearing on any generated HCA cost. As a result it is not immediately clear whether this approach would lead to prices higher or lower than those indicated by a BU-LRAIC plus approach. Furthermore it should be noted that building accurate cost models can be quite time-consuming. Finally, we note that ComReg point (para 11.140) to the use of BU-LRAIC for LLU services in 2010 as an approach designed to incentivise entry by alternative platforms, e.g. cable

operators or wireless operators. Consistency of approach as well as 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 prices for the use of the same infrastructure based upon their choice of purchased and self supplied elements. For example, an OAO would 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. We consider this non-technology neutral approach has the potential to lead to inefficient allocation of resources.

Taking the above into account, and given that ComReg will only use whatever costing methodology is agreed under circumstances where a negotiated outcome cannot be reached, it may be that the more conventional and familiar BU-LRAIC approach will prove both more predictable (and therefore helpful as a reference point for negotiation) and less burdensome to operate.

**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.**

We propose that the primary consideration should be to encourage end-users to move rapidly to higher speed services, consistent with the Digital Agenda targets, while complying with regulatory and other legal obligations. So in the short to medium term, there is no need to maintain a rigid link between copper and fibre based services and potentially a negative impact on NGA take-up.

Existing copper prices could form an anchor for higher returns on fibre. During the transition, two key tests are important:

- (a) Can other operators use the NGA wholesale services to compete with eircom at the NGA retail level?
- (b) Does the NGA retail service price form a margin squeeze against legacy LLU based services? The concept of imputing an implicit legacy price from eircom's NGA price (by subtracting whatever small premium consumers might currently be willing to pay for higher speeds) is developed in the associated Frontier paper.

ComReg should have regard to the Digital Agenda for Europe (DAE). The DAE sets targets of ubiquitous access to basic broadband by 2013, which Ireland will meet, and ubiquitous **access** to 30Mbps by 2020. In addition, it sets a target of 50% of EU households **subscribing** to 100Mbps by

2020. NGA in the form of FTTC and FTTH can make a significant contribution to these targets, but LLU or exchange launched ADSL cannot.

In the context of these targets, the proposed link between copper and fibre based services is both unnecessary and unhelpful. The primary consideration should be to encourage end-users to move rapidly to higher speed services, while complying with regulatory and other legal obligations. ComReg's proposed linkage would likely have the opposite effect, deterring migration, resulting in higher unit costs, which in turn becomes a further deterrent.

eircom does not suggest that LLU and line share should not be available in NGA areas, nor does eircom hold that charges for these services should be inflated to promote NGA. We believe they should continue to be properly cost based as at present.

However, eircom does not believe that an artificial direct linkage should be created between NGA retail charges and wholesale copper WPNIA LLU services. This is particularly important in the early stages of NGA markets, when consumers may find it difficult to place a value on NGA services versus copper and some flexibility to promote migration may be required.

This does not exclude the possibility of later creating a link between copper and fibre prices once NGA markets reach a suitable level of scale and maturity and the Next Generation Broadband Task Force targets are being realised.

eircom's position is therefore the reverse of ComReg's – encourage transition now, not later, and impose rigid cost based links only after the benefits of fibre-based services are clear to all, and the costs and volumes are based on reality (not forecasts and assumptions).

We urge ComReg not to discourage or deter early migration to NGA, nor should it positively support in NGA areas the technologies NGA is destined to replace.

In the event that ComReg persists with discouraging migration, we reject 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). Such triggers would favour LLU over NGA and would therefore be incompatible with the Digital Agenda targets.

**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.**

We agree that at this stage of market maturity prices for WBA offerings such as bitstream and VUA cannot be strictly cost oriented. 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. eircom shares ComReg's view that Recital 37 of the NGA Recommendation is relevant to eircom's NGA build, where UPC's competing platform provides strong and sufficient competitive restraints on retail pricing.

However, the 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 (para 11.143) to allow eircom "*to explore what price levels are appropriate to recover its risk related return empirically*". This is a further ground for simplification of the proposed model.

In 11.141, ComReg argues that opportunities to price excessively at the wholesale level would persist, absent a retail or wholesale constraint from cable, and/or LLU/Line share and indeed without appropriate pricing measures in place. However, as discussed in the Frontier paper (Annex 1), such constraints do exist:

- Cable exists: eircom and other retail operators face a direct constraint in areas where cable is available, but also strong indirect constraints in adjacent areas where cable prices set expectations of retail price

- LLU/ Line share exists, and even without a linkage between wholesale NGA and LLU prices, retail prices based the LLU platform, and current regulated LLU prices, set a retail price constraint

- The WBA price control D01/06 exists, and presumably applies to NGA WBA offerings even if not amended.

Alternative platforms such as mobile and wireless also exist, and, even if they do not seem to directly constrain retail and wholesale prices today, at some point they would act as a deterrent to excessive prices.

Finally, consumers with limited disposable income may deter excessive prices: eircom has calculated that NGA prices above current legacy broadband prices would deter take-up, so that eircom would maximise its profits by keeping prices at or moving prices below current legacy levels (currently, however, eircom is deterred from price reductions by the complex web of price controls for WPNIA, WBA, SB-WLR and the rules that apply to bundles).

We note that ComReg proposes that a move towards cost based floors in the WBA market may be appropriate "*where SLU is removed*" (11.142). However, our understanding is that 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 also proposing a retail minus ceiling for WBA (and indeed, WPNIA). This is a highly impoverished form of price freedom. Residual room for manoeuvre is very limited, and can only be improved if retail NGA charges are raised – hardly the outcome consumers or the Digital Economy would wish to see. ComReg's proposals in para 11.148 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.

ComReg makes a statement in section 11.145 that this “*freedom **can only be justified by the maintenance of copper as a viable form of access in the short term.***” We disagree: the fact the UPC now have over 50% share of broadband in many areas -in fact in almost all areas where LLU or Line share is active - would justify the approach.

We also have concerns about the proposal to review the approach (11.147) within 2 to 3 years. It is the case of course that following the amendments to the regulatory framework, no obligation imposed on an SMP operator may normally be left in place for more than 3 years, unless the European Commission agrees to an extension on the basis of a reasoned proposal on the part of the regulator concerned. Having regard to the fact that the WPNIA Decision was adopted already two years ago, eircom does expect that a market analysis will be conducted within less than two years and that in this context, the continued requirement of regulation of WPNIA, and the propriety of the obligations which have been imposed, will be assessed. However, within this context, eircom believes that it is essential that a commitment be made by ComReg that to the extent that continued regulation of WPNIA is required, including a price control, then the level of regulation will not change once the investment is made. Investors require a level of certainty and consistency in regulation: suggesting the rules are mutable once investments are committed is not helpful, and does not meet ComReg’s commitment, and that of the NGA Recommendations<sup>13</sup>, to promote “regulatory certainty”.

In summary, we agree with the principle that an obligation of cost orientation obligation is not appropriate and that a retail-minus approach is better suited at this point in time. However, we do not agree with several aspects of the justification proposed by ComReg, and we have serious concerns regarding many elements of the highly inflexible approach set out in the Consultation Document.

A simple test for evaluating the soundness of the remedies proposed is as follows: Will they lead to a faster and broader availability of competitively provided, affordable, high-speed broadband access? The positive support for narrowband WPNIA, the complexities of the pricing model, the short term nature of the remedies proposed, and the priority accorded to wholesale prices promoting unsustainable competition at every possible level of the value chain, all point sharply in the opposite direction.

#### **Q24: there is no Q24.**

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<sup>13</sup> Commission Recommendation of 20 September 2010 on regulated access to Next Generation Access Networks (NGA) (Text with EEA relevance) (2010/572/EU), recital 6: (6) *Regulatory certainty is key to promoting efficient investments by all operators... In order to mitigate the uncertainty associated with periodical market reviews, NRAs should clarify to the greatest extent possible how foreseeable changes in market circumstances might affect remedies.*

**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.**

Sections 11.155 to 11.188 deal with Margin Squeeze tests, between Current Generation services and Next Generation, and between retail (NGA) and wholesale NGA bitstream. These sections expand on the general statements at 11.69 and 11.70, which we addressed briefly in our response to Q18 above.

The expanded preliminary proposals are that:

- (a) eircom will comply with an ex-ante retail margin squeeze test in the NGA footprint area, based on D01/06 as amended by this decision
- (b) eircom will undertake a cross-check to ensure prices are not below (or substantially above) the relevant costs when compared to existing current generation prices and associated cost models
- (c) In addition to the requirements of D01/06, eircom will be required to pre-notify ComReg of the retail standalone broadband prices for new and existing products 15 working days before the retail prices come into effect
- (d) eircom will only be required to provide a statement of compliance for NGA retail standalone broadband prices where they are likely to have a material impact in the marketplace. Material is defined as 20% of eircom's retail NGA customer base, or 20,000 new retail subscribers, whichever is LOWER
- (e) eircom will be obliged to provide (within 12 months of the decision and annually) a compliance statement, with all relevant supporting information.

eircom broadly accepts the proposal to control NGA WBA prices with a retail minus control, based on D01/06. We welcome the clarification that only material retail offers will be required to comply. However, we have a number of significant reservations about the detail of the proposed control, and the argumentation put forward by ComReg to support it.

Firstly, eircom's proposal to invest in NGA will enhance competition between the xDSL NGA platform and the existing cable platform, and encourage further investment in upgrading of wireless and mobile platforms. As such, encouraging eircom's investment is consistent with ComReg's objectives. For the vast majority of potential NGA areas, the alternative to eircom's investment is a de-facto monopoly by an cable operator that offers no wholesale or resale products.

eircom 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. It is the case, as ComReg accepts in 11.171, that *“the provision of End to end product itself is not regulated”*. There is no basis for testing unregulated retail end-to-end prices against unregulated wholesale end-to-end products. The fact that end-to-end broadband access products are offered to other operators does not make them part of the WBA market. ComReg Decision D01/06, which purpose is to determine a price ceiling for eircom's Bitstream prices does not impose on eircom any obligations on eircom in terms of end-to-end/White Label Broadband pricing. In particular, the test under D01/06 is limited to ensuring that eircom's prices on the WBA market do not cause a margin squeeze on the retail market for broadband access and it clearly does not have any relevance to eircom's prices for White Label Broadband. eircom also notes that the presence of regulated Bitstream services upstream, with minimal barriers to entry to their use, provide OAOs which do not consider eircom's end-to-end broadband prices to give them sufficient margins, with a readily available alternative, so that such a test can serve no meaningful role in ensuring competition.

A more justifiable approach would be to apply a single margin squeeze test between the retail price and the underlying VUA product. This allows the appropriate traffic usage costs to be included in the test which is more correct, compared to the proposed approach which sets a rigid cost level between Bitstream and VUA. This is expanded on in eircom's responses to later questions and is addressed in the accompanying Frontier paper (Annex 1).

We take issue with ComReg's reasons for preferring infrastructure based competition (11.158) on the basis that service based competition is dependent on technological choices made by the incumbent in cases where the alternative operator does not invest in their own infrastructure. This preference 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. For many years now, eircom has offered its wholesale customers the maximum capability of the infrastructure installed (up to 8Mb or up to 24Mb bandwidth, with no contention). However, for NGA, eircom is offering layer 2 services which give wholesale customers the maximum flexibility consistent with the technical characteristics of the platform. If service providers wish to go outside this envelope of capability, they may choose alternative platforms, or alternative interconnection points (e.g. the DP, rather than the cabinet).

We also take issue with the suggestion that *“infrastructure based competition has the advantage of progressively suppressing monopolies, and thus of limiting controls, with a transfer from ex-ante to ex-post regulation”*. We see no evidence that the alternative infrastructure investments made by UPC are being used to enable third party operators to compete at any level, despite the fact that various forms of cable bitstream are being offered over DOCSIS 3.0 network elsewhere.

ComReg's argument that entrants progressively ascend the ladder of investment is no longer relevant. As ComReg admits, UPC has ascended straight to the top step. It did this not as a former state-owned monopoly, but through sequential acquisition of assets, culminating in UPC paying a price for Chorus and NTL that allowed a return on investment at prices the market seems willing to pay.

There are few cases of operators progressing from resale to bitstream, or from unbundling to own infrastructure with duct access.

Indeed, the inventor of the ladder of investment, Dr. Martin Cave, recently<sup>14</sup> suggested that *"while the Gold standard is "end-to-end platform competition", the ladder of investment concept was designed to deal with situations where that is not available."* The whole point of the ladder of investment is that it delivers benefits to consumers (through greater incentives to efficiency and more product differentiation). However, 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. For that reason, NRAs should not be doctrinaire about mandating unbundling at every level, and should take care not to succumb to the tendency to over-regulate.

**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.**

eircom welcomes ComReg's intention to make to make eircom's obligations in the context of NGA retail prices "less burdensome" (12/27, para. 11.179). However, it is difficult to assess the benefits of the proposed exemption to eircom and/or ComReg. The Consultation Document includes no discussion of what makes an offer "material" and the reasons why the alternative test of 20%/20,000 have been chosen. It may be that 80% of the time spent by ComReg in reviewing notification under D01/06 concerns offers that affect less than 20% of users, such that the proposed exemption would result in a significant saving in costs for eircom and ComReg, including for eircom in terms of reduced "time to market" (by up to 4 weeks). Greater clarity of the rationale behind the proposal would assist in assessing the proposal.

It is also the case that the scope of the proposed exemption of pre-notification obligations on the basis of immateriality is not clear and raises questions of interpretation.

eircom notes that its proposals of a suite of NGA tariffs in the draft retail minus price control, showed that the least popular offerings are expected to have approximately 20,000 customers.

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<sup>14</sup> At a panel discussion at the IIC TMT Forum, Brussels, 23<sup>rd</sup> April 2012



On this basis, the level at which the threshold is set would mean that no product that is currently contemplated by eircom would be immaterial.] In this regard, if the materiality threshold is applied to NGB and NGA bundles, it would be very helpful, but less so if it applies only to standalone broadband prices. At present, ✂.



Bundles are treated separately: is every bundle material or do similar thresholds apply to bundles?

eircom would also welcome clarifications regarding the consequences that would follow from the introduction of an exemption based on materiality to the pre-notification requirement set out in section 4.5.4 but not to the requirement set out in section 4.5.2 of ComReg Decision D01/06.

In particular, where several retail offerings are supported by a single wholesale offering, the control applies to the weighted average of the revenues of the retail offerings. We understand the proposal to mean that the weighted average always applies, but that the requirement to make an advance notification including a compliance statement does not arise where eircom expects the new retail offering to have less than the lower of 20% of NGA retail users, or 20,000 new retail users. However, it is not entirely clear how this will work in practice.

Thus, supposing that eircom has a weighted average retail revenue of €40 excluding VAT per user per month arising from a single retail product with price €40 sold to 100,000 users, and introduces a new “save” product at €20. To be clear, the price of €20 will not be tested – only the revised weighted average revenue of €38. Now suppose eircom expects 10,000 users to migrate to the save offer. Is it correct that as the Save offer is not material, no pre-notification is required?

Does it make any difference if the threshold that would require a reduction in wholesale prices is €39? What if eircom then introduced an additional winback offers at €15, and a loyal user offer at €10. Each of these offers would depress the weighted average significantly, but if eircom did not expect any one offer to exceed 20% of the user base, or 20,000 new retail users in total, then it appears that the obligation for notification and compliance statement do not arise.

Confirmation that no subsequent obligation of notification is triggered when an offering which was expected to have less than 20% of the base or 20,000 new retail users turns out to exceed one of the thresholds some time after launch would be welcome.

In this regard, the meaning and relevance of “new” is not entirely clear. The 20% measure does not refer to “new” users whereas the 20,000 total does so. If an offering attracts 15% of 400,000 users (i.e. 30,000 total users), but most of these are existing users of eircom retail NGA service, has the limit of 20,000 new retail users been breached? eircom understands that as long

as 20,000 or less are not “new retail users” to eircom, the offering is not material. By “new” users, eircom understands that ComReg means “new retail subscribers for eircom’s next generation services”. In this regard, eircom understands that new users also include those users for whom, where permitted by the various regulations, eircom has retained information after they ceased retail services with eircom. When such users request retail service from eircom at a later point in time, eircom does not regard the connection as “new”, but as a reconnection, or a winback (where the customer requests a seamless transfer from another operator). However, eircom understands that for the purpose of the exemption, they would be considered to be new customers, provided that they are new retail subscribers for eircom’s next generation services. The same would apply in relation to existing customers of eircom who might have telephony services or legacy broadband services, and wish to take NGA services.

The significance of the phrase “standalone Broadband retail NGA services” in 11.179 is also important, as this does not carry into the draft decision instrument, which instead simply refers to a new or existing retail product. Therefore, it may not mean “standalone” compared to POTS based, or compared to bundles with fixed or mobile voice.

In practice, ComReg’s proposal is very vague and eircom would welcome further clarification in relation to it.

**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.**

The proposed obligations are in line with the obligations for current generation broadband, imposed in 11/49 (Decision D06/11). These include the following obligations regarding price notification

- Pre-notification by 3 months
- Publication (to industry, in the BARO) 2 months in advance

and the obligation not to margin (price) squeeze (Regulation 12.4 of D06/11) between WBA and WPNIA, among WBA services, or between WBA and Retail (as per section 7.78 of the decision).

We note that price changes require 3 months notice, while new product or product changes will require 7 months notice. Therefore, the technical material provided in support of new products 7 months in advance (as proposed by the Consultation Document, which eircom believes to be

excessive, as discussed in response to Question 15) does not need to include prices, as these can be supplied 3 months before launch.

By contrast with the apparent intent of the materiality threshold (as per Q26), ComReg intends that “**ALL** (emphasis added) Wholesale prices related to new and changes to existing NGA wholesale products” must be pre-notified. All notifications require a compliance statement and supporting documentation.

There is a further requirement that, within one year, and annually thereafter, eircom will be required to provide a compliance statement. This suggests that the initial pre-notification for the first product(s), will be based on assumed costs and volumes (assuming the Decision is in force before launch). Thereafter, at some point within the first year, those assumptions will be updated with revised figures based on actual costs and volumes.

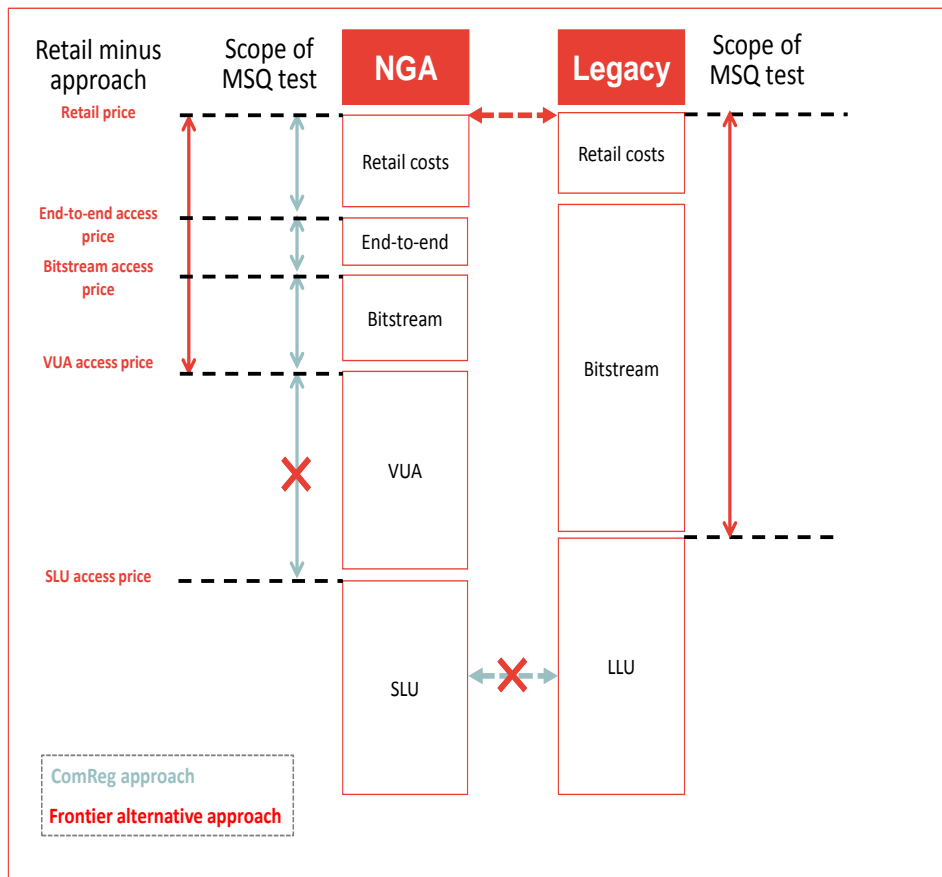
Two major concerns arise:

- 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 decision, and the decision 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.
- 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.

We welcome ComReg’s proposal to continue with the current practice of accepting notification and compliance statements by email.

**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.**

eircom does not accept the need for multiple layers of margin squeeze tests. If such tests are required at all, the scope can be significantly reduced.



**A possible alternative approach to margin squeeze tests<sup>15</sup>**

As depicted in the chart above and described in section 5 of Annex 1 (Response to the Oxera Report, prepared by Frontier Economics for eircom) we consider that the following two key tests are sufficient to ensure that Margin Squeeze (MSQ) is avoided:

- Test A: Retail “price” (weighted average ARPU) tested against VUA Price
  - In essence this test incorporates all the costs that arise in ComReg’s test 1 (Retail and bitstream or end-to end bitstream), test 2 (end to end bitstream to bitstream), and 3 (bitstream to VUA)

<sup>15</sup> Frontier Economics response to the Oxera Report. A report prepared for eircom

- We consider that there is no incentive to margin squeeze at the intermediate levels
- The tests proposed by ComReg rely on fixed absolute money amounts for elements which are highly unpredictable. The white label broadband service may typically bundle elements of network and retail activity over and above the bitstream service. Some potential entrants (such as a mobile operator) may, in effect be an ISP, whereas others may not be – and may seek quotes for ISP facilities, traffic management, email services, or other added value elements. Every request is different, so providing an indicative price difference between retail and end-to-end bitstream is unhelpful
- There is a probability that operators might misunderstand the gap between the bitstream service and the VUA service because it is presented as a fixed money amount. This is in stark contrast with ComReg Decision D06/12, where transport costs are presented as comprising at least a two part cost driver: a relatively fixed element, and an additional cost that varies linearly with peak throughput (although this two-part cost floor is in turn a simplification of a more complex cost curve). The figure of €3.48 is only valid at a particular throughput volume, and might initially be lower if throughput were lower.
- Rather than trying to identify every possible combination of elements that might comprise a white label service, or providing a complex cost curve test for bitstream to VUA, we propose these tests are simply not required. We consider that the competitive market pressure, and fallback of competition law, coupled with a simpler Retail to VUA test, would ensure sustainable competition.
- Test B: Imputed legacy retail price tested against LLU price
  - The imputed legacy price is derived from the NGA ARPU by subtracting the additional (small) market value of the improved performance (analogous to the functionality adjustment used by Regulators in MEA costing). This approach ensures both VUA and legacy LLU prices derive directly from a retail minus control related to the actual NGA prices, ensuring consistency.
  - Test B includes the D01/06 retail costs plus WBA floor (12/32)

We consider that the SLU and LLU relationship is not fixed even pre-NGA, but certainly NGA-SLU is not rigidly linked to legacy LLU. LLU prices are set with regard to probability of MDFs being unbundled or potentially unbundled, and giving a low weighting to long lines (over 5km) which were unlikely to support broadband. By contrast, the legacy SLU price was set based on costs of all loops served through a cabinet. If one were to set an NGA SLU price in a manner similar to the LLU price, one would have 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. This would be a major exercise, and the radical alterations to the copper access model which would be required would be incomplete unless all volume and cost data were updated to reflect events since 2009. Setting aside the proposal to apply a margin squeeze test as between VUA and SLU would avoid any need to review the LLU model in such depth. In any event, it would be premature to attempt to link VUA to SLU: neither costs nor volumes (take up) can be predicted with any certainty, and setting a parameter in a control at a fixed money amount based on untested assumptions could have serious unforeseen consequences.

Two further arguments against the linkage between VUA and SLU are the use of absolute rather than proportionate margins at every level, and the use of the SEO test between Retail and VUA. The former leads to exaggerated levels of reduction at the bottom of the value chain and the latter to an accumulation of allowances for economies of scale and scope which are liable to overcompensate by creating too much “economic space” at the bottom of the chain. This may result in unduly favouring legacy services, discouraging migration, and hindering Ireland’s efforts to meet the Digital Agenda objectives.

The proposed test somewhat misrepresents the form of control that the Consultation Document proposes to apply in wholesale markets. In fact, the proposed NGA control is primarily a cost-floor model, built from SLU, and applied to LLU, VUA, Bitstream, Bitstream End-to-end services and Retail products.

The tests give the illusion of pricing flexibility, but in reality they are designed to place strict constraints on eircom’s room for manoeuvre, primarily to encourage new investment -- and not just protect past investments-- in “old generation” technology. If adopted, this approach would seriously deter the take-up of NGA by end-users and other operators, and would have the effect of limiting and impeding the development of applications requiring higher speeds. This would be contrary to the Digital Agenda objectives and a major setback for economic recovery in Ireland.

ComReg is aware that NGA is primarily competing with UPC in urban areas, where UPC often has over 50% share of fixed retail broadband. The key objective at the current stage of market development should be for ComReg to ensure that significant retail competitors in those areas - such as eircom’s retail service or Vodafone’s fixed broadband offerings - are able to compete with those of UPC. Giving small new entrants a regulatory advantage over eircom and (for example) Vodafone, while imposing price controls on eircom which result in neither being able to respond to UPC, will impede and not stimulate the development of healthy competition.. Ideally, ComReg would consider alternative price floors based on the alternative Modern Equivalent Assets (“MEA”) approach. eircom and its wholesale customers are competing with cable networks so in principle, the reference MEA might be a DOCSIS3.0 network.

**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.**

ComReg proposes to apply the SEO cost standard in almost all circumstances, other than the VUA to SLU test. We have argued extensively why this is an unreasonable and disproportionate approach in our submissions, and believe ComReg is in error in continuing to utilise the SEO approach.

Even if the SEO test may have had some basis for support in the legacy world when new entrants were in fact new (which we believe is debatable), the competitive landscape in Ireland today provides no justification for its continued use in the Margin Squeeze test at any level in the value chain. An incumbent in its home market, such as BT, DT or FT, might have scale and scope advantages over a local competitor. However, in Ireland the situation is reversed. At neither the service layer, nor in retail markets, 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.

We note ComReg’s allegation that the 25% market share assumption for the SEO is challenging – yet Vodafone has already exceeded this percentage on the DSL platform.

ComReg has decided to use the EEO approach for the VUA to SLU Margin Squeeze Test. Partly this is because the model would give rise to absurdly negative SLU prices if SEO were applied. It may also be, in part, because ComReg concedes<sup>16</sup> that the SLU price is notional, and it may not be economic for any operator to avail of SLU. However, we conclude that even EEO costs are highly uncertain in this case, and no test should be applied as between VUA and SLU, for the reasons explained in the attached paper prepared by Frontier (Annex 1). (We propose, instead, an alternative direct linkage between retail NGA price and the LLU price to ensure no margin squeeze can arise –rather than an indirect link via a notional price for SLU).

Under the proposed SEO-based regime eircom would not in practice have freedom to set retail prices. Instead, eircom would be tightly constrained by a number of factors. Firstly, by the prices set by competing platforms including the prices set by competing platforms and the effects of any change to eircom’s retail charges on the margin squeeze model. Secondly, eircom’s retail charges would have to be considered alongside the effects of change on the margin squeeze model. Consider the following example: ✂

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<sup>16</sup> 11.215

The UPC standalone broadband price is €33 – so matching UPC would require a zero or even negative SLU price.

This illustrates why the proposed controls in practice so hamstring eircom as to preclude entry into the retail market at a competitive rate, an approach which has to deter eircom investment.

Paragraph 11.227 repeats the fallacy that the SEO in Ireland has higher costs than eircom because it lacks economy of scope due to lower volume in Ireland. ComReg make much of eircom's alleged ability to leverage its fixed telephony customer base into the separate fixed broadband market, but make no mention of the fact that Vodafone has 2 million mobile customers in Ireland, or that the TV customer base of Sky or UPC is similar in scale to the fixed telephony base of eircom. These three industry players have significant scale in Ireland: they have an 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. Each -along with O2, BT and 3 -is also (unlike eircom), a significant multinational actor, capable of leveraging expertise in broadband service development, retailing and bundling from many much larger markets. The repeated characterisation of eircom as somehow enjoying scale advantages over such players is not plausibly demonstrated. In reality eircom is a relative minnow struggling against global titans.

The ComReg SEO model considers the competitor to be a new entrant which must establish an unknown brand, and recover its costs of customer care, billing and other systems purely from retail broadband in Ireland. This is patently not the actual case for any of the significant competitors in Ireland today.

The real competitors in Ireland could well have **lower** costs compared to eircom, because

- their Ireland operation is part of a larger EU wide/worldwide operation
- while some local costs in Ireland may depend on the Irish market volume, significant economies of scale arise from regional or worldwide operation and concentrating specialist functions<sup>17</sup>.
- eircom's obligations<sup>18</sup> to meet a wide range of needs, and indeed to produce EU mandatory regulated products for which there may be no demand in Ireland, could well inflate costs. In contrast, a focussed operator (whether Irish or part of a multi-national corporation) can have dramatically lower cost by limiting the geographic area and the type of customer segments it serves, and the product set it provides.

In the event that ComReg continues with the proposed SEO-focussed approach, we wish to draw attention to the possibility of significant double counting of costs that would result. Such

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<sup>17</sup> examples, : e.g. Vodafone consolidating Ireland/UK call centre in Northern Ireland, rolling out pan-european modem models, launching One-net service in Ireland after Germany, Italy and other markets; O2/Telefonica group HR function in Ireland etc.

<sup>18</sup> eircom has specific regulatory obligations for non-discrimination and to provide mandated service; it also has implicit political and customer obligations to serve all areas of Ireland and to maintain legacy products even where regulation allows otherwise.



double counting can be obscured by the practice of using varying approaches to derive costs, such as LRIC+ for SLU, incremental cost of the EEO for VDSL DSLAMs, and SEO DCF models for retail costs.

A range of double counted costs might occur:

- NTU costs: The LLU and SLU prices include the cost of providing and fitting a network termination unit (NTU). The costs supplied by eircom to ComReg leading to VDSL calculation of €8.14 per month may also include the cost of providing and fitting a network termination unit.
- Planning and Design costs: The NGA model recovers the total of the access network planning costs associated with the Network planning programme from the VUA price floor. However, NGA planning is so extensive an exercise for the local network that it effectively replaces the OPEX costs of planning and drawing office work that would normally be undertaken for the copper access network in those areas in a normal year. For this reason, eircom considers that a portion of the total amount of the OPEX relating to planning and updating drawings recovered from the ULMP price is also reflected in the modelled NGA planning cost. Experience with the first twenty sites suggests that planning and design costs may be significantly lower than eircom originally estimated (in large measure, due to a revised approach to cabinetize directly fed lines rather than build FTTH). In the LLU OPEX module these planning and design costs are recovered at €~~8~~ per line per month. A similar scale of cost arises in the NGA model, and may in fact be double-counting the same activity.
- Migration charging: The NGA margin test assumes that all NGA network investment must be recovered from the rental charge for VUA. This approach was reasonable on the basis that eircom originally proposed to have only minimal charges for migration to encourage early take-up of wholesale NGA services. This position is now affected by two wholesale pricing developments (discussed further below in the response to Question 33):
  - It has been agreed with industry that eircom will offer a variant of the wholesale migration service where the OAO will fit the NTU at the customer premises – and this service will be priced to recover only order handling costs (say €~~8~~). eircom will also offer a migration service where eircom fits the NTU (as well as connects the customer loop to the NGA port). This second option will be priced close to €~~8~~.
  - Having considered the respective costs of completing these migrations as a concentrated versus ad hoc effort, eircom proposes to charge a higher price for later migrations. The charge for migrations outside the window of 6 months following the

date on which an NGA area is made available for service will rise to €~~3~~ and €~~3~~, respectively, reflecting increased costs in the order of €~~3~~.

If 50% of migration occur in the first 6 months and 50% later, the contribution to the eircom FTTC cost of €~~3~~ for jumpering and NTU fitting is  $50\% \times \text{€}\del{3} + 50\% \times \text{€}\del{3} = \text{€}\del{3}$ .

Given that the eircom cost of €~~3~~ per FTTC premises connected is recovered from the NGA margin test model at €~~3~~ per month the contribution from migration revenues will reduce this by €~~3~~.

Regarding combinations of NGA broadband and voice services (such as PB-VUA) eircom considers the reasonable and proportionate approach is to add the costs of the additional voice service to the NGA stand-alone broadband product. ComReg's proposals to add WLR prices to stand-alone NGA prices would lead to further significant double counting. For example, WLR includes elements of line fault costs, and cable, duct and trench linking the MDF to the cabinet, which are also included in the NGA standalone cost. These elements need only be recovered once, and should not be double counted in any controls.

**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.**

eircom does not agree with a product-by-product approach, and neither does Oxera. Indeed in table 11.287, ComReg propose that the retail to wholesale NGA margin squeeze test should be on a portfolio basis rather than a product-by-product basis. This summary is based on comprehensive arguments at para 11.265 to 11.273, all of which support a portfolio approach and reject a product-by-product approach. eircom agrees with this position.

This question is therefore oddly worded given that in 11.287, ComReg seems to propose that a portfolio approach is preferred for the Retail to bitstream test, and that this distinction is "n/a" for the various wholesale to wholesale cases.

However, the text in para 11.268 to 11.272 does not address the issue of the 20% threshold, except for notification. This suggests that the test would not apply at all if notification is not required. While this flexibility is welcome, it potentially sets up a system where a niche product could become "too successful" and have to be withdrawn once it exceeds the threshold. We believe that these situations should not be dealt with based on a mechanical rule but, rather, would need to be examined on a case by case basis, taking into consideration all of the competitive circumstances relevant to the circumstances..

eircom has previously explained the need for many-to-many portfolio tests (comparing weighted average of FFTC/H wholesale prices to a portfolio of retail products), and why 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. We have submitted a full explanation of this in respect of Next Generation Broadband which is attached as a confidential Annex 2. However, it is important to note 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.

The product by product test is particularly inconsistent with the Wholesale Network Input (WNI approach) proposed in 11/72. We expect that a majority of NGA retail offerings will in fact be bundles (of voice and broadband, or mobile and broadband) and so will be tested primarily under the controls arising from 11/72. We note ComReg's argument in 11.267 in favour of regulatory consistency, and we agree with it.

For the avoidance of doubt, eircom is proposing a single margin squeeze test between NGA retail and VUA, and considers that this single test should be based on a portfolio approach utilising the cost of a EEO and not a SEO. For reasons similar to those at 11.265 to 11.272, if ComReg were to adopt any other tests, they should also be applied on a portfolio basis.

We note the inconsistency between the n/a notation in the table in 11.287, and the call for a product by product test at the wholesale level in 11.273. This call is not justified, and no reasons are given for the difference in approach.

Consider the approach that would be adopted by an aggregator reselling a lower level wholesale service at a higher level. For example, operator 1 could buy VUA service from eircom, add backhaul from MDF to a national handover point, and resell it as a bitstream service to Operators A, B and C. Such an operator is not regulated, and can discriminate between operators A, B and C, and has no requirement that each of its three customers recover ATC on a product by product basis. All three operators can share the backhaul, generating economies of scale. Operator 1 would simply ensure each of its customers covered incremental costs, and that its portfolio overall was profitable. If eircom is prevented from operating in a similar way, in effect eircom must treat every wholesale customer as if it required a separate network. This again exaggerates and overstates the required economic space at each layer of wholesale operation and makes it difficult for eircom's retail operations to compete against OAOs using its network or its platform competitor, UPC. eircom would be forced to play at each wholesale layer, each becoming increasingly uneconomic, leaving a retail price which is unsustainable in the market. Investment in NGA is unlikely to be justified under this scenario.

**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.**

While the considerations described in ComReg 12/27 appear reasonable, eircom believes that a full context, including the extent to which cable has already displaced fixed line services within its urban footprint, has not been adequately taken into account. Again, eircom regrets that ComReg has not first completed a new market analysis that would have allowed ComReg to ascertain the changes in market conditions. As a consequence, the balance of consideration seems to be directed at creating a relatively slow managed evolution from copper to NGA, without adequately recognising that technological evolution and displacement of copper based services has already occurred. This is likely to prevent eircom and all operators, who sell services from eircom's NGA network, from responding promptly to competitive displacement that has already occurred in the market.

Paragraph 3.31 in ComReg 12/27 states that *"ComReg considers when the new network is fully rolled out over the NGA footprint areas and all relevant services are supported over the new network, operators could be incentivised to migrate to the new network within a reasonable period of time."*

This implies that incentivisation can only commence a reasonable period after the full rollout is complete. eircom believes such an approach would delay the competitive benefits of investment in NGA by artificially sustaining copper based services and slowing the speed with which the full benefits of NGA investment can be deployed.

In ComReg 12/27, paragraph 11.290 states that:

*"The relevance of WLR may decrease as voice over broadband ("VoB") becomes more prevalent in NGA areas. However, it is important that consumers that do not have a broadband connection can continue to receive competitive offers where those copper lines are in similar or close proximity to the geographic areas of those customers with fibre based broadband. Therefore, 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."*

The concern that *'an anomaly of much higher access prices for consumers in the same geographic areas as those availing of higher speeds over upgraded fibre networks'* could result is in fact very unlikely to arise.

If a customer were to purchase telephony on its own, the service provider would have to charge sufficiently to cover the costs of the access line. By comparison, if a customer purchased an NGA based service, the service provider would also have to charge sufficiently to cover the costs of

the NGA access line. Consequently, it is very difficult to envisage situations in which a POTS based service would be more expensive than an NGA based service. Equally, an NGA service is likely to provide a much better value proposition as it will be based on high speed broadband, and will likely offer a voice application at a low incremental price. The ability for eircom and other operators to offer retail services at inflated prices is simply not possible in a competitive market.

In ComReg 12/27, paragraph 11.296 states that:

*However, this presents a significant challenge on the appropriate representation of IP voice both currently and going forward in a regulatory framework which to date has only had POTS as the main voice offering, both at a wholesale and a retail level. It is proposed by eircom in their latest product set that where NGA broadband is provided that the consumer will also have the option to maintain their POTS based service over the copper line as the copper line will remain active from the exchange. It is not eircom's intention to switch off the copper line for some years to come. However, as this POTS based service will in certain circumstance be provided over a parallel running fibre network, which is the subject of this paper, the question arises as to whether the traditional wholesale line rental service referred to earlier is the relevant wholesale input to any Margin Squeeze test in the context of NGA broadband provided with POTS.*

While eircom has proposed POTS Based (PB) NGA services, these were never intended as long-term permanent services, and they should be seen as transitional products.

eircom had been exploring options for the deployment of NGA for several years but, in common with other operators internationally, had found the business case to be very challenging to justify. During that time, eircom also sought to increase its understanding of the business case through review of business models and through the launch of the Fibre Pilot in 2010. eircom had to make a commercial decision in the context of multiple uncertainties including technology, customer adoption, future services, economic, shareholder, and regulatory. Ultimately, eircom announced its intention to invest in an NGA network based primarily on FTTC with some element of FTTH.

Immediate implementation of a full NGA vision would have required significant changes that eircom and wholesale customers would not have been able to sustain, for example:

- Withdrawal of existing POTS based services
- Securing agreement for use of VoIP as a primary line voice service
- Building of a full scale VoIP platform that could support a mass migration of all customers within the NGA footprint
- Reconfiguring, rebuilding and investment in all Operators network and systems to support large scale VoIP rather than current POTS voice

- Re-building or replacement of existing billing and CRM systems to support a mass migration of all customers within the NGA footprint

NGA products are proposed that avoid disruption, in the expectation that transition arrangements would be worked out with industry stakeholders.

If it were possible to move immediately to a pure NGA solution, the copper infrastructure from the exchange to the street cabinet, and the PSTN voice infrastructure supporting those lines would become redundant and the associated infrastructure would become stranded.

However, despite the fact that the proposed network solution being based on a technological implementation involving a transition period, as described above, the stranding of these assets has already taken place economically as the market has moved on and is demanding functionality and pricing based on NGA services.

eircom notes that in paragraph 11.308, ComReg states *“From a technological perspective, the use of POTs service to deliver voice is a pragmatic solution while IP voice is rolled out.”*

Consequently, it is commercially unrealistic to seek to remunerate legacy copper based infrastructure as if it remains as a viable competitive infrastructure for the indefinite future. Requiring eircom to impose such costs on operators utilising its network will put them at a commercial disadvantage vis a vis UPC and other platform competitors.

In ComReg 12/27, paragraph 11.297 states that:

*This issue is of critical importance during the transition from POTs to IP voice. Significant distortions could occur where the imposition of a margin squeeze test on eircom does not take into account the voice element while the full scale IP network is being built. This could have very negative implications on investment decisions and the success of migrations to NGA services. However, significant distortions could also occur in the short to medium term where parallel current generation services are competing in the same areas as the NGA services. The investment decisions of others may also be negatively impacted by any uncertainty or changes as to how POTs based services are dealt with in as part of a margin squeeze test.*

The analysis in ComReg 12/27 lays heavy emphasis on a desire to protect investment that operators have made in copper based services. In eircom’s view this is unrealistic. Erosion of the competitiveness of these services has already occurred and is unstoppable, with cable already having substantially displaced fixed line services in the NGA area.

In ComReg 12/27, paragraph 11.294 states that:

*Currently, the provision of POTs is provided using WLR. As pointed out above, this service, which is a remedy derived from the Retail Narrowband Market is currently a service offered nationally. It is unlikely however that IP based voice be a national service given*

*the economics of building an IP platform nationally and to every POTs based exchange. Therefore, it is likely that Ireland may have a mix of POTs and IP based services running together for many years.*

This is only partly true. In urban areas where the market has been recast by cable, all operators will increasingly have to accelerate their migration to NGA services in order to be able to compete on a quality of service basis. Consequently, if operators utilising eircom's network are not to be foreclosed from the market by UPC, eircom believes that the urban market must urgently transform to one based on NGA services.

In the analysis in ComReg 12/27, paragraph 11.307 states that:

*From a social perspective, if consumers living within short distances from each other notice significant differences in price for the same or similar services, this could exacerbate a Digital divide within urban and suburban areas. Broadband from the cabinet or from the exchange over fibre will not be available to all consumers from the nominated NGA exchanges, therefore those customers who are too far from the cabinet to avail of NGA could end up paying significantly more for a lesser service.*

eircom believes that the question of an urban rural divide cannot be avoided. It already exists with cable offering services in urban areas that are not available in rural areas. Seeking to structure regulation to force or strongly encourage operators who use eircom's network to offer services on a national basis will put them at a severe competitive disadvantage against networks whose footprint is urban based. In this respect, eircom believes that societal issues arising from technological and market changes ought not to be properly addressed by way of SMP regulation. The purpose of SMP regulation is to address competition issues, that is, issues of market power. Under the regulatory framework, societal issues are to be addressed using other mechanisms including in particular the use of Universal Service Obligation accompanied by an appropriate funding mechanism.

Option 1:

eircom disagrees with ComReg's conclusion that Option 1 is unlikely to be appropriate, given that the POTs service would be decoupled from the WLR service. As outlined in the discussion above, eircom believes that recognition should be given to PB NGA services as a pragmatic technological transition that is essential to support all operators utilising eircom's network. Equally, recognition should also be given to the de facto stranding of the copper infrastructure from the exchange to the street cabinet, and the PSTN voice infrastructure supporting those lines, that has already occurred.



eircom also disagrees with the potential view that *'In addition, it is not clear at this point whether the MEA of POTS would equate to VoIP'*. If this statement is suggesting that a MEA of POTS might be considered, this would simply attribute POTS costs to VoIP rather than assess VoIP on an MEA basis.

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 PB services are included in the NGA portfolio as a pragmatic technological transition that is in the interests of all operators using eircom's network.

#### 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.

eircom views option 2b as having some of the characteristics and benefits of option 1. Offering a wholesale bundle discount where WLR is sold with Bitstream would enable PB NGA services to be offered at market competitive prices.

However, as described, the discount would also be available to current generation bundles of Broadband and Voice services. eircom believes that this would inappropriately encourage service providers and customers to retain older technology services. A consequence of this is that customers would be encouraged to avail of less capable broadband and thus delay migration to NGA services. This has the potential to significantly damage the investment case for NGA. A possible mitigation would be to limit the application of the WLR bundle discount to a limited period. This would have the effect of creating an incentive for operators to encourage customers to migrate to NGA services or to own infrastructure in order to avoid a wholesale price increase when the discount period expires. Such a wholesale price increase would require operators to increase retail prices or absorb a significant reduction in margin.

#### Option 3:

eircom does not consider Option 3 to be appropriate for the same reasons as outlines for Options 2a.

However, eircom could see merit in combining a sunset timeframe with Option 2b as discussed above. The implementation of a discount for a limited period of 12 – 24 months would allow operators to plan the orderly migration of customers onto NGA services once the VUA and



Bitstream products are proven as fit for purpose and their own service platforms are fully operational.

Option 4:

eircom can see some merit in Option 4. However, eircom is concerned that any delay in providing clarity as to the regulatory regime for NGA must be absolutely avoided so that there is no delay in further NGA rollout investment. For this reason, eircom does not believe that Option 4 which would involve another consultation process is a realistic or appropriate option.

Option 5:

eircom notes that ComReg has mentioned by not discussed option 5, retention of the status quo. This option has no merit. Continuation of the existing regime would completely undermine the NGA investment case as operators utilising the NGA network would be unable to support competitive prices in the market against the already established cable operator.

**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.**

To date other operators have not indicated any willingness to jointly invest in NGA.

Before addressing the potential co-investment/risk sharing arrangements identified by ComReg, it is worth noting the absence of any indication of a willingness on the part of other operators to co-invest with eircom.

Despite eircom's public commitment to NGA deployment, no operator has expressed any interest in co-investment to eircom. It is striking that Vodafone published several papers advocating a risk sharing approach to network deployment, but that it does not have any significant track record of investment consistent with these stated beliefs, and has not, as yet, indicated any willingness to co-invest in NGA in the Irish market.

Regulatory review of Long-term up-front contracts or volume discounts would mitigate against co-investment

It is conceivable that operators would enter into long-term commitments with eircom to purchase wholesale or network services from eircom's NGA network. If they did, this could reduce investment risk to eircom to the extent that eircom would have certainty of some revenues.

However, eircom believes this option to be unlikely. In the absence of a meaningful discount from standard access pricing, the business and ‘investment’ risks of such long term commitments would be assessed by operators in much the same way as capex investments.

Regulatory assessment of factors that affect jointly shared risk would be extremely challenging and complex in practice. The extent of burden on the calculation of margins on products for a co-investing operator, and the associated uncertainties that they would face, would be likely to be strongly off-putting to operators considering co-investment in association with long-term discounts and volume discounts. All such potential investors are likely to be reluctant to invest in association with eircom eircom’s regulated status will be considered to add significantly to the uncertainties, including of legal and regulatory nature, associated with such investments.

*Risk sharing is unlikely to result in overall risk reduction:*

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. They may also increase returns required, as each party would have to consider the additional risk of misjudgement of risk sharing – in the consultation this is described as parties incurring an ‘artificial benefit’ or ‘artificial loss’. Referring to these potential gains or losses as ‘artificial’ seems to be inappropriate – they are financial or investment risks that would arise directly as a result of joint investment structures. These are additional risk dimensions separate and apart from those of the underlying investment.

*Mandating an unspecified process for review of co-investment will further increase uncertainty and investment risk*

In the market consultation, ComReg preliminary conclusion is set out in 11.362 as follows:

*‘eircom will 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 will not be unduly discriminatory. Therefore, Co-investment or risk sharing agreements between parties, with respect to NGA investments, will be subject to pre-notification to ComReg.’*

In line with that conclusion, ComReg also sets out non-discriminatory obligations in paragraph 8.8 in each of the draft obligations for WPNIA and for WBA as follows:

*‘eircom shall notify ComReg, at the date of agreement, of any potential co-investment arrangements that may take place between Eircom and another party.’*

However, no description is provided of the review process or criteria that would be applied. As a consequence, the draft obligation will serve to increase investment uncertainty, rather than reduce it, and will mitigate against co-investment initiatives. Moreover, while paragraph 11.362 implies that eircom can offer lower prices for fibre loops, the actual price controls do not make explicit provision to offer lower prices for either WPNIA or for WBA services, and as a consequence appear to explicitly preclude offering lower prices to a subset of customers for WPNIA or WBA services.

*Clarification of support for co-investment and review processes is required*

Although co-investment seems unlikely to arise in practice, eircom's position is that making provision for potential co-investment would be beneficial and, for example, could potentially enable extension of the NGA footprint. However, to support co-investment 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.

**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.**

eircom proposes that Migration charges must be set to best meet a complex mix of conflicting requirements. Wholesale customers should have choices of "buy or build". One wholesale operator may need to send technical staff to customer premises to install internal wiring, satellite dishes, and set top boxes that terminate TV and Broadband internet. Another may have a "no frills" low cost approach, posting a cheap modem. Operators may seek to influence the work end-users expect with a retail pricing menu. Operators will differ in the extent that they need or want eircom staff to visit the end-user premises. So, these services will need to be costed and priced separately, rather than bundled into a monthly rental that all providers must pay, no matter which elements of the migration service they use. It is therefore appropriate to break the activity into components. Those elements that result in an "asset" that may serve the end-user through several different providers (e.g. a basic NTU) could be recovered within rental assuming a long lifetime. Activity that serves a short term purpose, and would have to be repeated if the end-user changes operator or service, should be recovered over a shorter period of time.

Bulk charges may encourage efficiency, and time-dependent charges may encourage earlier take-up – increasing average volumes and so reducing unit costs.

Nevertheless, if the full costs of migration were charged as a one-off transaction price, it might be so high as to discourage early migration.

However, eircom does not believe that the current cost oriented LLU migration charge at €15 relative to the ULMP monthly rental at €12.41 (i.e. where migration is 10% of the annual charge, or under 3% of the lifetime rental costs) can reasonably be characterised as “possibly a barrier to investment” as stated in paragraph 11.368. Furthermore, once the OAO has made the LLU investment in their own DSL platform there are a number of savings available to the operator on migration between wholesale services. These savings need to be analysed when assessing whether migration charges comprise a “possibly a barrier to investment”. For example, moving from WLR+LS (c. €19.20 including fault costs) to ULMP (c. €13.60) offers a rental saving of c, €5.60 per month, with a three month payback. That does not seem very risky. When traffic and interconnect costs and revenues are considered, the savings are even greater.

The table below lays out the savings available to the OAO in terms of reduced monthly costs (including the effects of traffic charges, fault clearance charges, and call origination/call termination charges) from the migration types covered by the charge.

<b>Migration Type</b>	<b>Monthly charges before migration</b>	<b>Monthly charges after migration</b>	<b>Saving per month</b>	<b>Payback period</b>
Bitstream to LS	€28	€22	€6	2.5 months
LS to ULMP	€22	€14	€8	1.9 months
Bitstream to ULMP	€28	€14	€14	1.1 months

From a brief analysis of the cost savings available to OAOs on migration between legacy services it is clear that the migration charge at €15 is not a barrier to OAO investment. ComReg suggests that a large cash outflow in a given month distorts investment decisions. This might be true if the migration charge must be expensed, and if the payback periods are excessively long. However, this does not seem to be the case and the migration decision seems to be positive within the quarter in which it occurs.

At paragraph 11.376 ComReg proposes three alternative options for setting migration charges.

These options are as follows:

- 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

Question 34 asks which is appropriate, however, we simply deal with the principles that allow the correct charge to be set.

In 11.385, ComReg refers to Option 3 as being consistent with the “cost causation” principle. This is just one of several principles that Regulators frequently use when setting wholesale prices. eircom believes that setting the cost oriented charges for migration from legacy to NGA wholesale access services should follow all the normal principles that apply to migration and connection fees for all wholesale services. We believe that ComReg should adhere to these principles which were established by OFCOM’s predecessor OFTEL and have been ComReg’s reference point for over ten years whenever considering issues of price structure for wholesale access services provided in regulated markets. The principles are:

1. Cost causation
2. Cost minimisation
3. Distribution of benefits
4. Effective competition
5. Reciprocity
6. Practicality

Migration from a legacy copper access network that delivers exchange-launched Bitstream or LLU services to an NGA network that delivers a VUA service over a combination of FTTC and FTTH is complex and the network operator has to take a number of key decisions about the timing of key portions of the investment. eircom has decided that the most efficient implementation for NGA on the Irish copper access network is to build initially to all the street cabinets that will be served in each NGA area - and to connect customer sites only at the time of migration. In principle this means that all of the investment up to the NTU – regardless of the timing of that investment in relation to the customer migration – is part of the network that would normally be recovered from rental charges.

**1. Cost causation:** the OAO has the option to select between fitting the NTU or requesting eircom to 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.

**2. Cost minimisation:** However industry at the NGA forum has articulated a view that as the implementation of retail NGA services will often entail a visit to the customer premises to fit complex CPE, the OAOs should have the option to fit the NGA NTU – and that connection/migration pricing should reflect the savings to eircom where the OAO carries out

this work. eircom supports this position and proposes that where the OAO fits the NTU at the customer premises the NGA connection/migration charge will be set to recover only the order handling costs of eircom Wholesale processing the individual migration order through largely automated systems. Experience of similar charges, set to recover order handling costs, indicates that the price is likely to be in the range of €2 to €5.

For OAOs who may want to post out CPE or not to install the eircom NTU during a customer premises visit eircom will offer a connection/migration charge set to recover the additional costs of adding the NTU task to the other network investments to implement the NGA service. This price structure is clearly consistent with the principle of cost minimisation as it encourages OAO's to ensure that the NGA migration requires only one customer premises visit.

While eircom is deploying the NGA in a particular locality there will be a larger than usual number of technicians enabling NGA service in that area. The greater number of OAO NGA migrations that take place during this phase the lower the combined (eircom plus OAO) cost per migration. At this phase of deployment both eircom and the OAO will be able to avoid the full truck roll costs of a "normal individual migration" through the concentration of network intervention and customer premises visits into a small area. So the principle of cost minimisation also indicates a lower connection/migration fee should apply during the deployment phase. We propose to work with the NGA forum to determine the appropriate start and end dates for the "deployment phase" in an NGA area.

**3. Distribution of benefits:** There is an option value available to an OAO adopting a "wait and see" approach to the eircom NGA. This value can justify the difference in a migration charge offered at NGA deployment and a higher delayed migration charge. The early migration of OAO customers to NGA provision clearly benefits eircom in achieving a higher fill and an earlier return on the NGA investment. So this principle operates in two ways to indicate that the early migration charge should be set at a lower level than the standard charge that applies at any later period.

**4. Effective competition:** two levels of charge (depending on the choice of the OAO to fit the NTU) also encourage competition both in the provision of in-home services and between access networks as the more efficient the form of migration supports multiple competitors using the enhanced functionality of the eircom NGA to compete with the higher speeds of cable and next generation wireless networks.

**5. Reciprocity:** as there are no cases where the OAO provides a migration service to eircom there is only one case where the principle is relevant to the pricing decision under discussion. This is the issue of the OAO fitting the NGA NTU at the customer premises. Reciprocity indicates that the difference between the migration fees with and without the NTU fitting option should reflect the cost avoided by eircom in not fitting the NTU – and the incremental cost to the OAO in fitting the NTU during the customer premises visit. eircom proposes to set the two connection fees at levels that respect this principle.

**6. Practicality:** the Industry Process Manual (IPM) currently being developed at the NGA forum includes the option for the OAO to choose whether to fit the NGA NTU at the customer's premises on an exchange by exchange basis. As this process will use a different order type when the OAO places a migration order for an exchange where they have chosen to fit the NTU it is reasonable and practicable to raise a different level of migration charge for that form of migration service.

The same IPM also proposes a "Planned Network Address File" that will cover the customers eligible for NGA service when a given exchange area is enabled. eircom can use this file to apply a discount to the standard connection/migration fees for an agreed period after that area is available for NGA service.

eircom does not propose to offer volume discounts for NGA migration or connection fees. This decision is primarily due to a finding that the requirement for eircom and/or the OAO to visit the customer premises at migration does not offer an opportunity to reduce unit costs other than close to the time of NGA roll-out in a particular area. Rather than offer a volume discount to larger operators during that window eircom proposes to distribute the benefits of that cost efficiency by offering the reduced connection fee during the period following activation of the NGA network in a particular area to all operators regardless of scale.

**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.**

There is a fundamental difference between migrations to NGA services in the WPNIA and WBA markets and migrations between legacy Bitstream and LLU services. In many cases, the first time the NGA service is implemented at any given premise a customer premises visit is required to fit a new NTU and to isolate internal wiring. This visit is essential to ensure that the customer receives the maximum functionality and the most reliable service from the eircom NGA network. As discussed in the response to Q.33 above, eircom believes the structure of wholesale connection and migration charges should encourage efficiency (and total cost minimisation) by all parties cooperating in delivering the NGA service to the customer.

There is a strong argument for a single universal migration charge for legacy service transfers between wholesale access services across the WPNIA and WBA markets. It is also important that such a charge be raised in the same conditions for each type of migration. The current charge of €15 applies to single migrations that can occur any time after the eircom and OAO investments in the service platforms that support the access service. eircom already offers a discount from

this charge for bulk migration projects from Bitstream to LLU. eircom will continue to offer discounts from the standard migration charge where early or bulk migrations result in cost savings.

eircom proposes that the single NGA universal migration charge will apply for the VUA and Bitstream services where eircom staff are 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 €~~8~~ per NGA line when delivered at NGA cut over.

eircom finds that all migration charges should be set on the basis of the six principles listed above and that the consistent application of those principles will lead to Option 3 - separate connection and migration fees for WBA and WPNIA services as between legacy (ADSL Bitstream and LLU) on the one hand, and NGA (NGA Bitstream Plus and VUA) on the other.

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. As ComReg put it in paragraph 11.379, this leads to economically inefficient pricing signals. As described, Option 1 also seems to result in geographically different prices for legacy migrations, and may require complex interim charges with retrospective increases where volume targets are not achieved. We, therefore, do not support option 1.

Option 2 proposes that the migration charge would depend on the stage or rung of the ladder of investment. ComReg seems to reject this because different charges (dependent on the actual work involved) may disincentivise investment. As discussed above, we consider that reflecting the actual costs are unlikely to deter migration. However, we do not consider that Option 2 has been properly presented.

If it means that LLU operators get a lower price when moving to NGA VUA than a bitstream operator moving to NGA bitstream (even where the latter has much lower costs), it does not seem to be economically efficient. We also foresee problems with Option 2 where end-users move on or off the eircom wholesale platform (e.g. to cable or wireless networks). The issue of whether number (and service) portability would be subsidised by on-platform activity, or vice versa, has not been properly addressed. On balance, we do not consider Option 2 practicable or worth further development.

In conclusion, we propose a variant of option 3 as set out above.



**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.**

eircom agrees that the costs tabulated at Figure 11 are the appropriate retail costs for a Broadband Internet Service Provider (ISP) purchasing NGA Bitstream from eircom and competing in the downstream market for super high speed Internet access.

If the ISP also wishes to sell their own VoIP and IPTV services using eircom NGA Bitstream as the delivery mechanism, there are additional retail costs that must be considered. These might include an ATA and/or Gateway for VoIP, and the costs of a multicast capability, content costs, and set-top box costs for IPTV.

**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.**

The EEO approach should be applied to *all* retail costs in the context of NGA when populating a test between eircom retail NGA services and the eircom VUA service.

The eircom NGA investment is primarily in response to the services offered to consumers by UPC on their cable network after recent upgrades. eircom retail customers, and the customers of re-sellers of eircom wholesale broadband services, have been moving their services to UPC to avail of higher broadband speeds at broadly comparable prices. When eircom deploys the NGA network in the areas covered by UPC, OAO's are expected to move their wholesale services to NGA provision to increase the broadband speeds available to the customers and to protect against further losses to UPC. At this point retail broadband competition in those areas where both UPC has deployed DOCSIS 3.0 and eircom has deployed VDSL with vectoring will be largely between eircom, UPC, and VUA based OAO's.

We also note that many respondents<sup>19</sup> to the bundling consultation 11/72 commented on the issue of SEO versus EEO. The argument made in favour of SEO was that eircom enjoys economies of scale and scope regarding its ownership of the network layer. Most respondents 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

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<sup>19</sup> ComReg document 11/63a contains responses to 11/72.

operators with customers on many platforms and in many countries can enjoy scale and scope economies exceeding those of eircom.

**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.**

All operators that market services in more than one market can leverage retail costs from one market to another, unless constrained from doing so by regulation. This is particularly the case where the operator developed an international brand that is advertised heavily in many media across national boundaries. For example, Vodafone benefits very substantially from leakage of UK advertising on television channels available on all standard TV packages into the Irish market. Potential entrant Sky also has an existing presence in the Irish market. Although not active in the UK, UPC also benefits from its position as a major multinational brand. A high proportion of this advertising is around brand features rather than specific customer propositions (e.g. Vodafone's Yoda<sup>20</sup> campaign) and as such improves the position of the OAO's retail propositions in Ireland. Even the message that these providers offer bundles extending beyond their core market - for example, television for UPC and mobile telephony for Vodafone – is one that is common to the Irish and UK media.

In addition to brand design and advertising costs, Sky and UPC have multinational content deals which can extend into Ireland, and can be leveraged into the telephony and broadband markets.

As for impacts on smaller niche OAOs selling NGA services, the level of eircom advertising is largely irrelevant compared with (for example) UPC and Vodafone media spend. This is particularly the case as customers that have decided to move to a new broadband (or fixed telephony) service are then at the point of deciding between a range of service providers other than eircom. We note that Magnet, Smart and Digiweb offer products that are available in specific locations, and as such, the national retail costs incurred by a notional SEO are irrelevant.

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<sup>20</sup> <http://webcache.googleusercontent.com/search?q=cache:rTQdDnASmrkJ:www.mirror.co.uk/news/technology-science/technology/yoda-stars-in-new-vodafone-campaign-173252+vodafone+Yoda&cd=1&hl=en&ct=clnk>

**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.**

There is no reason why any OAO should incur higher help desk costs in selling NGA services than the eircom level modelled at EEO. This is the case for several reasons. The first is the increased functionality of the eircom Unified Gateway used to support wholesale NGA services. The second is minimal scale effects for help desks after a moderate size of installed base. And all OAOs have the opportunity to outsource helpdesks to centres outside Ireland where lower costs per service problem are available than eircom can achieve in Ireland.

The use of the Unified Gateway (UG) for all NGA ordering and repair processes will provide eircom Retail and OAOs with equivalence in delivering NGA services. For this reason, eircom finds that an EEO cost standard is appropriate for help desk costs as there is no structural reason why the help desk costs of any efficient OAO should be higher than eircom costs.

**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.**

The level of help desk cost during migration depends on the migration model used by the service provider. There are two broad model types – the post-out model, and truck-roll model.

The first model is appropriate for less complex services. In the context of the NGA, this model might be deployed where the migration is simply from legacy broadband to NGA broadband.

The features are:

1. The OAO posts out the NGA modem/router with a note explaining how and when to install the new CPE.
2. The eircom technician connects the customer pair to the NGA port at the street cabinet, and fits the NTU at the customer premises.
3. The customer swaps in the new CPE and rings the OAO help desk to arrange for service activation.

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. The call may take from 10 minutes for a smooth migration to 30 minutes where the customer has to be talked through each stage,

The level of help desk costs currently included in the DCF model for eircom is broadly consistent with eircom recent experience of retail repair costs and will serve as a sensible basis for modelling customer care for NGA after installation.

**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.**

eircom has recently presented a detailed study to ComReg of IP costs based on a project carried out within eircom to determine the most efficient mix of transit and peering consistent with recent changes in Internet usage. The cost levels identified in this study can be achieved by any ISP of reasonable scale in Ireland. It is likely that several large customers for wholesale NGA services actually achieve lower unit cost for Internet connectivity due to their international footprint. The eircom modelled cost should be the ceiling used in any margin squeeze test.

Both Vodafone and UPC already have a presence in most of the countries where the most efficient mix of transit and peering is found for an operator providing Internet access to Irish customers. For this reason they are in a position, with reasonable efficiency assumptions, to realise lower unit costs for IP connectivity than can be achieved by eircom.

In summary eircom agrees that the unit costs calculated by eircom for the more efficient mix of transit and peering now being implemented after a recent review should form the basis for the IP connectivity retail cost treatment in the margin test proposed for NGA retail services.

**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.**

ComReg rightly finds that the modem delivery service model for NGA has not been agreed with industry and the nature of this model will determine the appropriate level of retail cost. In all cases connection of an NGA service will require a new modem that is somewhat more costly than the current generation of ADSL 2+ compatible modem. The most efficient delivery of the new service would entail a single visit to site to fit a new NTU and deliver the NGA modem –

either by an eircom technician, or by an OAO technician. To a certain extent the asset life for the modem depends on the industry agreed model for customer premises visits and on the process for recommending CPE that will support vectoring. The other factor that will determine modem lives is the effect on customer churn of moving from dual-play (telephony and broadband) to multi-play (broadband, IPTV, fixed telephony, and mobile telephony). Indications from other markets are that 5 years is a reasonable time to recover NGA modem costs.





If the former option (eircom wholesale visit to premises) is chosen, the retail cost of the modem will be limited to purchase price and bulk delivery – but the NGA access service rental charge will include recovery of the cost of the technician visit. If the latter option (OAO technician delivers and installs modem) is chosen the “retail” cost to the OAO of despatching the technician to site must be added to the modem cost. However, under this option, the monthly wholesale rental would be lower due to eircom Wholesale avoiding the cost of the customer site visit.

Overall, it is important that the various cost stacks do not result in the inefficient calculation of costs, or costs being double counted.

As suggested above in the response to Q33, those elements of activity that result in an “asset” that may serve the end-user through several different providers (e.g. a basic NTU) could be recovered within rental assuming a long lifetime. Activity that serves a shorter term purpose, and would have to be repeated if the end-user changes operator or service, should be recovered over a shorter time. To the extent that a technician visit results in provision of an NTU that may survive several changes of operator, 20 years would be a reasonable lifetime.

**Q. 42 What do you consider is a reasonable estimate of the likely installation costs involved with NGA services? Please provide the details as part of your response.**

eircom has recently sought quotations from external suppliers for the fitting and enabling of a range of NGA services at customer premises. The table below shows the range of quotations received when outliers had been removed. The reason the outliers have been removed is that a number of quoted rates indicated that the supplier did not understand the nature of service to be delivered. The rates are for delivery during normal working hours.

These costs do not include the costs of the CPE – they are limited to the installation service provided by a supplier using NTUs, modems, routers, and set boxes supplied to them by the customer. eircom’s understanding is that the IPTV installation is for a single room but the wide range prices quoted indicate that some suppliers may have considered the additional costs of a second room in some cases.

**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.**

Multicast is essentially a method for sharing wholesale capacity. Rather than having multiple connections, one for each customer, there is only one connection for each channel or programme.

The retail costs associated with multicast wholesale services are therefore the retailing costs of TV offerings –content, set-top boxes, and ancillary services.

However, as the retail and wholesale layers interact, it is not possible to estimate the retail costs for the multicast service that will support an IPTV service until eircom has published the detailed pricing for the multicast service to be implemented on the eircom NGN. eircom will shortly make a detailed submission to ComReg on the pricing for the multicast service offered to Bitstream Plus customers. On the basis of this submission ComReg will be in a position to assess the maximum cost to OAOs of multicast before the end of the consultation process.

**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.**

eircom does not accept that it is in any way appropriate to have margin squeeze tests between Retail and End-to-End/White Label Broadband - both products being unregulated - or between NGA Bitstream and end-to-end/White Label Next Generation Bitstream. eircom does not accept that this is a margin squeeze test that ComReg may lawfully impose on eircom.

In terms of the costs that are relevant to end-to-end White Label Next Generation Broadband, while indeed there will be costs “on top of NGA bitstream”, it is essentially that any test recognises that end-to-end services are bespoke, and can often be provided at very low incremental cost. 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.

In this regard, an averaged cost stack such as that proposed by ComReg is entirely inadequate because it does not reveal the actual incremental costs faced by eircom or its competitors bidding for a specific end-to-end requirement. Its effect can only be to dampen competition, to the detriment of retail competition.

Managed wholesale NGA broadband services differ from such services delivered over exchange launched ADSL platforms. In the latter case there are several suppliers using eircom Bitstream and their own LLU investments. For the Bitstream-only users, it is unlikely that there will be any alternative to eircom VUA as an input for some time and any price control for end-to-end NGA Bitstream must properly reflect this.

ComReg proposes to set a floor based on the average cost to an OAO of providing their own bitstream service by buying in eircom regulated components – VUA ports on WSEA backhaul. However, it is likely the OAO buying VUA has built out their own backhaul network to avail of VUA (otherwise they would use bitstream). 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. Backhaul networks for services like LLU and VUA are generally over-provisioned so as to avoid any further engineering effort to cater for even quite substantial growth. Where the OAO has built a fibre link to the eircom exchange, the cost is very largely sunk, and where they have bought transmission capacity from a third party the cost is largely fixed. It is well established that with these cost structures the OAO will set prices above incremental cost and below average total cost for substantial tranches of additional (wholesale) business. As in turn backhaul and Internet costs are driven primarily by the level of busy hour traffic, it is possible that the incremental costs associated with providing a White Label service to an operator with a very different user profile than those already on the network are very low. In these circumstances, the operator offering White Label might simply seek a fixed network charge, or a fixed price per user to reflect this. It is essential that any test provides for this possibility so that it does not result in effect in preventing eircom from offering White Label services, to the detriment of competition at the retail level. The reasons for this are explained in further detail below.

For any Internet Service Provider (ISP) serving a mix of residential and business customers this busy hour currently occurs close to 22:00 and is driven almost exclusively by the level of residential Internet use. This is the case for a combination of at least three reasons:

1. The larger number of residential Internet users: More than 80% of eircom Broadband users are residential

2. The relative increase in the capacity of residential broadband services when compared with the increase in business Broadband services. The ratio of downstream speeds provided for business services to the speeds provided for residential services has declined from more than 4 to 1 to less than 2 to 1.
3. Increasing numbers of devices being connected to each residential Broadband service. Broadband services to homes initially connected a single PC to the modem using a copper cable. Now all new modems support WiFi and each service supports several laptops as well as games consoles, internet radios and smart phones. This effect is less pronounced for most business broadband services.

The relevance of this factor to end-to-end NGA Bitstream pricing is that an end-to-end NGA Bitstream service that will be used to serve business customers causes the OAO a lower level of incremental cost to deliver than does a similar service that will be used to serve residential customers. So, for instance, if a mobile network operator tenders for a wholesale managed fixed broadband service that it intends to bundle with a business mobile voice package then a rational OAO will offer prices below those they would offer for the equivalent service targeting residential customers. This is the case because:

- The additional end users connected if they win the end-to-end NGA Bitstream pricing tender will give rise to very little additional busy hour Internet traffic – as their demand is concentrated at times of low network usage
- The additional end users will also drive very little demand for additional backhaul capacity as most of the additional traffic is carried off-peak

If the OAO is using eircom NGA Bitstream to serve the tender the additional end users will cause a very small increase in the billed amount for end-to-end NGA Bitstream traffic because that service is charged at the 95<sup>th</sup> percentile per month (i.e. the traffic charge reflects busy hour traffic and there is no incremental charge for increases in off-peak usage). ComReg proposes that the IP connectivity costs are based on forward looking throughput, but that the cost is subject to change as user profiles evolve. A specific end-to-end customer might wish to provide business services, full IPTV, or broadband internet to back up a satellite TV service. The operator might seek a fixed network charge, or a fixed price per user, in effect requiring the provider to share the risks, upside and downside. Any test should allow such pricing.

**Q45: there is no Q45?**



**Q. 46 Do you agree with the proposed approach for determining the cost stack for NGA Bitstream? Please provide reasons for your response.**

ComReg proposes to test for margin squeeze between the bitstream price and the VUA price. eircom agrees with the elements identified as proper to the cost stack for NGA Bitstream to the extent that the elements added to the VUA service offered by eircom include all those that an OAO must add to provide their own NGA Bitstream service.

However it is inappropriate for ComReg to use such a cost stack in a simplistic way to regulate the price level for eircom NGA Bitstream. In the first instance this is the case because the VUA purchaser has a number of options for building or buying the additional elements to construct the Bitstream service – each of which will deliver a different cost structure. In 11.448, ComReg suggests that a VUA user must always rent a WEIL from every MDF. This is not correct, and indeed contradicts ComReg’s reference at 11.451 that VUA involves less use of eircom’s network, consistent with ComReg’s objective of encouraging competitive infrastructure investment<sup>21</sup>.

We therefore have 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 itself can achieve lower costs than the model suggests because it can aggregate demand (and EEO vs. SEO could and should be applied). Therefore, the proposed construct simply serves to make bitstream and retail prices higher than they need to be to cover either eircom’s costs, or its competitor’s costs.

We understand that ComReg does not mean that the bitstream cost is a fixed money amount for all time, and in fact expect the money amount to be calculated using a two-part approach consistent with that in the WBA floor model (12/32) and actual traffic levels updated from time to time. However, this is not at all clear from the consultation or the draft decision. Indeed, it is possible to interpret that proposal as a requirement to have a single, all-inclusive price for bitstream, whereas 12/32 suggest a three part price (comprising the NGA VUA “port”, and fixed and variable elements of transport costs).

For this reason the level of the “cost stack” for NGA Bitstream will depend on the level of traffic carried by that service, and depending on the levels of traffic anticipated at each VUA site the

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<sup>21</sup> In 11.451, ComReg claims it’s objective of encouraging infrastructure investment requires investment in VUA is promoted as there is less use of eircom’s own network with VUA. ComReg’s role is to provide a level playing field for competition to develop, and not to create an environment which dooms eircom to fail by disadvantaging it unreasonably vis a vis both platform and intra-modal competitors. eircom does not object to reasonable safeguards against anticompetitive margin squeeze, but there is no justification for ComReg to engage in a highly questionable form of industrial planning by skewing prices in order to push OAOs towards one wholesale product over another. Particularly given financial and economic conditions in Ireland today and for the relevant review period, there may be very compelling economic reasons to rely on NGA Bitstream over other options.

OAO may select different backhaul options at each site to build their own NGA Bitstream service.

We have a particular concern that ComReg intends to impose its view of average throughput (being between 140kbps and 230kbps over 2013-2015) on every bitstream seeker. If this is the case, it would be of benefit to a bitstream user with excessive throughput (perhaps because it has unlimited retail offers at unsustainably low prices) and penalises those operators which manage their demand (perhaps by having tiers of usage, with different download caps at different prices). Such a control would eliminate potential competitive factors at the retail level, and expose bitstream users to price changes driven primarily by regulation-induced actions of the market on average, rather than by their own actions.

We consider it is inappropriate, unreasonable and disproportionate for ComReg to construct a rigid cost stack comprising costs which neither eircom or its actual competitors face, and then use this as the basis of ex ante regulation of NGA Bitstream price levels.

**Q. 47 What are your views regarding the parameters for determining the relevant costs for a Multicast service. Please provide reasons for your response.**

ComReg specifically asks for industry views on a range of parameters which they consider are required to inform the cost model for multicast services. ComReg ask for views on

- a) The number of standard definition channels and high definitions channels at the retail level;
- b) The bandwidth required in Mbps for a standard definition channel;
- c) The bandwidth required in Mbps for a high definition channel;
- d) 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).

We consider that this approach of mechanically calculating a bandwidth required for multicast, and adding it to the bandwidth required for internet, is not appropriate or reasonable. Indeed, it could lead to outcomes where backhaul cost is divided 50:50 and generate endless arguments about “line-sharing” and whether TV or internet is the base product.

We do not consider that eircom has enough experience to provide reliable long term figures for (a) or (d) as the retail market is continually evolving. Similarly, anyone in the industry could give a view about (b) and (c) but coding techniques may change these numbers over time, and indeed the very definitions (sic) of high definition varies over time. In 1936, 405-line was high definition compared to the mechanical 240 line systems previously in use. Currently 720p, 1080p and 1080i systems are regarded as high definition, but even these three systems may require different bandwidth depending on the content. Fast-moving action films or sport-close-ups may require higher bandwidth than talk-shows or educational material. Various new formats (currently labelled Ultra HDTV or Super-Hi-vision are in development and may be trialled at the 2012 Olympics, and has been in experimental use by the BBC since September 29<sup>th</sup> 2010. Digital cinema formats 2k and 4k (roughly 4 times the bandwidth for 1080p) may be adapted for broadcast earlier, and Apple presumably expects to deliver content which can utilise the 2880x1800 pixel “retina” screens in its latest MacBook-Pro.

We therefore propose a different approach. 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. It is worth noting 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, even substantial capacity increases add little extra cost.

The eircom price will therefore 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. However, it is possible that at some point, “TV” requirements may come to dominate bandwidth use in the same way that high-speed internet now dominates voice.

ComReg should be very wary of setting up a regulatory regime that locks in today’s technologies and prevents a smooth transition to a Video centric world, if such should come to pass.

**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.**

eircom broadly agrees with the approach to determining the cost stack for VUA on the basis that only one operator can economically unbundle any cabinet – and that a general requirement to

provide wholesale access to the resulting bottleneck control over NGA services will lead to all operators achieving similar fills. However, eircom's position is that such a modelled cost stack should not have any role in the ex ante regulation of price for wholesale NGA services 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.

We also note that specification of a cost model at this early stage can act as a major deterrent to investment. On the one hand, setting a maximum price limits the available return, while setting a minimum price may disable business plans if there is a view that (wholesale and retail) users will not accept the prices proposed compared to those being charged for an alternative technology or platform.

In particular, if ComReg limit the price for VUA by calculating AVERAGE costs over some assumed NGA footprint, it will ensure that much of that footprint is never equipped. Consider the simplistic case of two cabinets, where the cost of enabling one is €10 per line and the other is €20 per line. If the regulated price is €15, then only the first cabinet will be enabled. eircom has previously explained its approach to economic analysis of the viability of enabling DSL in its submissions to 10/56 and 10/108, and similar concerns arise here.

However, if ComReg persist in imposing a cost model, eircom must point out that it has multiple concerns about the numbers currently proposed.

Already eircom's early experience in building the initial NGA cabinets suggests that costs to pass 1 million premises may be of the order of ~~20%~~ than originally forecast. Electronics cost are evolving, and new procedures with local authorities and ESB have resulted in ~~20%~~ compared to the original pilot sites. We note however that applying these savings to the ComReg model does not result in a ~~20%~~ reduction in the modelled cost.

eircom could react to these cost saving by simply investing less for the initially planned coverage, or investing the original amount over a much larger footprint. The latter approach is credible because cabinets which were unviable with earlier assumptions may become viable if the costs are significantly lower. Lower unit costs may lead to a virtuous circle of lower prices, higher take-up, and even lower unit costs. Premature regulatory intervention has the potential to disrupt this process and result in less coverage, higher unit costs, and failure to progress towards the digital agenda.

ComReg's current cost stack suggests a cost of €8.14 per user per month. However, we consider there may be a number of cases of over-estimation and double counting in the cost model. We attach a confidential Annex 3 that details our alternative views.

In response to the discussion at 11.472 eircom can confirm that the multicast service provided to VUA customers is very different to the multicast service provided to NGA Bitstream Plus

customers. This is principally the case because the VUA service only crosses the eircom Aggregation Node at the NGA exchange and the NGA (FTTC and FTTH) infrastructure. The capital and operating costs of this infrastructure are largely recovered from VUA port rental revenues and the VUA multicast price structure will reflect this. The Bitstream Plus Multicast service utilises router and transmission resources across the eircom core and the prices that eircom proposes for this service will ensure an appropriate contribution to the costs of those resources.

At paragraph 11.474 we note that for modelling purposes ComReg and TERA have used those existing cabinets that have at least 50 working lines and acknowledge that this may be adjusted as the NGA rolls out. This willingness to adjust the model is correct as eircom has already found that the most efficient approach is often to introduce new cabinets where this reduces total deployment costs.

At paragraph 11.486 ComReg discusses the relevance of the 95:5 weighting applied to the costs of lines connected to urban and rural exchanges in setting the ULMP price. This approach was not used in setting the price for the SLU price that is the appropriate input for NGA VUA. So the weighting should not be applied to VUA. The decision to set SLU without applying the weighting was correct in that SLU is only meaningful for lines that are fed through copper cross-connect cabinets and this type of distribution is only implemented in urban areas. As the current and planned eircom NGA deployment will be almost exclusively FTTC it is only likely to reach the same urban areas. For all these reasons the issue of 95:5 weighting should be put aside for NGA.

In the discussion on faults from paragraph 11.488, ComReg refers to LLU faults meaning the observed level of ULMP faults. Eircom agrees that this level is appropriate to use in cost stacks at launch, however, there are a number of reasons why a lower level of faults may be appropriate in the future. The LLU input to NGA is SLU and as this uses less network elements than ULMP the fault rate may be lower. Exchange launched ADSL services have a much longer range than cabinet launched VDSL services used by SLU and NGA VUA are likely to be much shorter on average than those used by ULMP – and this may lead to lower fault rates for NGA services. After deployment reviews of the cost model should use actual SLU/NGA fault data.

At paragraph 11.494, ComReg refers to DSLAM cost information supplied by eircom. An internal review of the deployment costs to date shows significant savings in DSLAM costs and the attached confidential Annex 3 shows the impact of this saving on the NGA cost stacks.

From paragraph 11.502, ComReg discusses the modelling treatment of aggregation nodes and optical distribution frames at eircom exchanges. This discussion mentions the ESS6 node and eircom did indicate that our intention was to deploy a dedicated ESS6 at each NGA exchange. However a different node has been deployed in practice, and in a minority of sites eircom has found that the existing NGA aggregation node had sufficient spare capacity to add the NGA demands. Again the effects of these cost reductions have been included the confidential annex.

At paragraph 11.509 ComReg acknowledges that the current cost stack is based on 100% of migration costs being recovered from rental charges. In the response to Q.34 above eircom makes clear our intention to recover some of these costs from charges raised at the time of migration. Once again this effect is reflected in the revised cost stack included in the confidential Annex 3.

We note that the ComReg/TERA model is applied to a stylized copper access model, and not the actual eircom network. Therefore, where the model selects cabinet of a certain size, these are notional cabinets<sup>22</sup>, not grounded in reality. The actual rollout may find some larger cabinets uneconomic (because they are isolated and need expensive backhaul) whereas some smaller sites may be served (because they are en-route between larger cabinets and/or exchanges/MDFs, and so have no incremental backhaul costs at all). The model therefore delivers a different number of DSLAMs and a different fill rate, and a different mix of FTTC and FTTH.

We agree that the cost of VUA should not be affected by the presence or absence of multicast (as per proposal at 11.472).

Overall, we accept the general approach to deriving the relevant costs, but we consider that some elements are double counted, and some costs are over-estimated. Overall, we consider that attempts to calculate accurate numbers before a substantial portion of the network is built are premature.

**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.**

Sections 11.486 and 11.487 discuss the probability weighting in decision 01/10 and argue for consistency. ComReg's proposed position is not clear, but we assume that ComReg is actually proposing that the 95% weighting approach should be discontinued.

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<sup>22</sup> The notional cabinets do not have the same location as actual cabinets in the eircom network, nor do they serve the same premises. The model has the same number of cabinets as the eircom network, but allocates cabinets and customers differently across each housing area, based on every cabinet in a housing area having the same number of premises served. The result is that MDFs which in reality serve a large number of small cabinets are assumed to have far more lines than really exist. Those MDFs with a small number of large cabinets, or a high percentage of directly fed premise (e.g. large office complexes or Multi-Dwelling units) are assumed to have fewer customers than really exist. The model therefore overestimates the number of directly fed lines (too high FTTH percentage), and may overestimate the average cost per cabinet (too high FTTC cost).

In setting the LLU price, what ComReg actually did was to calculate costs for larger exchanges (over 2,500 lines), and for smaller exchanges, based on eircom's obligation to serve every premises in the state. ComReg then assumed that the National Average Price for LLU should not be based on national average cost of copper pairs, but rather should anticipate that the actual use of LLU would be such that 95% of LLU lines would be in larger exchanges, and 5% would be in smaller exchanges. The huge discrepancy in costs between large urban sites and smaller rural exchanges can be estimated by considering that if the LLU price were 100% larger and 0% smaller, the price would be €0.80 lower<sup>23</sup>.

A further adjustment was made to give a low weighting to lines at larger sites, which are longer than 5km, on the basis that these lines could not support 1Mb broadband and so would not be unbundled.

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, 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. This might be the case. If, for example, the backhaul costs for an operator using VUA vary by site, but the bitstream price levied by eircom is "national" and the same everywhere NGA bitstream is available. In addition, at some MDFs, eircom's WEIL might be more expensive than at others. Some sites might have many competing alternative backhaul infrastructures, whereas in others the eircom option might be the only choice. So, it is possible that eircom might offer VUA in a site in the far west (e.g. Clifden) but no OAO would buy VUA at that site – bitstream would always be cheaper.

So it is possible that some higher cost VUA sites might be excluded from a cost oriented VUA price, resulting in a lower unit cost. In the context of the proposed decision, this would reduce the possibility of a given retail price resulting in SLU or LLU reductions.

While this treatment of VUA might be reasonable in a retail-minus environment, if it were transposed later into a cost-plus control, it would preclude proper cost recovery at those sites.

We assume the fact that ComReg and their advisors TERA have not developed the argumentation and calculations indicate that ComReg does not favour any probability adjustment to the VUA cost model. However, we consider that it is inappropriate and unreasonable to simply rule out any use of a probability approach which has ample regulatory precedent without fully understanding the implications. This work has not been done as yet and so reinforces our argument 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.

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We come now to the proposed change to the LLU price which would arise if the Copper Access Model were amended to exclude the 95:5 for LLU also. This proposal is ambiguous, and “exclude the 95:5” could be interpreted in either of two ways:

- (a) The clearest interpretation is that NO probability weighting should be applied: the national cost should be used. This would increase the LLU price to approximately €~~3~~ per month, and increases in WLR and retail services would be required. We do not consider that this is ComReg’s proposal, but for the record we would vigorously oppose this approach.
- (b) ComReg is actually proposing not to exclude the concept of probability, but to move instead to a 100%/0% weighting. In this context, it is also unclear whether the 100% weighting would apply to sites actually unbundled, or to the potentially economic sites identified in, for example, the WBA floor model. This would deliver a reduction in the LLU price, but potentially has implication for availability and price of LLU elsewhere, and for WLR and retail services. A proper Regulatory Impact Assessment of this proposal has not been made and is essential before proceeding.

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, we agree that a consistent approach is required, but we caution against and would oppose any piecemeal changes without a full and proper Regulatory Impact Assessment.

**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.**

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). As discussed above the OAO taking the VUA service has already built a backhaul network to avail of VUA at the eircom NGA exchange site. 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.

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.

At paragraph 11.472, ComReg considers that the cost of VUA at any site may be the same whether or not multicast is offered at that site. eircom can confirm 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 discussed above.

**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.**

In paragraphs 11.488 to 11.490 ComReg seems to suggest that there need to be consistency between the treatment of fault charges for LLU and VUA. This is not always the case. In fact, there are many cases where price structures differ at retail and various wholesale layers for good reasons.

eircom 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<sup>24</sup> by OAOs connecting their broadband electronics to eircom copper loops. In the case of VUA, eircom 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.

As discussed above in response to Question 33, there are six well established principles for developing the structure and level of wholesale prices required by regulation to be cost oriented. These principles have been used when eircom LLU services were first established to separate line test and fault clearance charges from line rental and the same principles hold good today. Application of these principles to VUA charging does not indicate that the same benefits would arise in setting a separate charge for clearing VUA faults – as they did not indicate any benefit in setting a separate charge for clearing Bitstream faults.

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<sup>24</sup> For example, if faults are not charged separately, OAOs may have an incentive to pass all fault reports to eircom first, leaving it to eircom to prove faults back into the OAOs own equipment. The current price structure encourages OAOs to prove their own equipment first, and reinforces to eircom staff that the fault is very likely to be on the eircom side.

It is also essential to remember that the setting of the cost oriented price level for ULMP rental included a step where the operating costs to be recovered from that charge were reduced by the revenues available from the separate fault charging. Removing the separate fault charge will entail reversing that step in the rental calculation – with a consequent price increase.

We note ComReg’s proposal to use the LFI which applied in the LLU decision D01/10 to the NGA cost model, but this may be contradicted by further statements requiring use of actual LFI faced by Operators for LLU. LFI differs by MDF and the actual experience of LLU operators, the LLU model and the VUA/NGA footprint might have different figures.

Overall, we do not currently believe the LLU price should be revised to include unlimited fault clearance.

**Q. 52 Do you agree with the proposed outputs from the NGA Margin Squeeze Model? Please provide reasons for your response.**

There are a number of the outputs that need adjustment to reflect the cost drivers more completely but the general form of the outputs is appropriate. However as mentioned in the response to a number of questions above eircom finds that the appropriate form of price control for the wholesale services arising from our 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. These should be replaced by a single test between eircom retail services and the core wholesale input for NGA - namely the VUA service.

We note in particular that while SLU/LLU prices are ceilings, eircom is not free to price below these maximum levels, contrary to previous suggestions made by many parties. ComReg state in 11.515 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. “

We also note that ComReg approval is required in advance of any such price change.

We also note that the presentation in 11.517 and figure 16 confirms that the control is in essence a cost plus control setting price floors, even though it is packaged as a “retail margin squeeze” approach that is somehow related to a retail minus approach.

**Q. 53 Do you agree that the proposed price control period should be for at least three years in the context of NGA services in the WPNIA and WBA markets? Please provide reasons for your response.**

eircom notes that under the regulatory framework, no obligation can be imposed for more than three year periods unless the European Commission agrees to any reasoned extension of the duration. In this regard, eircom notes that there have been significant changes in the market for broadband access in Ireland since ComReg's last market review and the obligations proposed by ComReg do not reflect, in eircom's view, the level of competition that eircom already meets .

eircom in this regard is of the view that the price controls proposed by ComReg are far too complex , inflexible and prescriptive and are unsustainable over a three-year period. In particular, it is far from clear that an appropriate “ladder of opportunity” (if one exists at all) for NGA will comprise all the layers set out by ComReg, or will warrant or be capable of sustaining the multiple additive margins involved.

A more streamlined version of the proposed price control could give confidence and certainty over a three year horizon, but even here it would be prudent to provide for periodic refinement within a given structure, to allow for necessary corrections in the light of experience. This is particularly important for three distinct but interrelated reasons: (1) the lack of experience with the new NGA technology and services being deployed; (2) the unpredictability of bandwidth-hungry applications coming on line and consumer willingness to pay; and (3) economic and financial conditions in Ireland.

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. This more flexible, less intrusive regulation could be delivered in the form of published guidance on what would constitute anticompetitive pricing in the NGA context. 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.

**Q. 54 Do you believe that the draft text of the proposed Decision Instrument is from a legal, technical and practical perspective, sufficiently detailed, clear and precise with regards to the specifics proposed? Please explain your response and provide details of any specific amendments you believe are required.**

As discussed in the Key Principles Section of this response and our answers to the individual consultation questions, the proposed NGA remedies that are set out in the Consultation Document reflect a heavy handed and disproportionate approach to the regulation of NGA in many critical respects. The proposals are materially flawed as a matter of law and of sound regulatory practice. Many raise serious technical, commercial and practical implementation concerns and are wholly disproportionate. If adopted as proposed, the NGA remedies will have the effect of undermining the Government's Digital Agenda objectives for Ireland and distorting platform competition in the provision of superfast broadband services. The Draft Instrument should accordingly be amended to provide for an appropriate level of regulation. eircom in this regard also refer to its response to specific questions where suggestions for amendments have been made, where appropriate.

**Q. 55 Do you believe that the draft text of the proposed Decision Instrument is from a legal, technical and practical perspective, sufficiently detailed, clear and precise with regards to the specifics proposed? Please explain your response and provide details of any specific amendments you believe are required.**

As discussed in the Key Principles Section of this response and our answers to the individual consultation questions, the proposed NGA remedies that are set out in the Consultation Document reflect a heavy handed and disproportionate approach to the regulation of NGA in many critical respects. The proposals are materially flawed as a matter of law and of sound regulatory practice. Many raise serious technical, commercial and practical implementation concerns and are wholly disproportionate. If adopted as proposed, the NGA remedies will have the effect of undermining the Government's Digital Agenda objectives for Ireland and distorting platform competition in the provision of superfast broadband services. The Draft Instrument should accordingly be amended to provide for an appropriate level of regulation. eircom in this regard also refer to its response to specific questions where suggestions for amendments have been made, where appropriate.

## Review of Regulatory Impact Analysis (RIA)

### Introduction and Background

ComReg is obliged to prepare a RIA as a result of a Policy Direction issued in 2003 under Section 13 of the Communication Regulation Act, 2002.

ComReg's guidelines<sup>25</sup> on RIAs establish clear guiding principles. RIAs will:

- (be) in accordance with European and international best practice (para 1.1)
- identify opportunities to withdraw from or reduce regulatory intervention (para 1.2)
- by establishing all possible options and selecting that which is most appropriate (para 1.2)
- determine the impact of any proposed new regulatory measure....on all stakeholders (para 1.2)
- by identifying the full range of regulatory options and assessing the potential effect of each option .....establish whether regulation is in fact necessary, and if it is, identify and impose the most appropriate and least burdensome measure (para 1.2)
- establish whether regulation is actually necessary (para 1.3)
- identify any positive or negative effects which might result from a regulatory measure (para 1.3)
- establish whether there is a net benefit (para 1.3)
- identify and assess any alternative regulatory measures (para 1.3)

ComReg's RIA for the NGA Consultation (Chapter 4) is a substantial text, but is not always consistent with ComReg's own guidelines, or intellectually robust in its analysis. In view of the substantial increase in the level of regulation implied by many of the NGA remedies proposed in the Consultation Document, a well reasoned RIA is indispensable. The RIA accompanying the draft decisions is deficient in material respects and does not justify the increased regulatory obligations proposed by the Consultation Document.

Each section of the RIA is considered in turn below.

### Purpose of a RIA and Proportionality of Access

**Paras 14.1 – 14.3** set out the nature and objectives of an RIA, confirming the continuing relevance of the Guidelines cited above. They reflect the objective of ensuring measures are appropriate, proportionate and justified, but curiously stress the importance of proportionality

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<sup>25</sup> Guidelines on ComReg's Approach to Regulatory Impact Assessment, 07/56a, August 2007

in relation to the burden a RIA represents *on ComReg* (para 14.3) rather than the burden imposed on eircom or the industry.

**Paras 14.4 – 14.24** deal with the basis for concluding that access obligations should be imposed. It states that SMP exists in the WPNIA and WBA markets and that the NGA investment establishes new infrastructure within these markets. Accordingly new access services will be required.

eircom does not disagree that wholesale NGA services should be provided. The consultation was published well after an NGA pilot trial with wholesale customers was established, and well after an industry forum had been established and begun work on product definitions. These developments are particularly relevant to an analysis of whether regulation is required. They strongly suggest that appropriate services are being introduced irrespective of regulation. ComReg's analysis ignores these developments and concentrates instead on extrapolating outdated experiences of the early stages of WPNIA and WBA. This is indicative of an effort not to "identify opportunities to withdraw or reduce regulation" but rather to stretch the evidence required to continue (and, indeed, increase) regulation.

Para 14.12 concludes that access to passive infrastructure is necessary because "duplication of the access network in an NGA context is uneconomical". There is already an NGA access network in the NFA footprint areas, operated by UPC. eircom's investment is being made in a second and competing network platform. It appears that ComReg has not taken this critical factor into account when considering what type of access should be required.

Throughout this section of the RIA (and the remainder) the "proportionality" of a particular remedy is asserted rather than assessed. No consideration of the cost of the obligations being proposed is provided. Benefits are expressed in qualitative terms and by reference to European guidelines, without reference to the particular circumstances of Ireland. There is no quantification of benefits and therefore no demonstration of proportionality in relation to costs.

Similarly, the requirement to show that proposals are necessary and justified is asserted rather than evaluated. Para 14.11 simply says (of Regulation 12(4) of the Access Regulations) that "these aspects have been taken into account". Para 14.18 says that ComReg considers access to the sub-loop "both proportionate and necessary". Para 14.24 asserts that Regulation 13 of the Access Regulations, which deals with such important questions as the requirement to encourage investment in NGA and allowing an investing operator to make a reasonable rate of return, are "taken into account".

Such observations are clearly not sufficient. They do not establish the need for interventions, the less intrusive options for intervention, the costs and benefits of each or the basis for choosing between them.

The assessment of proportionality in this context must evaluate the relevant costs not only in terms of capital outlays, administrative burdens, resource constraints, etc. but also in regard to the distortive effect on platform competition between eircom and UPC resulting from the proposal to impose highly intrusive and burdensome regulation on the one (eircom) but not on the other (UPC), which has the first mover advantage in NGA).

### Policy Issue and Objectives

**Paras 14.29 to 14.40** deal with the policy issues and objectives. The aims set out in paras 14.29 to 14.31 are clear and objectively justified. The question is whether they are subsequently met.

Para 14.33 concludes that there is no alternative operator in a position to provide next generation access for WPNIA and WBA. Within the NGA footprint areas eircom has virtually no infrastructure and UPC has a fully established and successfully functioning presence. The conclusion that eircom's future network has SMP at the wholesale level, but that UPC's existing DOCSIS 3.0 network does not, makes no sense, particularly in light of technical advancements that make it possible for UPC to provide a VUA-like offering to wholesale customers. Para 14.36 asserts that it is ComReg's objective to "facilitate a smooth and timely migration to NGA". But that is plainly not what the consultation proposes. The consultation clearly sets out to protect and promote copper based access services in the NGA footprint area, and imposes in relation to NGA a regulatory burden, in particular in terms of EoI requirements, that are far in excess of those placed on existing wholesale products.

### Is Access Regulation Required

Paras 14.47-14.50 illustrate the misapplication of the requirement of proportionality. The Consultation Document deals with access to the copper sub-loop. No European jurisdiction has yet found there to be material demand for access to the sub-loop. The costs of building and operating a competitive infrastructure to utilise sub-loops is generally considered prohibitive. Those costs rise as population density falls. So the likelihood of material commercial demand arising in Ireland is lower than the likelihood of it arising in, for example, the UK, Holland, Germany or Belgium.

Para 14.51 is another example of attempting to justify regulation by assertion rather than fact. It states "Should the enhanced wholesale 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." This is a presumption of foreclosure for which no evidence of substance is presented. The evidence there is shows that voluntary development of wholesale services is well advanced and proceeding well ahead of the consultation or its conclusions. Moreover, as Frontier's response to Oxera establishes, it is in eircom's economic interest to grow its wholesale business in order to fill the NGA network as quickly as possible.

## Discrimination

**Paras 14.62 to 14.69** deal with non-discrimination. eircom accepts the application of the principle of non-discrimination in relation to SMP services. But eircom strongly disagrees with the EoI remedy that is proposed by ComReg, which far exceeds the requirement of the non-discrimination remedy under the Access Regulations, and the justification offered. Our reasons are set out in detail in both the introduction to this response and in answer to Q 14. The comments following are specific to the case set out in the RIA.

NGA WPNIA and WBA services differ from conventional WPNIA and WBA products in a number of important respects. First, NGA wholesale services are being introduced in the absence of existing retail product. In the past, wholesale services have been derived from existing retail services. These have been designed from scratch, and purpose built as wholesale services.

Second, the services have been developed in close consultation with the industry, with eircom's downstream businesses participating in the development alongside with and on an equal footing with other wholesale customers.

Third, eircom has voluntarily committed to use the same product order and service gateway as its wholesale customers when supplying retail NGA services.

Fourth, eircom has recently begun to publish KPIs showing how service standards are being met for own use and wholesale supply for a range of wholesale services, providing an objective foundation for exposing, examining and resolving any remaining issues of discrimination in relation to existing wholesale services.

Taken together, these factors establish that improved mechanisms are already in place for addressing discrimination concerns and that such concerns should arise less frequently and be more readily resolved in the case of wholesale NGA.

None of these factors are weighed, or even mentioned, in ComReg's conclusion (para 14.53) that "an obligation of non-discrimination will apply to all NGA services and processes. In particular ComReg has outlined its interpretation and application of the standard of "Equivalence of Inputs".

In other words, the Consultation Document envisages a major increase in the scale of regulation, of its costs and obligation both in nature (EoI) and in scope "all NGA services and processes". This escalation is introduced without assessment of the need, ignoring or discounting the material differences of circumstance, without assessment of costs (eircom has not been asked for a view), without calculation of benefit, without evaluation of alternatives, and without considering the impact on investment or on competition with UPC. No other regime in Europe has gone so far, and yet no meaningful justification is on offer. This step change in burden is modestly but misleadingly described as an augmentation of the existing non-discrimination obligation in Para 14.54. It is in fact a fundamental change.



What justification there is takes four forms. Para 14.54 suggests that because the NGA recommendation refers to a higher non discrimination standard for civil engineering infrastructure EoI is in some sense warranted. ComReg intends to apply EoI to NGA WPNIA and WBA services, not infrastructure.

Para 14.55 refers to a Consultation from the European Commission. The Consultation has not yet led to agreed conclusions which can inform policy.

Para 14.56 asserts that feedback from industry is that the systems supporting them may be inferior to those supporting eircom's downstream businesses. ComReg does not establish that this allegation is well founded, though the KPI mechanism now in place will provide a basis for detecting and resolving such concerns. In an event, eircom's existing voluntary commitment to use the same order and service gateway as competitors directly addresses and resolves the issue in respect of NGA.

Para 14.57 implies that ComReg is simply seeking to impose an obligation that eircom has already volunteered to meet. This is far from true. What eircom has offered is reasonable and proportionate and deliverable as a result of developments in the gateway servicing wholesale customers and in relation to wholly new NGA services where there are no complexities arising from an installed base. ComReg's proposals go very much further, requiring use of exactly the same processes, systems and interfaces internally and externally through all parts of the product life cycle and applying to a range of services that were never intended to be used by eircom's downstream operations. The proposed "equivalency of inputs" obligation extends well beyond what eircom voluntarily offered, without justification. Paragraphs 14.58 – 14.69 seek to counter such concerns by suggesting that where eircom can make a case to ComReg's satisfaction that the EoI requirement should not apply, then ComReg may consent to the application of the non-discrimination standard instead. Proportionality is being offered not as a justification for the imposition of a new remedy, but as a possible basis for its occasional relaxation. This is very different from "establishing all possible options and selecting that which is most appropriate". ComReg is in fact avoiding the requirement to "establish whether regulation is actually necessary", to "identify any positive or negative effects which might result from a regulatory measure", to "establish whether there is a net benefit", and to "identify and assess any alternative regulatory measures" and is seeking to impose that burden on eircom. In effect eircom would be required to conduct a series of retrospective RIAs where the purpose is to reverse regulation rather than to justify it in the first place.

This transfer of the burden of proof is not what a RIA is meant to be about, and not what the Minister's Policy Direction requires. It is also contrary to the process required for imposing obligations under the Communications Regulation Act, the Framework Regulations and the Access Regulations.

### Transparency

**Paras 14.70 – 14.76** deal with transparency. Many elements of transparency arise because of the need to detect whether discrimination is taking place as a result of necessary and permitted

differences between the way an SMP incumbent treats itself and the way it treats wholesale customers. ComReg's proposals completely ignore the fact that eircom has voluntarily committed to access the OSS gateway using the same system as its wholesale customers, which should eliminate or at least reduce the need for some transparency measures. Instead, the Consultation Document proposes to reconstruct and amplify the existing transparency requirements. In doing so, ComReg has failed to "identify opportunities to withdraw from or reduce regulatory intervention".

In 14.72 ComReg identifies the need to ensure transparency over the launch of new NGA services, and proposes a six month notification period. This is a very long time in a new market where change and evolution can be expected. No consideration is given to the functioning of the NGA forum and no reasoning is offered for the adoption of this period over any other.

Para 14.76 asserts that "we ensure that proportionality is applied" but provides no explanation of how this is done.

#### Price Regulation

Paras 14.77 – 14.90 deal with options relating to price regulation. A case is made for a price control to exist in relation to wholesale services, and for the form the control should take. eircom does not at this stage dispute the conclusions reached, but does not agree with the logic of the argument used. In 14.87 ComReg confirms that SLU, and the WPNIA civil engineering services they propose to mandate, are unlikely to be used to any great extent (raising again the issue of the proportionality of these obligations in the first place).

#### Margin Squeeze

Paras 14.91-14.96 deal with options for the margin squeeze test. There are two critical elements to a margin squeeze test. The first is the services concerned with the margin squeeze and the second the method used for the purpose of determining and calculating the appropriate margin. The RIA deals with the latter in the sense that it identifies options and sets out which ComReg has chosen. Even in doing so, however, ComReg proceeds by assertion, not demonstration. For example, ComReg states that "the SEO cost base assumes that entrants are currently not likely to be as efficient as the incumbent given that they cannot achieve the same scale", leaving the inference that the relative inefficiency of entrants has been established. Entrants like BT, or Vodafone, enjoy retail economies of scope and scale that are greater than eircom's. It is not sufficient to infer that inefficiency exists and needs to be corrected, at eircom's expense.

The first critical element – which services should the test apply -- is not addressed at all. The disproportionality of ComReg's margin squeeze proposals lies in the cumulative effect of multiple margin squeeze tests across an extended value chain. It is a regulatory choice to opt for such an approach, but not one addressed in the RIA or subjected to the requisite tests of necessity and proportionality.

14.92 asserts “we consider that these proposed principles should provide eircom with sufficient flexibility in its retail pricing”. There is no explanation of how this conclusion, which eircom does not share, could be reached. Elsewhere ComReg makes it clear that they expect retail price competition to be an effective constraint on eircom’s retail NGA charges. The cumulative margin squeeze proposals mean that any retail price reduction will be passed through the value chain to all wholesale services in absolute terms, and thus in ever increasing proportionate value. eircom’s retail NGA pricing will thus be severely constrained upwards, by competition, and downwards, through the knock on effects of reductions in wholesale charges. This straitjacket effect will in practice be exceptionally constraining and certainly does not offer eircom “sufficient flexibility” in the pricing of NGA services.

### Options

**Paras 14.94 – 14.101** list a number of selective options without distinguishing between them or discussing their relative merits.

### Impacts on Stakeholders.

This section sets out in tabular form ComReg’s view of the impact of proposals on the incumbent, on OAOs and on consumers. eircom does not presume to speak for OAOs or consumers, but notes that the factors ComReg appears to record as relevant to eircom are:

In respect of access regulation:

1. eircom might otherwise foreclose
2. eircom can invest with certainty

In respect of non-discrimination:

3. eircom must deliver EoI, with agreed exemptions
4. it should not be difficult for eircom to assess the burden of EoI standards of compliance
5. eircom should not be compelled to share sensitive information with market players who are not also customers

In respect of transparency:

6. transparency alone does not ensure eircom does not discriminate
7. eircom must notify new services to ComReg
8. eircom must show the differences between EoI and EoO standards
9. this should not be a problem because eircom would have had to do something similar under standard non discrimination rules.
10. Transparency is necessary to give confidence to investors.
11. Transparency is necessary to allow ComReg to monitor compliance

In respect of price regulation (Option 1 only considered – where options are discussed we comment only on the analysis of the selected option):

12. eircom cannot foreclose
13. eircom can invest with confidence

In respect of the form of price control (Option 1 only):

14. eircom can set retail prices, reductions will flow through to wholesale services under the margin squeeze model.
15. eircom can reduce wholesale charges

In respect of margin squeeze principles (Option 2 only):

16. use of the SEO means eircom will set lower wholesale charges
17. Use of the SEO will promote competition

The RIA goes on also to consider the impact on stakeholders of the cost standard to be used, the use of margin squeeze tests at a portfolio or product level, pre-notification and migration issues. For the purpose of this analysis, and for the sake of brevity, we consider only the options above, though our general conclusions apply throughout.

Of the 17 impacts on eircom that ComReg describes, two are duplicated (1 and 12, 2, and 13). Four describe why eircom should do something, or what its effect on others will be (6, 10, 11, 17).

Of the remaining 11 three are not statements of impact but of ComReg's belief that their proposals are modest in impact. eircom does not believe the proposals allow it to invest with certainty (2). Risk is increased, the cost of NGA is raised, and the capability of eircom to compete with UPC on a level footing is reduced. eircom does not believe it will be a simple matter to establish the costs of Eol and make a case for exemptions under the standard proposed by the Consultation Document (4, 9). One is a statement of policy intent (5).

The seven remaining impact statements (1, 3, 7, 8, 14, 15, 16) are simply reiterations of what eircom will be obliged to do or not do.

ComReg does not establish the effect of their proposals on eircom, as a properly conducted RIA would require. In eircom's view, the impacts should include:

- the significant increase in costs resulting from Eol
- constrained and distorted competitive positioning relative to UPC
- materially constrained retail NGA price freedom
- loss of NGA sales due to regulatory support for narrowband 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.

None of these feature in Consultation Document RIA.

#### Impacts on Competition (Paras 14.107 to 14.114)

This section reiterates ComReg's commitment to promoting competition at the deepest level of the network and to ensuring that eircom as the SMP operator does not foreclose efficient competitive entry by overcharging for wholesale services or under pricing retail services. It does not refer to UPC, or to the effects of the proposals on eircom's ability to compete with UPC at the retail level.

This section acknowledges the need to stimulate infrastructure investment, but ignores eircom's investment and focuses on measures to encourage others. It refers to the Digital Agenda but does not show how its proposals may support or frustrate its objectives.

The overall impression is that ComReg sees no need to support eircom's NGA investment and takes it for granted. In considering competition ComReg focuses on the competition to eircom that is based on services provided over eircom's infrastructure, and gives an entirely inadequate weight to cable and to eircom's own ability to compete on a level playing field with the cable platform.

#### Assessment of Impacts and Choosing the best option (paras 14.115 – 14.141)

The first part of this section (paras 14.116 – 14.120) asserts that ComReg believes that the costs of what is proposed are reasonable and the benefits substantially in excess of those costs. However neither costs nor benefits have been clearly established and quantified so the assertion is truly only a matter of ComReg's belief.

The second part (paras 14.121 – 14.134) restates the obligations proposed and summarises the reasons previously given for them.

Paras 14.136 – 141 conclude by setting out the six principles of Better Regulation and asserting that ComReg believes them to be satisfied. The analysis above establishes that ComReg's approach does not meet "best practice"; has ignored opportunities to "withdraw or reduce regulation"; is inadequate in efforts to "determine the impact"; has failed fully to identify the "positive and negative effects" of what is proposed, and for these reasons cannot plausibly establish a "net benefit".

#### Conclusion

For all of the reasons discussed above, the RIA is wholly inadequate to justify the escalation of obligations proposed in the Consultation Document.



# **Response to the Oxera report**

DOC: COMREG 12/27A

A REPORT PREPARED FOR EIRCOM

July 2012





## Response to the Oxera report

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## Response to the Oxera report

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# Introduction and executive Summary

## 1.1 Introduction

In this report we evaluate Oxera's conclusions to the key questions raised in ComReg's consultation on Next Generation Access in relation to the regulation of access to eircom's NGA infrastructure in Ireland:

- Is price regulation necessary in Ireland?
- If so, what form of price regulation would be appropriate?<sup>1</sup>

In addition, we consider an additional question not analysed in the Oxera report – what are the risks associated with wide-ranging and detailed price regulation? – which should also be considered in evaluating the reasonableness and efficacy of the proposed access regulation.

To provide the appropriate context for these questions, in section 2 we start with a high-level summary of the competitive context in Ireland in the areas where eircom's NGA infrastructure is expected to be initially rolled out.

Section 3 introduces a conceptual framework to assess the need for price regulation in the Irish NGA context. We do this by analysing eircom's short-term and long-term incentives to offer access to its NGA network.

Section 4 considers the merits of price regulation.

Section 5 discusses the appropriate form of price regulation in the Irish context. We analyse Oxera's proposed ex-ante margin squeeze test and we suggest an alternative approach to price regulation that meets ComReg's objectives, whilst creating significantly lower regulatory burden for eircom.

Section 6 then looks at the specific aspects of Oxera's margin squeeze test methodology in more detail, discussing their appropriateness for the purpose of NGA price regulation in Ireland.

Our key findings are summarised below.

## 1.2 Executive summary

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

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<sup>1</sup> See document ComReg 12/27A, Oxera "eircom's next-generation access products. Pricing principles and methodologies" April 2012

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.

In light of this, it is appropriate to consider carefully a cost-benefit analysis of the regulatory remedies proposed. This is particularly relevant in this case, given the proposals for extensive and prescriptive price regulation of NGA access products. Oxera does not appear to have considered sufficiently the potential costs of the proposed measures, and these could be considerable, in the context of platform-based competition between eircom and UPC.

In the presence of uncertainty about the likely future take up of NGA-based services and NGA costs there are significant risks to setting access prices at multiple tiers of the NGA value chain, and between VUA and LLU products. In particular, caution is required when linking the prices of NGA and legacy services as there are considerable risks to such an approach, and the need to specify the economic space between the VUA product and SLU/LLU products is unclear.

Given an objective to protect competition in key parts of the value chain, and under the existence of a strong and growing competitive constraint from UPC in urban areas, an alternative to the very prescriptive regulatory approach of Oxera may be to use regulation to set out the framework for considering whether there is sufficient margin between different prices. This would provide OAOs greater certainty about how ComReg would intervene if required to do so, increasing the credibility of intervention, whilst also allowing greater flexibility for eircom to adjust its prices. This appears more appropriate in the face of the very significant developments of platform-competition in the Irish broadband market.

If nevertheless ComReg considers that price regulation is necessary to promote sustainable competition, there are alternative approaches for guarding against anti-competitive margin squeeze that seem to be able to achieve its objectives more simply at lower cost and with less risk. In particular, an ex-ante margin squeeze test set to safeguard economic space at the deepest level of the NGA value chain that currently appears feasible may be more appropriate. Given that SLU-based entry has not emerged as a viable business model anywhere else in Europe and does not appear likely to prove commercially viable in Ireland, this would imply a margin squeeze test between NGA retail and VUA prices.

Furthermore, to the extent that ComReg is concerned to safeguard efficient competition between NGA and legacy services, it would appear appropriate to consider a direct link i.e. consider the appropriate economic space between NGA retail prices and LLU prices, rather than doing this via an imputed price for a SLU product for which there may not be any significant take up. Considering a direct link test avoids having to make assumptions about uncertain NGA costs and limits the impact of demand uncertainty. In contrast the method proposed by Oxera has considerably greater risk of setting the SLU and LLU prices

incorrectly with potential detrimental impacts for efficient migration of consumers to NGA and the incentives for eircom and UPC to invest in fibre-based platforms. Also, if the LLU prices are set below the efficient level, this could potentially encourage inefficient investment in LLU-based services.

Lastly, we consider the appropriate way to implement ex-ante margin squeeze tests. In the context of the very strong existing platform-based competition in Ireland, the justification for using a similarly efficient operator (SEO) approach rather than an equally efficient operator (EEO) approach is not clear. Moreover, the way that a SEO approach is implemented and the assumptions made in doing this can lead to materially lower wholesale prices – an issue that was not considered in the Oxera report. Furthermore, whilst we agree with the use of aggregated margin squeeze tests, to allow sufficient flexibility for eircom to differentiate its prices, the cost benchmark proposed by Oxera is questionable as it includes costs that may not be relevant to a firm's decision to enter or to remain in the market.



## 2 The competitive situation in urban areas in Ireland

In this section we summarise the competitive conditions in the Irish market for current and NGA broadband services and put eircom's NGA rollout into context.<sup>2</sup> The situation in Ireland differs from that in a number of other European countries, because of the increasing success of cable-based offers in the major urban areas of Ireland. Whilst the strong competition from UPC appears to be recognised by Oxaera and Comreg, the proposed regulatory approach does not appear to have taken this situation appropriately into account.

In December 2011, Frontier was engaged by eircom to prepare a paper that assessed the "Competitive constraints on eircom from UPC" (attached as Annexe 1). UPC is the key competitor for eircom in its (planned) NGA footprint area. Its network was able to provide broadband services to more than 45% of households in Ireland (largely in urban areas) as of March 2012.<sup>3</sup> UPC's national share of the broadband market was significant at 25% in March 2012.<sup>4</sup>

However, looking at UPC's market share in urban areas<sup>5</sup> highlights how UPC has transformed the broadband market in Ireland. UPC had a [●Confidential] market share in urban areas in March 2012, up from [●Confidential] in June 2009, while eircom's market share fell from [●Confidential] to [●Confidential] in the same period<sup>6</sup>, see **Figure 1** below. If we consider only residential customers, which are the main focus of the cable operator, UPC's market share in urban areas was around [●Confidential], while eircom market share was [●Confidential] in March 2012.<sup>7</sup>

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<sup>2</sup> See the Frontier December 2011 report for more detail.

<sup>3</sup> According to LGI 2012 quarterly results available here <http://www.lgi.com/PDF/Q1-2012-LGI-Press-Release-Final.pdf> the number of two-way passed households was 720,800. According to Global Comms, there were 1.6 million households in Ireland at the end of 2011.

<sup>4</sup> Global Comms Company Broadband Statistics

<sup>5</sup> For purposes of this note, we refer to areas where UPC is present simply as 'urban areas'. Also, as explained below, UPC footprint largely overlaps with eircom's planned NGA network.

<sup>6</sup> Market share estimates based on data provided by eircom to Frontier for our December 2011 report.

<sup>7</sup> According to data provided by eircom

**Figure 1. Urban broadband market shares across different technologies**

[●Confidential]

Source: Frontier Economics based on data from eircom

UPC has grown rapidly at the expense of both eircom and other DSL providers: evidence shows that there is a high level of switching to UPC. In particular, its NGN upgrade to the DOCSIS 3.0 standard, starting in April 2009, enables UPC to offer broadband at speeds of up to 120Mbps, as well as TV and voice services. Currently UPC offers a top broadband speed of 100Mbps, the fastest product available in the Irish market. In contrast, eircom's legacy copper network can only deliver up to 24Mbps and, although eircom is likely to offer TV services over its legacy network, they will be limited in capability compared to UPC.

eircom also faces competition from Other Authorised Operators (OAOs) who retail DSL-based broadband over eircom's current generation network. Vodafone is the leading provider in the retail market and had a 19% share of the national market in March 2012.<sup>8</sup> BT is also a significant player and provides a wholesale, broadband only service to downstream retailers using eircom's Line Share product (a broadband only form of LLU). Other networks, mainly fixed wireless access, had an estimated share of approximately [●Confidential] in urban areas as of March 2012.

The market share of OAOs using eircom's network stood at [●Confidential] in urban areas, in March 2012, compared to [●Confidential] a year ago. Since June 2009 there has been a relatively slow deterioration of OAOs market share in urban areas. Note that the distribution of Ireland's population, which is substantially more dispersed than in many other EU countries<sup>9</sup>, suggests that LLU is unlikely to be viable in a significant part of the country.

In the medium term, there is the prospect of competition from next generation mobile networks, with the rollout of LTE. It is not a perfect substitute, since download speeds will be affected by the number of users sharing the network but, at its maximum, will be capable of offering similar speeds.

Given UPC's position, it is reasonable to expect that UPC will remain a key competitive constraint on eircom's NGA based offers in the future. UPC's product portfolio is comparable to eircom's likely NGA services. UPC's current network and eircom's planned NGA network roll-out area already overlap to a significant extent, and it is likely that there will continue to be a strong overlap

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<sup>8</sup> Frontier Economics based on data from Global Comms.

<sup>9</sup> "Network access costs in Ireland: Modelling equivalent costs in European countries" DotEcon and Network Strategies, 28th August 2008, page vii



between the footprints of UPC's cable network and eircom's NGA network (especially as UPC is planning to increase its coverage).

We understand that, based on current plans, eircom's network may have NGA coverage in some areas where UPC is currently not present. However, despite this we understand that it would be difficult for eircom to target these areas with different offerings from the areas where there is overlap with UPC. In other words, even if eircom is able to offer fibre broadband to all households in the planned NGA areas, it will not be able to effectively price discriminate between customers having access only to eircom's network and customers that have access to both eircom's and UPC's network. Therefore, it would seem reasonable to expect UPC to exert competitive constraint on eircom in the whole NGA area.

## 2.1 Conclusions

The competitive situation in Ireland differs from that in a number of other EU member states, with eircom facing a strong competitive constraint in urban areas from UPC:

- UPC has upgraded its network to Docsis 3.0, enabling it to provide highly competitive retail packages including superfast broadband. This has had a considerable impact on the competitive situation in urban areas in Ireland, with UPC achieving a share of [●Confidential] in urban areas by March 2012, having grown its number of broadband subscribers by 67% in the past two years.
- This has led to the share of DSL-based broadband falling rapidly in urban areas. Based on current trends, UPC's share of retail subscribers in urban areas will surpass those of DSL-based providers by the end of 2012.
- As Oxera and ComReg have noted eircom currently intends to undertake a NGA roll out as a defensive move, responding to the success of UPC.<sup>10</sup>
- UPC is expected to remain a significant competitive constraint on retail pricing in urban areas.<sup>11</sup>

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<sup>10</sup> This is consistent with our discussions with eircom, although eircom has emphasised that this is subject to achieving a suitable regulatory framework.

<sup>11</sup> This retail constraint is due to the strength of competition from UPC in urban areas as described above. It should be noted that there is considerable tension with the EU regulatory framework where cable operators, such as UPC, who are generally not regulated, have a significant share of the market – often greater than the incumbent share in areas of cable coverage. This tension is exacerbated as the upgrade path to providing superfast broadband on cable networks (via Docsis 3.0) appears to be considerably easier and cheaper than the upgrade path to providing superfast

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broadband on copper networks (via FTTC or FTTH), giving some cable companies a potential technological and competitive advantage over incumbent fixed networks. This is an aspect that was not appropriately factored in to ComReg's market analysis in Ireland in the D05/10 market review.

As described further below, where there is platform competition the incentives to provide access may be significantly increased and the imposition of asymmetric regulation carries risks of harming the competitive process and the incumbent's ability to compete.

### 3 Price regulation of NGA access in the Irish market

As described above, there are wholesale customers that are currently dependent upon access to eircom's network, and it seems likely that wholesale customers will continue to be dependent upon such access if eircom rolls out a NGA network.

In the specific context of an incumbent operator rolling out a NGA network to respond to competitive pressure from another platform-based competitor, the question of the incentives of an incumbent operator when offering access to try and foreclose efficient entry needs to be carefully considered. In this section we set out therefore an assessment of the risks of the access terms offered by eircom leading to potential foreclosure.

We first set out the conceptual framework, and then apply the framework in the Irish context. We also discuss the specific points raised by Oxera related to eircom's short-term and long-term incentives to foreclose its wholesale customers.

#### 3.1 Conceptual framework

This section sets out a conceptual framework to analyse the incentives of a vertically integrated network provider, such as eircom, to foreclose downstream rivals that rely on its wholesale products. It is useful to separate two types of incentives to foreclose:

- short-term incentives, which rely on a consideration of static economic efficiency; and
- long-term incentives, which in addition consider dynamic economic efficiency.<sup>12</sup>

We describe the analysis of these two types of incentives to foreclose in more detail below.

##### *Short-term incentives to foreclose (static analysis)*

Our analysis of the short-term incentives to foreclose uses the vertical arithmetic approach introduced by CRA<sup>13</sup> (and accepted by Oxera). We briefly reproduce

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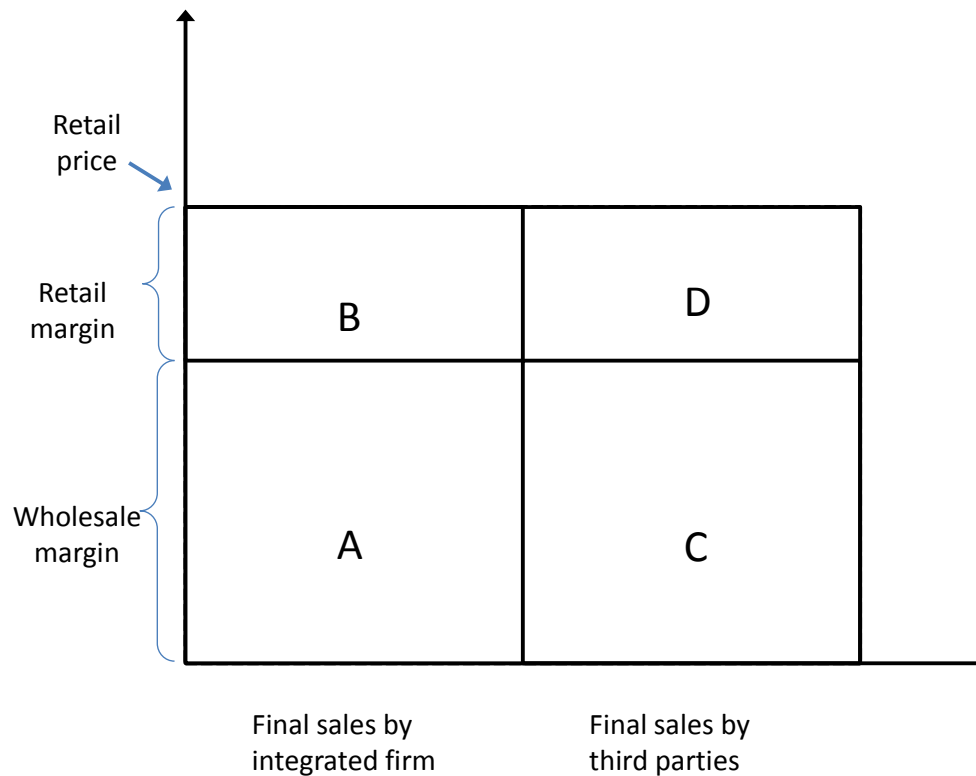
<sup>12</sup> We use the term short-term incentives to refer to static considerations and long-term incentives to refer to dynamic considerations.

<sup>13</sup> M. Walker, Comments on ComReg's "Preliminary consultation on next generation access remedies in wholesale regulated markets", Charles River Associates, 19<sup>th</sup> October 2011

below CRA's illustration of the choices facing a vertically integrated incumbent over whether to provide access.

**Figure 2** below shows the situation when the firm provides access. It receives a wholesale and a retail margins, A and B respectively, from selling the product itself and a wholesale margin C from the downstream retail competitor which earns a retail margin D.

**Figure 2.** Margins for incumbent if access is provided to downstream rivals



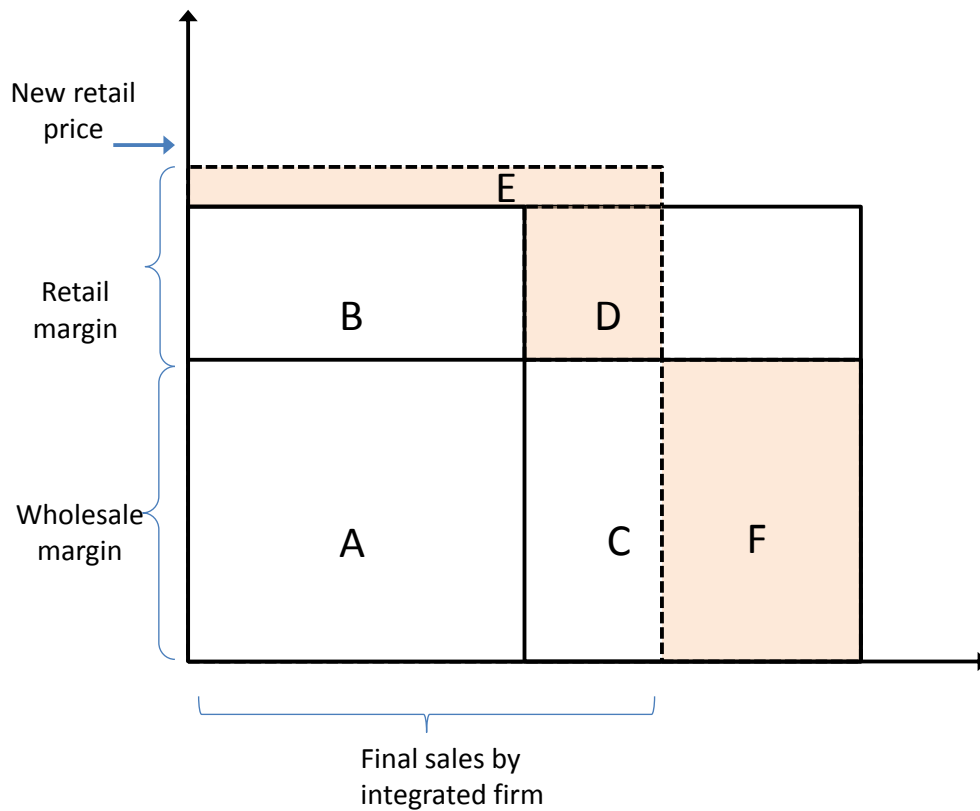
Source: Frontier Economics based on CRA report

If the vertically integrated firm chooses not to provide access, three things may result:

- the retail price could rise;
- the incumbent may “steal” some of the retail business from its potential rivals; and
- the demand may fall by some amount to the extent that the retail price rises.

**Figure 3** below illustrates the difference for the vertically integrated firm if it does not provide access. The vertically integrated firm now earns higher retail

margin due to the increase in retail price, this is shown by the area E (shaded in the diagram). It also gets a proportion of the area D (shaded in the diagram), the retail margin its downstream rival would have earned. It does not get the full amount because demand has fallen because (i) the retail price has increased, and (ii) it cannot address end-customers as effectively as its potential downstream rival meaning that some end-customers will choose alternative platforms. The incumbent will also lose some of the wholesale margin C it would have earned in supplying the downstream competitor because demand for the services on its network has fallen. This is the shaded area F in the diagram.

**Figure 3.** Margins for incumbent if access is not provided to downstream rivals

Source: Frontier Economics based on CRA report

The short-term incentive to foreclose would therefore depend on whether the characteristics of the market are such, that the area contained within the dotted lines is larger than  $A+B+C+F$ . The relative margins between retail and wholesale products, the ability to raise retail prices and access the customer base of its downstream rival will all have an impact on whether it is overall more profitable for the vertically integrated firm to provide access, i.e. whether there is short-term incentive to foreclose.

### *Long-term incentives to foreclose (dynamic analysis)*

A static efficiency analysis may not provide a full picture of the reasons why a vertically integrated incumbent may have an incentive to foreclose. Therefore, it is appropriate to also consider dynamic effects, i.e. firm's long-term incentives to foreclose.

The key dynamic efficiency rationale that has been put forward as a potential reason for foreclosure is the 'ladder of investment' theory. Under this theory, competitors initially enter downstream, using wholesale inputs, and gradually

invest more in upstream facilities as their scale and their knowledge of the market increases.

If the ladder of investment theory is correct, firms may have an additional incentive not to provide access because downstream entry may allow competitors to later seek to compete aggressively in the upstream market. Therefore, if upstream profits are substantial, this could provide an additional rationale for not allowing apparently profitable downstream entry.

We explain in section 3.2.2 below why we do not consider that such long term incentives to foreclose are likely to be relevant in the Irish context.

## **3.2 Frontier's analysis of the incentives on eircom to foreclose access to NGA network**

In the light of the above context, we now assess eircom's incentives to foreclose access-based rivals within the context of the strong platform-based competition exercised by UPC. In particular, we explore:

- short-term incentives to foreclose; and
- long-term incentives to foreclose.

We discuss Oxera's analysis of static and dynamic considerations, and then provide our own evaluation of the incentives to foreclose in the specific Irish context.

### **3.2.1 Short term incentives to foreclose**

Oxera claims that eircom's short-term incentives to provide appropriate NGA wholesale access voluntarily on terms and conditions that enable competition are weak. This is because:

- there is not enough retail competition to significantly constrain NGA pricing (section 2.2.2 of Oxera report);
- the potential for eircom to expand the market, or its share of the market, through wholesaling is limited (2.2.1);
- FTTC architecture is likely to enhance its market power relative to OAOs (2.2.3); and
- eircom's past anti-competitive behaviour (2.2.4).

We discuss the individual points raised by Oxera in more detail below. We consider Oxera's concerns in the specific context of the Irish broadband market and conclude that, on balance, eircom's short-term incentives to foreclose are over-estimated by Oxera.

### Consideration of competitive constraints

Oxera accepts that “consumers are responding to UPC’s relatively attractive product offering, putting pressure both on eircom and its wholesale customers.”<sup>14</sup> Moreover, Oxera considers that eircom’s planned NGA investment is a defensive move and therefore has few concerns that eircom’s retail pricing will be excessive. However, Oxera does not accept that the retail pricing constraint would be sufficiently strong to limit the risks of eircom not providing wholesale access.

Oxera may however have understated the strength of the competitive constraint posed by UPC in respect of eircom’s planned NGA network. Oxera considers that UPC’s market share is modest, but this does not take into account the trajectory of UPC’s market share or consider its share in eircom’s NGA footprint area which is much higher than the national share.<sup>15</sup>

As explained in CRA’s report<sup>16</sup> this constraint can be expected to affect eircom’s incentives to foreclose: to the extent that eircom is significantly constrained in its ability to achieve higher retail prices through foreclosure, this would also reduce its ability to increase profitability. The greater the competitive constraint imposed on eircom by UPC, the closer the area E will be to zero, using the vertical arithmetic framework, set out above in **Figure 3**. The benefits for eircom from foreclosure therefore could be expected to depend mainly on the lower wholesale margin due to decrease in sales (area F) versus the increase in retail margin (area D).

Oxera notes that there is little other competition to DSL-based broadband other than cable in Ireland, and that competition from within the DSL platform is limited. Oxera argues that the relatively low take-up of wholesale bitstream and LLU, which have not changed substantially in the recent past, suggests that switching costs may be considerable and so DSL-based competition is unlikely to be a significant constraint on eircom’s pricing for NGA.

Whilst Oxera remarks that the OAOs have not gained a considerable share of the broadband market in Ireland in recent years, it does not consider whether this may be linked to DSL’s general lack of competitiveness with UPC’s next generation cable network: it is noticeable that eircom’s share of the retail market has fallen considerably during this time.

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<sup>14</sup> Oxera report page 12

<sup>15</sup> As set out in section 2 above the UPC share in urban areas at March 2012 was 46%.

<sup>16</sup> See, for example, the analysis of Mike Walker, para 23



### *Potential to expand the market through wholesaling*

According to Oxera, the potential for eircom to expand the market through wholesaling is limited as product differentiation is low and/or downstream providers' product portfolios could be easily replicated by eircom.<sup>17</sup>

A more detailed analysis however suggests that the necessary conditions for access to be offered are likely to be fulfilled in Ireland, because:

- there is likely to be sufficient product differentiation at the retail level; and
- other Irish operators are likely to have lower downstream costs.<sup>18</sup>

We discuss these in more detail below:

#### ● **Product differentiation**

There is evidence in Ireland of product differentiation at the retail level, so that the service providers that use eircom's wholesale services can address customers which eircom cannot. OAOs in Ireland target different retail customers than eircom (e.g. Sky with its pay-TV customers and Vodafone with its post-paid mobile customers). Evidence from the UK pay-TV market, for example, supports the case that different retail providers have different strengths in terms of the differentiation of their retail propositions: in the first quarter of 2011 in the UK, Sky had 10.1 million pay-TV customers<sup>19</sup>, compared to 3.8 million for Virgin's cable network and 575,000 for BT's IPTV service. This is consistent with rival retail providers being able to differentiate their propositions in Ireland, and attract NGA customers who would not be attracted to an eircom bundle of pay-TV content and broadband, as Oxera suggest.

Such a market expansion effect is also consistent with what has happened in other countries where there has been significant retail differentiation in broadband.

In addition, Oxera uses the example of MVNO access in the Irish mobile sector to argue that, another reason – excess capacity – may be an important factor in

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<sup>17</sup> For example, Oxera notes that eircom has the opportunity to target customers who prefer broadband bundled with mobile or television through Meteor, eircom's wholly owned subsidiary, or partnership with a firm with access rights for premium content.

<sup>18</sup> There may be additional factors which could increase the likelihood of access being offered. For example, if alternative operators have easier access to funding than the incumbent, there may be greater marketing spend when access is offered, which could increase customer awareness of the benefits of superfast broadband products and help to drive take up. This could be a relevant factor in Ireland.

<sup>19</sup> In addition, Sky is a significant wholesale customer of BT with 3.863 million broadband lines as of 31 March 2012, see [http://corporate.sky.com/about\\_sky/key\\_facts\\_and\\_figures](http://corporate.sky.com/about_sky/key_facts_and_figures)

incentives to provide access<sup>20</sup>. However, there is also evidence that the reason for MNOs granting MVNO access include product differentiation in order to expand the customer base, which is particularly advantageous when there are significant fixed and common costs.<sup>21</sup> As the proportion of fixed costs in fixed networks is generally recognized to be higher than in mobile networks this would tend to suggest that the wholesale margin would be higher in fixed networks. As there is already strong competition for NGA products from UPC, eircom may thus have even stronger incentives than mobile operators to increase the utilisation of its newly built network. It may be able to achieve this by exploiting the ability of its rivals to reach additional customers who have a greater ability to compete with UPC by virtue of their differentiated products from eircom.

For these reasons, eircom could be expected to have an incentive to offer NGA wholesale services to downstream rivals if the increase in volumes of wholesale NGA products was more profitable (because of the high fixed costs) than any decrease in eircom's retail revenues.

### ● Downstream costs

A vertically integrated incumbent can be expected to have an incentive to provide access to third parties where it can benefit from such rivals' greater efficiency in distribution. Therefore, eircom could be expected to have a greater incentive to provide access if its competitors have lower (variable) downstream costs.

In general, OAOs could exploit economies of scale in retailing to the extent that their sales and marketing functions can benefit from operations on an international basis allowing them to reduce their variable costs.<sup>22</sup> More specifically:

- BT similarly is an international company (including operations in Northern Ireland) and would be expected to benefit from economies of scale. BT also may have access to economies of scope in providing transmission services through using its backhaul network to support other customers than retail DSL providers.<sup>23</sup>
- Vodafone, a retail competitor in DSL broadband is the biggest MNO in Ireland. Vodafone could be expected to benefit from national as well as international economies of scale and scope through being part of Vodafone Group.

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<sup>20</sup> Oxera report, section 2.2.2, page 11

<sup>21</sup> For example, Telefónica O2 has recently launched the MVNO 48, in order to target a specific youth section of the market.

<sup>22</sup> See, for example, the analysis of CRA, para 41

<sup>23</sup> We understand that BT provide backhaul services to UPC

In addition, to the extent that fixed costs form a relatively low proportion of downstream costs, providing access to wholesale NGA services is likely to lead to limited duplication of downstream costs. The absence of significant fixed or sunk costs is, other things being equal, likely to increase the incentives to provide access, to the extent that eircom is able to avoid most of the retail costs associated with a loss in retail market share (that would result from providing access to alternative operators).

### *Importance of FTTC architecture*

Oxera states that eircom's FTTC architecture is likely to enhance its market power relative to OAOs because the minimum investment required to unbundle the sub-loop is much larger. Hence, the business case for upstream investment by OAOs in an NGA world is limited.<sup>24</sup>

There appears to be no evidence of significant demand for SLU in the EU, despite the existence of requirements to offer SLU in several member states. Oxera refers to studies by European NRAs which find that the business case for SLU is significantly less certain than for LLU, even in densely populated countries. Ofcom echoed these findings and considered that the minimum efficient scale needed to recover fixed cost investments was likely to be materially greater for SLU than LLU deployments.<sup>25</sup>

In light of the pricing constraint that Oxera recognises UPC is likely to exert, it is not clear how the FTTC network architecture and the more limited scope of upstream competition increases eircom's short-term incentives to foreclose its wholesale competitors. If anything, to the extent that the ladder of investment could operate in Ireland, if SLU was non-viable for rivals, the FTTC architecture could arguably reduce rather than increase the incentives to foreclose because an incumbent operator would be less concerned with entrants using NGA-based access products as a platform to investing in their own platforms – we return to this below.

### *Behaviour in the legacy market as an indicator of incentives to provide NGA access*

Oxera cites OAO responses to its own questionnaire that allege previous anti-competitive behaviour in the past by eircom in providing wholesale access to its current generation network.

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<sup>24</sup> Oxera report page 13

<sup>25</sup> Ofcom, "Regulatory challenges posed by next generation access networks", November 2006

Considerable caution should be exercised when analysing these responses<sup>26</sup>, because eircom's incentives to provide LLU-based and NGA-based access are different in the two cases.

- eircom is starting from a different position in the case of NGA based services. As Oxera/ComReg recognises, eircom's planned NGA investment is motivated by competitive interaction with UPC. Initially network utilisation will be low, and access seekers could be expected to have an important impact on the overall utilisation of eircom's wholesale NGA assets. This is particularly important given that UPC already has significant utilisation of its assets. This may enable eircom to reach minimum efficient scale more quickly and reduce risk for eircom since OAOs will help to foster NGA take-up. Fixed costs will still account for a large proportion of overall cost in NGA, so the ability of eircom to reach additional customers (receiving only the wholesale proportion of the revenues) could be quite significant.
- eircom's current generation access network is a mature network and eircom has already invested in DSLAMs and voice switches. It has an incentive to drive utilisation of these assets because the proportion of fixed (and sunk) costs is high. Furthermore, the strength of competition from UPC, which is an important driver of eircom's incentives, has increased considerably over the last couple of years.

In summary the following factors would be consistent with a much more limited risk of eircom having a short-term incentive to foreclose its wholesale customers in the NGA environment, compared to the assessment that Oxera appears to have made:

- the presence of a retail pricing constraint from UPC and the significant and growing market share of UPC in urban areas;
- eircom's intention to invest in NGA as a competitive reaction to UPC;
- the ability of at least some OAOs to be able to target successfully customers that eircom would not appear to be in a position to target; and
- the likelihood that at least some of the OAOs may have cost advantages downstream compared to eircom.

In addition, the significant fixed costs (and economies of scale) and low level of variable costs at the wholesale level, compared to the high level of variable/avoidable downstream costs, would give eircom a significant incentive

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<sup>26</sup> Oxera also recognise this.

to increase wholesale volumes, by access-based entry taking share from UPC, even where there is an impact on its retail volumes. In Annex 2 below we provide an example of the limited risk in terms of incentives for eircom to foreclose using a stylised but broadly realistic example of the Irish NGA situation: this shows that as long as access-based entry expands the utilisation of eircom's NGA network sufficiently, eircom would have a limited incentive to foreclose entry.<sup>27</sup>

### 3.2.2 Long term incentives to foreclose

Oxera argues that there may be a dynamic incentive to foreclose i.e. that eircom may have an incentive to limit the possibility of entrants competing in the upstream markets<sup>28</sup> i.e. an incentive to reduce the likelihood that wholesale customers turn into upstream competitors by building out their own networks (or investing in subloop unbundling).

However, when examining the evidence in more detail, the presence of such long-term incentive to foreclose is not clear because:

- as Oxera recognises, there is no evidence of significant demand anywhere in Europe for sub-loop unbundling (SLU), the type of investment higher up the value chain that Oxera suggests eircom may be concerned to prevent;
- there is no evidence that the take up of wholesale products leads to greater platform-based competition; and
- it appears unlikely that there would be any demand for significant further fixed network platform-based entry.

#### *No evidence of demand for SLU*

Despite the existence of requirements to offer SLU in several EU Member States, there is no evidence of significant demand for the product based on experience elsewhere in the EU. Given the small size and demographics of Ireland, the business case for SLU may be all the more challenging for OAOs.

Oxera refers to studies by European NRAs which find that the business case for SLU is significantly less certain than for LLU, even in densely populated countries.<sup>29</sup> A study undertaken by Analysys for ComReg also<sup>30</sup> shows the same.

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<sup>27</sup> We note that the analysis provided by ComReg in the WPNIA market review D05/10 appears to be based on the legacy environment. However, the situation in the NGA environment is substantially different from the legacy environment. The access products that appear likely to be used in the NGA environment account for a significantly larger proportion of the value chain and the strength of the competitive constraint from cable (based on the upgrade to Docsis 3.0) is considerably greater.

<sup>28</sup> Oxera report p9

<sup>29</sup> Oxera report p25

In the UK, Ofcom echoed these findings and considered that the minimum efficient scale needed to recover fixed cost investments was likely to be materially greater for SLU than LLU deployments.

### *No empirical support for access-based entry leading to platform-based entry*

Annexe 3 sets out the empirical evidence for the ladder of investment. Whilst there is some evidence of bitstream-based entry being a stepping stone to LLU-based entry for legacy networks, there is no evidence that LLU or bitstream based entry leads to platform-based entry. Given the significantly more challenging economics of NGA investment it seems even less likely that entry based on NGA access would lead to platform-based entry.

### *It seems unlikely that further platform-based entry is feasible*

We set out briefly at the beginning of this paper that UPC has become the key competitor in broadband in urban areas (with a market share of [●Confidential], or [●Confidential] in the residential segment respectively) and that it is likely to continue to be an effective platform-based competitor in the future when eircom rolls out its NGA infrastructure.

Given (i) the platform-based competition from UPC (ii) the fact that eircom appears likely to roll out a NGA network and (iii) the significant economies of scale in the access network, it seems highly unlikely that in the Irish context other competitors would see a significant opportunity to roll out their own fixed access networks.

## **3.3 Summary**

In summary, the evidence both from the rest of the EU and Ireland are not consistent with eircom having a material long-term incentive to foreclose OAOs from access to NGA-based wholesale products. In particular, the scale of competition from UPC can be expected to reduce any benefits from foreclosing access to eircom's NGA network.

## 4 Cost benefit analysis of proposed price regulation

In light of the assessment of the limited potential risks of foreclosure in the circumstances that apply to the Irish broadband market, it is appropriate to consider also a cost-benefit analysis of the regulatory remedies proposed. This is particularly relevant in this case, given the proposals for very extensive and prescriptive price regulation of NGA access products. OXERA does not appear to have considered sufficiently the potential costs of the proposed measures.<sup>31</sup> As indicated earlier, in Ireland UPC's and eircom's broadband customer bases are of similar sizes in the NGA footprint areas. Given this, an asymmetric approach to the regulation of eircom, especially regulation that could impose significant constraints, could be expected to have an impact on the ability of eircom (and OAOs that utilise eircom's NGA network) to compete.

In the UK Ofcom has considered that price flexibility allows operators to try different approaches allowing them to manage the risks of their investments and make pricing judgements in the face of various market uncertainties and their requirements to earn a sufficient rate of return. For example, Ofcom recognised that price regulation can lead to distortions to competition and investment incentives, and it therefore did not propose to regulate virtual unbundled access.<sup>32</sup>

There are many ways that price regulation can affect the ability to compete and economic efficiency. We provide examples below of how asymmetric price regulation can restrict an incumbent's competitiveness by;

- limiting its ability to price differentiate; and
- limiting its ability to innovate on prices.

### *An illustration of how asymmetric price regulation can restrict an incumbent's competitiveness – price differentiation*

In a December 2011 paper for eircom on access price regulation<sup>33</sup>, Frontier showed how asymmetric regulation could harm an incumbent when a vertically integrated competitor was not required to comply with the same regulatory obligations and how this applied to the situation in the Irish broadband market.

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<sup>31</sup> And

<sup>32</sup> Ofcom 2009 Delivering Superfast Broadband, paragraphs 8.16, 23-24.

<sup>33</sup> Effect of access regulation of eircom in the presence of increasing competition from UPC, Frontier, December 2011 (attached as Annexe 4).

It is widely recognised that pricing flexibility when setting prices of services that share fixed and common costs can lead to improved efficiency, with overall increases in the volume of the services consumed – and this is of particular significance in the case of the provision of broadband services: these share significant fixed/common costs between them, and with other services offered, such as voice. The reason for this is that differentiated retail prices can allow the recovery of a higher proportion of the access costs than average from customers who are less price sensitive (and a lower proportion than average from the more price sensitive customers). Consumer welfare would therefore be higher because more people are served overall<sup>34</sup> and usage of the network would increase.<sup>35</sup>

To enable the (vertically integrated) incumbent and its wholesale customers to differentiate retail prices in this way could mean that it would need to have different wholesale products – tailored to allow downstream providers to meet the varying needs of retail customers. However, if access regulation does not allow access prices to be differentiated both the incumbent and downstream providers using its network could be prevented from setting efficient retail prices.<sup>36</sup>

If there is also a vertically integrated rival not subject to access regulation, the incumbent may not be able to compete on a level playing field. The vertically integrated rival will be able to set lower prices than the incumbent for some customers and, all other things being equal, could be able to achieve a higher level of subscribers, as it would not be subject to the same pricing constraints as the incumbent. In the presence of economies of scale, this could then mean the vertically integrated rival has lower costs than the incumbent as a result of it achieving greater levels of volume (not greater efficiency). This could then in turn affect the incumbent's ability to compete effectively, as a result of the asymmetric approach to regulation, including through affecting its ability to invest in the network.

### *An illustration of how asymmetric price regulation can restrict an incumbent's competitiveness – pre-announcement of price changes*

Asymmetric price regulation may also impose constraints on eircom if eircom is required to pre-announce retail price changes. Pre-announcing price changes is

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<sup>34</sup> Demand goes up more in response to a fall in price for the more price sensitive customers than demand falls in response to an increase in price for the less price sensitive.

<sup>35</sup> For an illustration see Figure 3 in Annexe 4

<sup>36</sup> One way to get round this would be, for example, to consider the portfolio of upstream products in the margin squeeze test, as well as a portfolio of downstream products. For example, this could mean considering average retail ARPU from relevant retail products and comparing this to a weighted average cost of the relevant wholesale inputs (such as FTTH or FTTC based access products).



typically required of dominant incumbents in order to provide rivals with sufficient time to consider their price reactions, and to allow regulatory authorities to consider if the proposed price changes are consistent with the regulatory obligations of the dominant incumbent.

In the circumstances of the Irish market however, an obligation to pre-announce required of eircom only may well weaken eircom's incentives for competitive price decreases: UPC would have more time to respond to an eircom pricing initiative than it would in a normal competitive situation, thus limiting any advantage that eircom could gain from reducing price or introducing innovative price structures.<sup>37</sup>

Pre-announcement of price changes could also limit eircom's ability to respond to UPC's or other competitors price offers.<sup>38</sup> In addition to the above costs, the ComReg/Oxera access pricing proposals raise risks in terms of leading to potentially inefficient entry or inefficient investment, at different levels of the NGA value chain. To the extent that the proposed approach to the setting of access prices leads to under-investment by eircom, this would create an asymmetry between eircom and UPC, which would be to the detriment of Irish consumers in some parts of Ireland. We return to this in the next section.

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<sup>37</sup> We understand that ComReg's intention is that changes to retail products will have to be notified to ComReg to ensure compliance with margin squeeze obligations are met but will not have to be pre-announced to the public or competitors. However, changes to the terms of wholesale products will have to be pre-announced. And, if changes in wholesale products are required to implement changes in retail products (e.g. under the relevant margin squeeze tests eircom could not decrease retail prices without also decreasing wholesale prices) then an obligation to pre-announce changes in wholesale products can have a similar effect as an obligation to pre-announce changes to retail products.

<sup>38</sup> From paragraph 8.50 of the consultation we understand that eircom is required to notify changes to existing wholesale products to ComReg 3 months prior to any changes. However, it is possible that there could be additional delays if there are implications for the prices of various different wholesale products (e.g. SLU, LLU, etc) from proposed retail price changes and these need to be discussed and agreed with ComReg.



## 5 The appropriate form of regulation: between which product levels should a margin squeeze test be applied?

Oxera considers that a margin-squeeze test approach is more appropriate than cost-plus regulation, because:

- there is a retail pricing constraint from UPC, preventing excessive pricing at the retail level; and
- cost-plus regulation is limited due to difficulties associated with asset valuation of networks that are subject to a retail pricing constraint.<sup>39</sup>

Oxera considers that margin squeeze tests should be designed to ensure consistency across the NGA supply chain and between legacy and NGA products and inputs. Hence, Oxera proposes:

- to define the economic space (i.e. the price difference) between retail NGA products and the End-to-end NGA bitstream product and between the wholesale products in the NGA value chain through a set of tiered margin squeeze tests; and
- to define the economic space between VUA and LLU by first defining the appropriate SLU price through a margin squeeze test between VUA and SLU and then incorporating any imputed changes in the price of SLU into the LLU price (the rationale being that SLU is the common element between legacy and NGA infrastructure).

Whilst the existence of a pricing constraint from competition from UPC provides support to a margin squeeze test rather than cost-orientated prices, the form of margin squeeze test that is proposed is extensive and prescriptive, seeking to define the appropriate differences between prices at *multiple* levels of the NGA value chain.

In the light of our earlier assessment, this raises the significant question of whether such level of intervention is necessary to achieve the desired objectives. The proposals also raise, in our assessment, a number of practical issues that do not appear to have been considered in detail.

Bearing this question in mind, below we consider each of Oxera's proposals asking whether:

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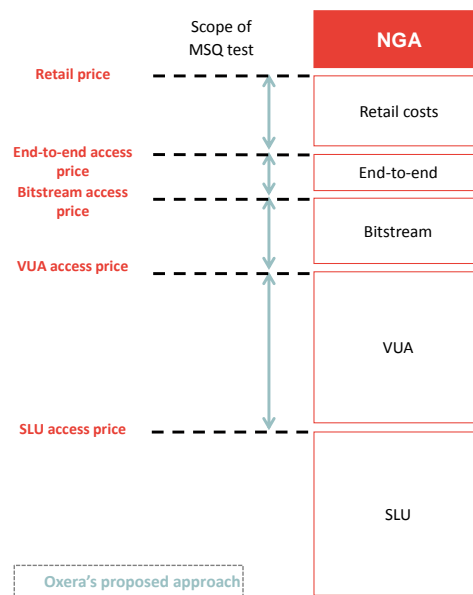
<sup>39</sup> This is a general concern which implies that, whilst there remains a retail pricing constraint, cost-plus regulation is unlikely to be a suitable methodology for setting access prices.

- does economic space need to be maintained between all the tiers of the NGA value chain?
- if consistency between NGA and legacy pricing is necessary, could this be achieved in a less risky way?

We then explain what alternative approaches may be more appropriate in Ireland.

## 5.1 Oxera's proposed tiered MSQ tests

Oxera considers that the first set of measures is required to promote competition via the ladder of investment. However, as shown in **Figure 4** below Oxera's proposed system of tiered margin squeeze tests would involve using regulation to define the difference between prices at multiples layers of the market. It is not clear why relatively complex regulation with a full array of tiered margin squeeze tests (NGA Retail to End-to-End Bitstream; End-to-End Bitstream to Bitstream; Bitstream to VUA; and VUA to SLU) is required to achieve these objectives and the rationale for this has not been clearly set out. Note that we do not consider the impact of the 12/63 bundling proposals here.

**Figure 4.** Oxera's proposed tiers of MSQ test

Source: Frontier Economics based on Oxera (section 3.3.1, page 26)

### *The need to regulate multiple layers of the value chain is unclear*

If Oxera considers that price regulation is required, its focus should be on what is required to enable competition in the part of the NGA value chain where it is efficient and sustainable. Oxera's proposal is to explicitly regulate to allow for the potential for *all forms* of entry by defining the difference between each and every one of the potential rungs on the NGA ladder. Moreover, eircom is currently at a very early stage in the development of NGA, in the absence of reliable information on take-up and costs.

As the rationale for this level of intervention is not explicitly set out and evaluated, it is not straightforward to assess the potential benefits of these proposals. The setting of access prices for all of these rungs in the presence of uncertainty about the likely future take-up of NGA based services and NGA costs raises significant risks which are generally recognised:

- Due to uncertainties about the cost and demand, this could lead to the difference between prices at different levels of the value chain being set too high or too low. If the economic space allowed in one part of the value chain is too high this would be expected to promote inefficient entry in that part of the value chain.

- Furthermore, if access prices are too low, eircom's incentives to invest in NGA infrastructure will be reduced. Since eircom is planning to roll out NGA as a defensive response to UPC the impact may be felt only at the margin (i.e. in those areas where the business case for roll out is more marginal) but some consumers could still lose out if NGA rollout is slower or less extensive at the margin than it could be.

As discussed further below, it would appear that similar benefits could be achieved without the need for the level of explicit and comprehensive price regulation that is being proposed, reducing thus the risk of asymmetric outcomes.

*There is limited evidence provided of a need to define economic space between SLU and VUA at this stage in Ireland*

In particular, Oxera does not seem to provide any justification for the need for economic space between SLU and VUA at this stage in the development of the market and NGA in Ireland. Around Europe there is little evidence of current or future demand for SLU. Other EU regulators have reached similar conclusions and Oxera itself recognises that the business case for building fibre networks to the cabinet is limited.<sup>40</sup> In other words, there does not appear to be evidence to suggest that competition at this level of the value chain is likely to be sustainable or that OAOs could be expected to reach this rung on the ladder of investment, at least at this stage of development of the market.

It is not clear, therefore, why intervention is necessary at this point in time to regulate SLU pricing in order to maintain economic space between VUA and SLU.

We note that the VUA-SLU margin squeeze test is also part of the proposed mechanism for maintaining economic space between VUA and LLU. However, as we explain below, we consider that it may not be necessary to regulate the economic space between VUA and LLU in order to establish the link between NGA and legacy prices. Hence this is no reason for keeping the VUA-SLU test either.

## 5.2 Economic space between NGA and legacy services

Oxera states that creating sufficient economic space between NGA and legacy services is necessary because it:

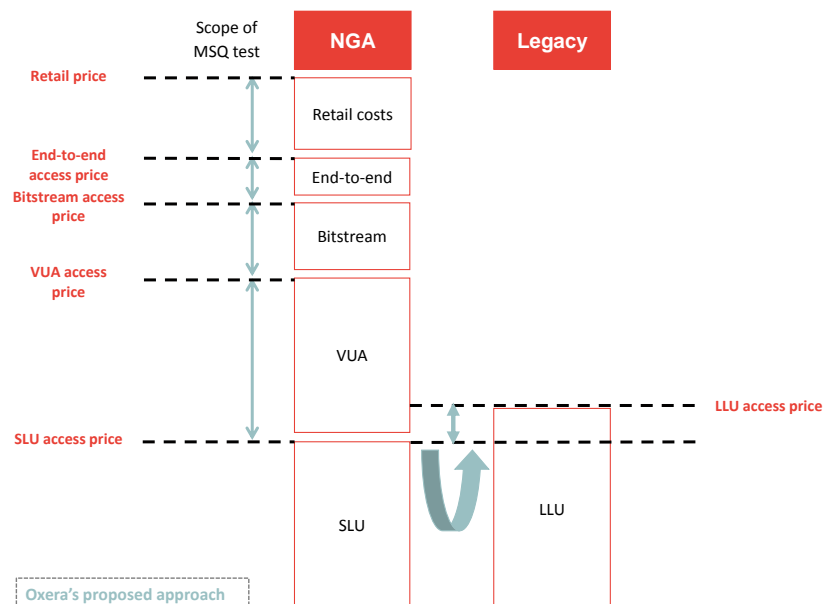
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<sup>40</sup> See for instance the European Commission's decision in *Case AT/2010/1084: Market for wholesale (physical) network infrastructure access at a fixed location in Austria*, page 5 (available at <https://circabc.europa.eu/d/d/workspace/SpacesStore/2f7ab427-ab43-4d71-bb9a-b1ffb89653fe/AT-2010-1084%20Acte%20%283%29%20EN%20date%20et%20n%C2%B0.pdf>)

- ensures the right price signals for OAOs and consumers to promote efficient migration to NGA<sup>41</sup>; and
- allows for the recovery of OAO investments in LLU.

It therefore proposes to create a link between the prices of eircom’s VUA and LLU products, through the SLU price, which it argues is a common element between legacy and NGA infrastructure.<sup>42</sup> As shown in **Figure 5** below, the proposed system of tiered margin squeeze tests, together with the link between VUA and LLU products, implies that any decrease in NGA retail prices would be reflected in the decrease in the LLU prices.

**Figure 5.** Oxera’s proposed link between NGA and legacy services



Source: Frontier Economics based on Oxera (section 3.3, page 24)

Below we explain why:

<sup>41</sup> In principle, retail prices should reflect quality differences between current and NGA broadband services to promote efficient migration

<sup>42</sup> We note that it is an over simplification to consider that SLU is generally an input into LLU. We understand from eircom that SLU relates to lines of up to 1.5km from certain cabinets (those that are large enough to make cabinet level unbundling economic). In contrast LLU generally relates to lines of up to around 4km from certain MDFs (those that are large enough for exchange unbundling to be economic). These two products can involve quite different local loop assets. Clearly the situation as regards the copper line to an individual premises (that can, in principle, be served via LLU or SLU) is more simple – for that line, the subloop part could be considered to be an input into the full local loop.

- caution is required when linking the prices of NGA and legacy services; and
- Oxera's proposals to link VUA and LLU prices is risky.

### *Caution is required when linking the prices of NGA and legacy services*

If OAOs have invested in LLU-based entry it would not be appropriate to ignore this when considering the relative pricing of legacy and NGA products. However, in competitive markets, developments in technology or demand can affect the actual returns companies are able to achieve, in ways that they were not able to fully anticipate when they made their investment. In particular, there is no guarantee in competitive markets that companies can achieve a specific level of return on their investments. Regulation should therefore allow for entrants to have the potential to recover their costs. However, if there are unexpected developments in the market (and UPC's success at winning customers since upgrading its network to support Docsis 3.0 appears to have been unexpected) then this would need to be taken into account.

It is also necessary to consider the trade-offs between the links between NGA and legacy pricing and the potential risks i.e. whether this could distort the incentives for efficient NGA migration, reducing eircom's competitiveness and investment in NGA at the margin. In this context, it should be noted that, as accepted by Oxera, efficient migration is important not just because of the benefits to end-users but because wider benefits to the economy are likely.<sup>43</sup>

Therefore, whilst it may be appropriate to make sure that there is consistency between wholesale prices for LLU-based broadband and the treatment of NGA broadband caution is required when doing this.

In addition, the current proposals link the LLU price to the NGA retail price, by 'assuming' that it is possible to derive a SLU cost in a retail-minus way from the retail NGA prices, and that it is then appropriate to reflect any changes in SLU costs as a result of changes in retail NGA prices in the LLU price. This is in practice a significant change to the approach to setting LLU prices, which up to now were cost oriented. To the extent that this leads to regulatory uncertainty about future ComReg policy decisions, this could imply additional costs, if it increases eircom's perceived uncertainty about future investment returns from regulated services.

### *The proposal to link VUA and LLU prices is risky*

Given the significant uncertainties about the VUA costs and the level of NGA demand, there is a risk that the methodology proposed may have the impact of

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<sup>43</sup> Oxera report page 52 footnote 68



setting LLU prices below the efficient level. In particular, this is more likely to be the case if there is a potential regulatory asymmetry, for example, where ComReg would be less likely to allow higher LLU prices (which, for a given VUA price, could be appropriate if the SLU to VUA costs turn out to be lower than forecast) and more likely to set lower LLU prices.

If LLU prices are set below the efficient level this may have a number of detrimental impacts. First, the incentives of entrants to migrate customers onto the NGA network could be impaired – in particular, if entrants are able to benefit from LLU prices which are below the efficient level they are likely to set retail legacy prices lower and this could deter efficient migration to the NGA network. Second, the incentives of eircom to invest in the NGA network could also be weakened – if the expected volumes on the NGA network are lower (because retail legacy prices are set too low) then this would affect eircom's incentive to invest in NGA. At the very least, in areas where the NGA investment case is marginal, this would likely deter eircom from investing in NGA. Third, the ability of UPC to recover its investments in upgrading its network and potentially to roll out its network further could be affected – if legacy retail prices are set below the efficient level this will also affect UPC's ability to win retail customers and thus affect the business case for investing in its network. Fourth, access-based entrants using legacy technologies (DSL) may be overly incentivised to roll out additional equipment – if LLU prices are set lower than is efficient this could lead to excessive investment in legacy technology where it would be more efficient for end consumers to migrate on to the NGA network.

The proposed linkage between the VUA-SLU margin squeeze test and SLU and LLU costs<sup>44</sup> appears to raise a number of significant practical issues because:

- products and prices are not yet stable as demand for retail and wholesale NGA products is uncertain;
- there is significant room for revisions to prices which will lead to uncertainty for both investors and eircom and could chill investment;
- costs are relatively unknown in the early stages of NGA deployment (as Oxera acknowledges), and this will create practical difficulties in implementing the proposals; and
- the proposed approach contradicts one of the reasons for opting for retail-minus rather than cost-plus approach; namely absence of

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<sup>44</sup> It appears that Oxera is proposing that implied reductions in the costs of the copper sub-loop revealed in the margin squeeze test between NGA retail and SLU should be translated into an adjustment to LLU prices.

knowledge of true long term costs because volumes are uncertain and forecasting the right increments for costs is difficult.<sup>45</sup>

As a result of the uncertainties, it is not clear that a link between VUA and LLU prices via the SLU price would reflect the appropriate differences in the economic value of these products raising risks of distortion in relation to migration to NGA. We also note that if eircom is required to decrease LLU prices outside the areas where there is competition with UPC, there could be a negative impact on eircom's incentives to invest to expand its planned NGA footprint. Competition from UPC is the main reason for eircom's NGA deployment, and it is rationale behind adjusting the economic value of eircom's loop assets where UPC is active. Decreasing the price of LLU outside the NGA footprint areas, due to competition from UPC in the NGA areas, would, all things equal, limit eircom's incentives to further deploy its NGA network. This is because broadband customers in areas where NGA has not been rolled out yet would be expected to be less attracted to NGA-based broadband products (if lower LLU prices leads to the availability of cheaper current generation broadband).

### 5.3 Alternative approach to regulation to meet ComReg's objectives

It is necessary to consider whether Oxera's proposals are the best way to achieve ComReg's objectives, given the potential costs they may impose on the market. A lighter-touch approach could protect competition on key parts of the value chain without requiring such wide-ranging price regulation and with much lower risk.

Any form of price regulation has to be considered carefully, as there is a risk of obstructing the competitive dynamics of the market and harming consumers. In the light of this, it is helpful to set out the policy objectives as clearly as possible so that the most appropriate form of regulatory intervention, if any, can be selected.

According to Oxera's understanding the objectives that ComReg has set out are:

- *“orderly migration to fibre-based services;*
- *cost minimisation (avoiding possible costs of dual running)*
- *competition at the deepest level of the network to the extent economically feasible and maximum scope for product differentiation.”<sup>46</sup>*

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<sup>45</sup> Oxera report page 21

<sup>46</sup> Oxera report page 52

Given these objectives, and in the light of the earlier assessment of foreclosure risks, an alternative lighter touch approach could achieve ComReg's objectives at lower cost to the market: we briefly explain this below.

### 5.3.1 An alternative approach to price regulation

Given the uncertainty, risk and scale of the investment involved in rolling out NGA, it is important to allow eircom pricing flexibility so it can respond to information as it emerges on demand and the costs of supplying NGA services and to competition from UPC and other competitors.

One way to achieve this would be not setting prices ex-ante using regulation, but rather using ex-ante regulation to set out the framework under which ComReg would consider whether sufficient margin has been provided between different prices. Rather than ComReg being required to police all of eircom's proposed price changes, such a framework could specify, for instance, that entrants are required to raise concerns about eircom's pricing and how ComReg would intervene when such a concern had been raised. For example, it could specify the time period over which ComReg would respond to the complaint and the methodology for resolving it. The methodology could cover issues such as the form of the price control and how to consider the forecasting of revenues and costs. Such a framework would provide OAOs with more certainty over how ComReg would intervene if required to do so and thus increase the credibility of intervention. And, as long as there is a suitable mechanism to discipline eircom for any contravention, bearing in mind the inherent uncertainties with predicting the cost and volumes of NGA, such an approach could be expected to have a behavioural impact on eircom.

We note that there is some precedent from the UK, as Ofcom followed a similar approach when it decided initially not to regulate the pricing of BT's virtual unbundled product.

However, if ComReg still considers that NGA access prices should be regulated, it should recognise that, in the face of the strong competition from UPC, there is uncertainty over whether the benefits of regulating access prices will outweigh their costs. As a result, a careful analysis of the proposed regulations would be highly desirable to make sure that benefits of regulatory intervention clearly outweigh the costs. Since the costs of regulation generally increase with the level of intervention, this suggests that any intervention should be limited to the minimum necessary to achieve ComReg's goals.

Next, we look at the whether scope of the tiered margin squeeze tests proposed by Oxera is appropriate in terms of the wide range of services to which it is applied, and we examine key methodological issues in the proposed margin squeeze tests, such as the cost standard and the level of aggregation.

### 5.3.2 If regulation is considered necessary, a simpler, less risky approach can be followed

If ComReg believes that price regulation is necessary to promote sustainable competition, there is an alternative approach to a margin squeeze test that seems to be able to achieve these aims more simply, at lower cost and with less risk than under Oxera's proposals. There are two potential elements to such an approach.

First, in view of the extremely limited likelihood of competition emerging based on SLU at this stage in the development of the market, and the uncertainties in relation to NGA costs, an ex-ante margin squeeze test to safeguard the economic space between NGA retail and VUA prices seems more appropriate to achieve ComReg's objectives. A framework for assessing margin squeeze at this level should also be sufficient at this stage of the development of the market, to ensure that prices at other levels of the value chain are appropriate.

The risks to competition from doing this are lower than Oxera's proposals, and the benefits achieved would be comparable, because there would be sufficient economic space to promote entry at the highest level upstream which currently seems feasible or likely i.e. VUA.

We understand that BT is the most significant access-based entrant with significant backhaul assets.<sup>47</sup> At present BT largely purchases shared access and sells white label bitstream services. Within a NGA environment BT's business model may equate to purchasing a VUA product and selling an End-to-end NGA bitstream product. Therefore we understand that Oxera/ComReg may have a concern that eircom could have an incentive to squeeze BT in this part of the value chain. It is worth considering this in further detail.

To the extent that OAOs using VUA benefit from greater efficiencies than eircom in the provision of services such as backhaul, eircom may have limited incentive to squeeze the economic space between NGA Bitstream and VUA.<sup>48</sup> Furthermore, if the costs of backhaul are largely sunk any attempt to squeeze would appear unlikely to lead to exit,<sup>49</sup> therefore it would not make sense for eircom to attempt to squeeze in the first place. In any case, if there were an attempt to squeeze then it seems unlikely that the sophisticated wholesale purchasers of the End-to-end product would wish to switch to eircom if they

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<sup>47</sup> For instance, according to TeleGeographyGlobalComms, BT launched the latest phase of its NGN backhaul network rollout in March 2010. In June 2010, UPC signed multi-million contract with BT to gain access to the NGN backhaul in order to upgrade its own retail services.

<sup>48</sup> After all, the backhaul assets are largely sunk therefore any squeeze would not be expected to lead to exit from the market. If exit is improbable there would be no incentive to squeeze in the first place.

<sup>49</sup> Since it would make sense for an OAO to continue provide the service, as long as the price were above the forward looking costs of providing the service (which may be relatively low if many of the costs are sunk).

believed that eircom was in fact squeezing with the intention of strengthening a position of market power, and with the intent to later raise prices (which is where the competition concern arises). On the other hand, if the purchasers believed that eircom was simply able to provide the product at lower cost in the long term, it would seem to be efficient for eircom to supply the service.

If there were a credible complaint that eircom was attempting a price squeeze this could be dealt with by using the sort of framework described in the previous section. This would appear to be much more proportionate than imposing extensive price regulation at every level of the value chain, and with significant risks if the calculations of the allowable margin are wrong. This is especially the case given that the part of the value chain (between the VUA and End-to-end NGA bitstream products) over which there may be a concern is a small percentage of the overall value.

Second, to the extent that if ComReg is concerned to safeguard the economic space between NGA and LLU, it appears more appropriate to focus directly on this economic space: in other words, consider the retail prices for NGA and current generation broadband and the margin between current generation retail prices and LLU.

A possible proposal could work as follows.

- **Step 1** – establish a minimum allowable difference between NGA and current generation retail prices for an appropriately designed portfolio of retail products. Use this difference to impute a current generation retail price that is considered to be competitive with the NGA retail price. This could use information from Ireland, if available, or from international benchmarking.<sup>50</sup>
- **Step 2**– calculate the LLU price that is consistent with the imputed current generation broadband retail prices. This would require considering the appropriate downstream legacy costs and subtracting these from the imputed average retail price of current generation products.
- **Step 3** - if the calculated LLU price is below the current LLU price this would imply that the LLU price needs to fall.

Therefore, if eircom effectively writes down the value of its assets in setting a competitive price for its NGA retail products, the implied write down could be passed onto LLU without the need to model the uncertain NGA costs to impute a residual SLU price.

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<sup>50</sup> For example, in countries where it is clearly accepted that there is significant retail competition then it could be appropriate to take the differential in the retail legacy and NGA price and apply the same differential to Ireland.

Note that, to the extent that eircom's NGA retail pricing reflects UPC's pricing constraints, it would also be appropriate to recognise that this implies that at least some of the value of the legacy assets (for example DSLAMs/MSANs) also need to be 'written down' and this would need to be reflected in step 2. The value of the assets would fall, for example, because of the unexpected high level of migration to the new NGA services (both UPC's and eircom's) which would reduce the likely future utilisation of the legacy assets.<sup>51 52</sup>

**Figure 6** illustrates how this proposal differs from Oxera's.

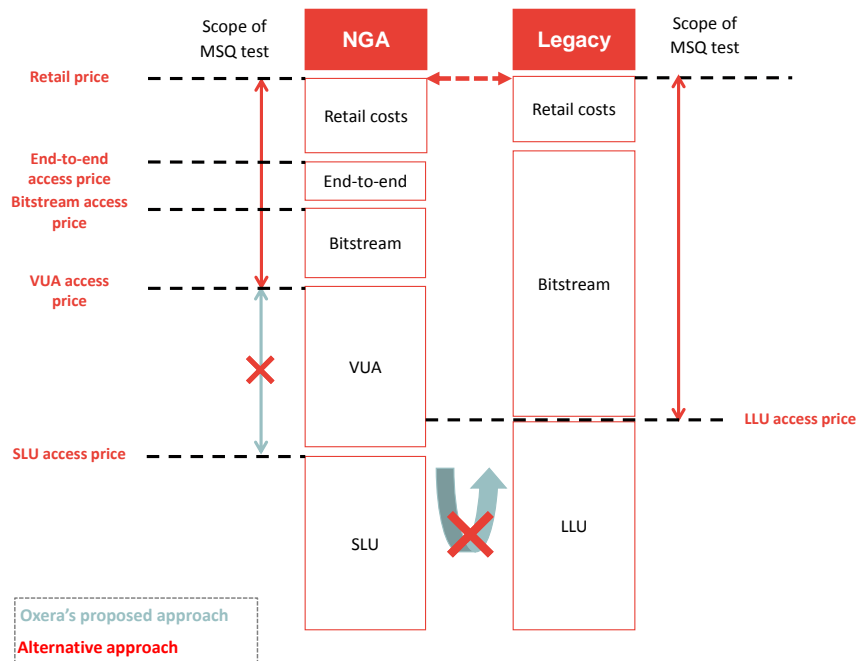
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<sup>51</sup> To the extent that migration is expected this would not need to be taken into account

<sup>52</sup> One option to calculate the decrease in value of the legacy assets would be to use a discounted cash flow approach to estimate the change in the value of the relevant OAO assets. For example, this could use two sets of assumption about future volumes/utilisation: first, assumptions that are consistent with the expectations when the original investments were made; and second, assumptions that are consistent with current expectations for volumes/utilisation. This would require forecasting volumes of legacy products and there is some demand uncertainty. However, there would be considerably less uncertainty around the costs because these are well known for legacy products. The first set of assumptions could be used to calculate an effective unit charge for use of the assets over time (calculated such that the NPV at the time of the investment was zero). Using this unit charge, and the second set of volumes one can calculate how much value those assets would have been expected to derive under the original assumptions. This can be used to estimate the current value of the assets in use.

Such a methodology would be expected to overestimate the value of the assets. If the forecast of current generation retail prices has decreased, this would also be expected to have an effect on the value of the legacy assets (as well as on the value of the LLU assets). However, it is not clear how one can determine what part of this value decrease should be assigned to the LLU price and what part to a decrease in value of the legacy assets. Therefore, ignoring this effect on the value of the legacy assets (i.e. overvaluing them) this methodology would be expected to underestimate LLU prices.

**Figure 6. A possible alternative approach to margin squeeze tests**



Source: Frontier Economics

This methodology may tend to underestimate LLU prices, but it could be used as a cross check on the value derived from Oxera's proposed methodology. For example, if Oxera's methodology were to derive a lower LLU price than under the above methodology this could suggest that it would need to be revisited.





## 6 Methodological issues in Oxera's proposed ex-ante margin squeeze tests

In this section we set out our analysis of the methodology proposed by Oxera for carrying out its proposed ex ante margin squeeze tests. In general we consider that the tests, if they are applied, should focus on protecting efficient competition. In contrast, the rationale set out by Oxera appears to us to focus on protecting competitors.

### *Similarly efficient or equally efficient operator test*

There appears to be insufficient justification for using the similarly efficient operator (SEO) test rather than the equally efficient operator (EEO) test in the margin squeeze tests for the following reasons.

First, Oxera's own conditions for using the SEO approach do not seem to be met. The condition that Oxera sets out in the report (page 28) says "*... if the benefits of entry and increased competition in the longer term are assumed to outweigh any efficient costs from the hypothetical sub-scale or less efficient entrant, the SEO approach can be justified*".

However, Oxera does not substantiate the claim that additional benefits to consumers are likely to arise from continuing to provide assistance to lower scale firms already in the broadband market, or from promoting further entry. It does not show that eircom's existing rivals would be likely to exit the market. Nor does it seem likely that there will be genuine 'new entry' in NGA as the most likely access seekers are already well established in the broadband market, or may be able to leverage strong existing positions in other markets.

Second, Oxera draws a parallel with the regulation of the UK pay-TV market (p21) to support the use of SEO. This is arguably not relevant to broadband in Ireland. In the light of Sky's leading position in UK pay-TV and its position in relation to the rights to premium content, Ofcom considered that a similar sized competitor to Sky was unlikely to emerge. Ofcom therefore had a specific entry assistance rationale for alternative pay-TV infrastructure and considered the objective to promote lower scale entry was appropriate in that case.<sup>53</sup>

However, the trade-off between static inefficiency and dynamic efficiency for NGA access in Ireland would be expected to be quite different. In the UK, lower scale entry was considered the most likely potential source for promoting dynamic efficiency through platform-based competition, whilst in Ireland, UPC is

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<sup>53</sup> Without entry assistance Ofcom was concerned that the development of "disruptive alternative TV platforms" that could offer consumers "unprecedented choice of content, and the ability to access that content on demand" could be harmed.

already providing strong platform-based competition in NGA broadband, so the additional impact on dynamic efficiency will be lower.

Third, Oxera's proposals risk creating a situation where eircom's rivals are in perpetual need of regulatory assistance and are unable to reach efficient scale since the potential for OAOs to generate further economies of scale may be limited. Oxera suggests that the recent move from Bitstream access to LLU is evidence that OAOs may reach efficient scale. However, as Oxera notes earlier, OAO market shares have been static recently, partly due to the impact of UPC on the market.

Furthermore, the particular implementation of a SEO test is highly important, and this is an issue that is not considered by Oxera. We understand that ComReg has proposed to apply a test that considers the costs of a new entrant starting from scratch using only superfast broadband and building up scale over time.<sup>54</sup> It appears highly questionable whether such an assumption is appropriate where there are existing access-based entrants and these are likely to be the future customers for NGA wholesale products.

### *The level of aggregation of the margin squeeze tests*

Oxera's proposal to use a portfolio level of aggregation in the margin squeeze tests appears appropriate. This would allow sufficient pricing flexibility so as not to undermine the efficient pricing of NGA retail products, which is particularly relevant in view of the competition from UPC.

The level of aggregation of the margin squeeze test should in general be consistent with what is perceived as efficient market entry. If there are economies of scope in providing a range or portfolio of products, the margin squeeze test should typically reflect this. Not to do so may encourage inefficient entry by firms not fully exploiting the economies of scope available.

The portfolio approach should allow eircom to efficiently price discriminate across different NGA retail broadband services, which is likely to be consistent with UPC's retail pricing and enable eircom to compete on a level playing field. If efficient price discrimination increases the usage of NGA broadband services and strengthen eircom's incentives to invest in NGA, consumers are also likely to benefit.

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<sup>54</sup> We understand that the underlying assumption in the SEO test used by ComReg is that the modelled operator does not sell any other products and so must recover all its costs from broadband services alone. Combining this with the assumption that the entrant has to grow from zero may have a significant impact on the estimated downstream costs. Alternative assumptions, still using an SEO test, for example considering a SEO with smaller scale in NGA than eircom but selling bundles, and migrating from a reasonable position in the current broadband market to NGA, may have costs closer to an EEO.

From a practical perspective, using a portfolio approach has additional benefits because LRAIC estimates at this aggregated level are likely to be a good approximation of the real incremental cost. This is unlikely to be the case if a more disaggregated approach were followed. LRAIC estimates would be likely to overestimate the true incremental cost which would encourage inefficient entry.

In fact, most regulatory LRIC estimates tend to include a portion of common costs because of the difficulty of fully stripping them out for individual products or services. This is likely to be more difficult in NGA to the extent that demand and costs will be very uncertain in the initial stages of rollout.

### *The choice of the cost standard*

It is unclear why average total costs (ATC)<sup>55</sup>, as proposed by Oxera, should be the appropriate cost standard for the margin squeeze test. The cost standard should only include those costs that are relevant to a firm's decision to enter or exit the market. However, ATC includes fixed and common costs some of which may not be relevant to a firm's decision to enter or to remain in a market.

Instead, either average avoidable costs (AAC) or long run average incremental costs (LRAIC) appears the appropriate standard. Both would be consistent with the European Commission's Article 102 guidelines that relate to margin squeeze.

The main difference between LRAIC and AAC is that sunk costs are not included under AAC, as the CRA report points out. Hence, AAC would be more relevant if the concern behind the margin squeeze test is the exclusion of existing firms because the costs of entry have already been sunk by existing market participants, so they will not influence their decisions on whether to stay in the market. For firms considering whether to enter a market, entry costs are clearly relevant, therefore LRAIC would be more appropriate.

On balance OAOs are likely to be existing market participants. For example, OAOs are likely to be able to leverage their existing customer bases to migrate to NGA. In principle, as the competition concern relates to exclusion of existing competitors rather than deterring of entry, AAC could be more appropriate than LRAIC, although in practice there may not be a significant difference between AAC and LRAIC.

Finally, the use of a forward-looking approach to determining the relevant downstream costs, given the uncertainties involved in NGA deployment and the possibility that OAOs may have to make additional upfront investments to provide NGA-based services also appears appropriate.

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<sup>55</sup> See the Oxera report page 30 for a summary of the cost standards referred to here

## 7 Conclusions

The analysis above suggests that there are several factors which would be consistent with Oxera over-estimating the risks of eircom having the incentive to foreclose. In particular, Oxera does not appear to have factored the significant platform-competition from UPC in urban areas in Ireland sufficiently into account.

In light of this, it is appropriate to consider carefully a cost-benefit analysis of the regulatory remedies proposed. Oxera has proposed extensive and prescriptive price regulation of NGA access products and does not appear to have considered sufficiently the potential costs of the proposed measures. These could be considerable, in the context of platform-based competition between eircom and UPC.

In the presence of uncertainty about the likely future take up of NGA-based services and NGA costs there are significant risks to setting access prices at multiple tiers of the NGA value chain, and between VUA and LLU products. In particular, caution is required when linking the prices of NGA and legacy services as there are considerable risks to such an approach, and the need to specify the economic space between the VUA product and SLU/LLU products is unclear.

Given an objective to protect competition in key parts of the value chain, and under the existence of a strong and growing competitive constraint from UPC in urban areas, an alternative to the very prescriptive regulatory approach of Oxera may be to use regulation to set out the framework for considering whether there is sufficient margin between different prices.

If nevertheless ComReg considers that price regulation is necessary to promote sustainable competition, there are alternative approaches for guarding against anti-competitive margin squeeze that seem to be able to achieve its objectives more simply at lower cost and with less risk. In particular, an ex-ante margin squeeze test set to safeguard economic space at the deepest level of the NGA value chain that currently appears feasible may be more appropriate.

Furthermore, if ComReg is concerned to safeguard efficient competition between NGA and legacy services, it would appear appropriate to consider a direct link i.e. consider the appropriate economic space between NGA retail prices and LLU prices, rather than doing this via an imputed price for a SLU product for which there may not be any significant take up.

Lastly, in the context of the competitive situation in the Irish broadband market in urban areas, the justification for using a SEO approach rather than an EEO approach is not clear. Moreover, the way that a SEO approach is implemented, can lead to materially lower wholesale prices and this was not considered in the Oxera report. Furthermore, whilst we agree with the use of aggregated margin

squeeze tests, it is appropriate to use a cost benchmark that is relevant to a firm's decision to enter or to remain in the market.



## **Annexe 1: Competitive constraints on eircom from UPC**

[●See separate (confidential) document]





## Annexe 2: Numerical example of static incentive to foreclose

In this annex we present a simple numerical example to illustrate the vertical arithmetic approach to the short-term incentives for vertically integrated incumbents to provide access to downstream rivals.

In particular, we show that when there are significant fixed costs (and economies of scale) and low level of variable costs at the wholesale level, compared to the high level of variable/avoidable downstream costs, a vertically integrated firm has a significant incentive to increase wholesale volumes, by access-based entry taking share from other platform-based providers, even where there is an impact on its retail volumes.<sup>56</sup>

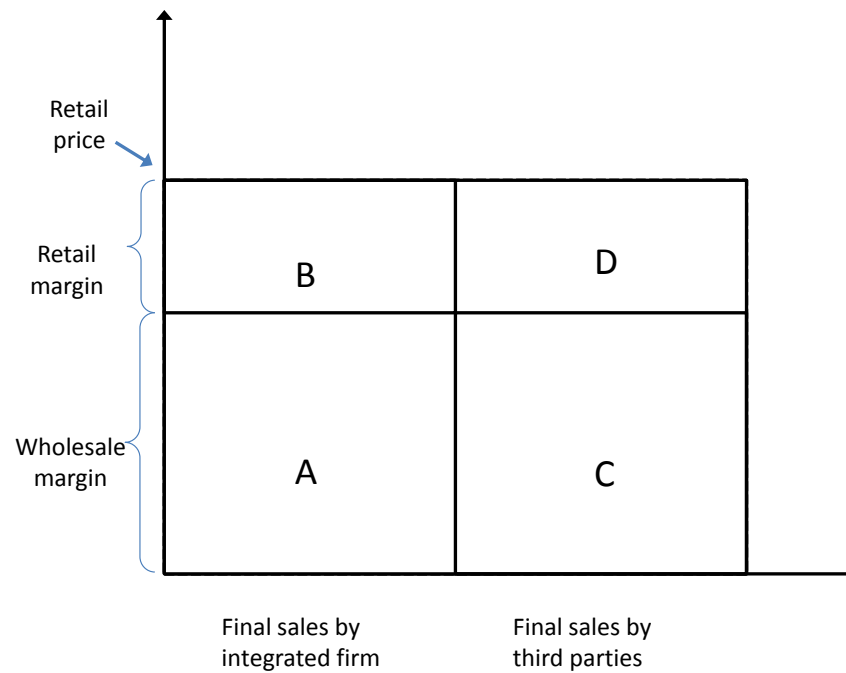
We provide below an example of the lack of incentives for eircom to foreclose using stylised, but broadly realistic, figures for (i) retail prices, (ii) level of switching (between an access-based entrant and eircom/UPC) and (iii) the proportion of fixed costs upstream and downstream. We show in the example that, provided that access-based entry expands the use/utilisation of eircom's NGA network sufficiently, eircom will have an incentive to provide access.

First, for ease of reference, we repeat the diagram used to illustrate the vertical arithmetic analysis.

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<sup>56</sup> The incentive to provide access may also be affected by any expected change to regulation. However, including analysis of how this affects incentives would be complex and would require considerable care as there are several potential effects on the incentives. This may depend on the assumptions are about (i) the effect on both wholesale and retail margins following change in regulatory approach (ii) the likelihood of entry at different points of time (iii) whether the decision to provide access affects the likelihood of regulation. The example in this annexe takes a relatively simple approach and considers what appear to be the main factors that affect the incentives to provide access.

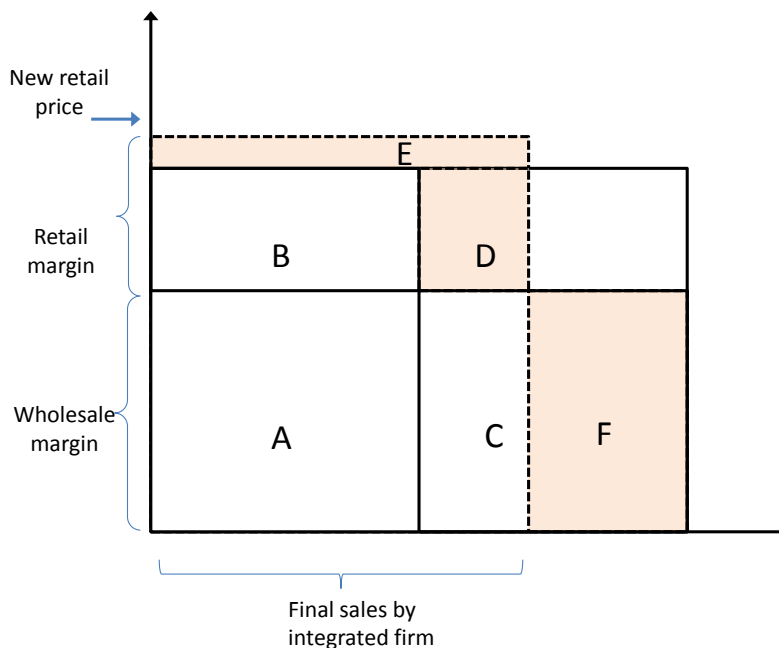
**Figure 7.** Margins for incumbent if access is provided to downstream rivals



Source: Frontier Economics based on CRA report

Our simple numerical example follows this approach and the numbers have been chosen to draw out the key conditions for a vertically integrated incumbent to provide access.

We present tables above and below which illustrate the revenues, costs and profits for an incumbent and an entrant (we assume it operates downstream only) in two cases: where the incumbent provides access and where it does not. This allows us to compare the overall profit the incumbent makes on wholesale and retail services in both scenarios. If the incumbent would earn significantly more profit providing access than not doing so, then clearly it has a strong short-term incentive to provide access.

**Figure 8.** Margins for incumbent if access is not provided to downstream rivals

### General assumptions

We make several simplifying assumptions to keep the example easy to follow:

#### Revenues

The incumbent and the incumbent face a common retail price of €35.

We assume that there is a strong retail pricing constraint so that the retail price is the same whether the incumbent provides access or not.

We also assume that there is no increase in the retail price in the no access case. This is consistent with there being a strong retail pricing constraint from infrastructure-based competition and limited retail price constraint from access-based rivals.

This is appropriate because, if the retail minus approach to setting access prices is well calibrated the additional access-based entry would not be expected to lead to significant retail price decrease (because the margin in the retail minus approach should be sufficient to allow entry, but not to provide room for undercutting of the incumbent's retail prices) which is set via competitive interaction with the cable operator.

## Costs

Costs have a fixed and variable component.

- We assume that the incumbent and entrant face the same variable retail costs (if entrants were more efficient than incumbents their retail costs may be lower than the incumbent)
- We assume that there is a much higher proportion of fixed costs in wholesale than in retail due to the cost structure of these activities.
  - Differences in fixed costs affect relative margins (profits as a % of revenues) in retail and wholesale. The higher the proportion of fixed cost, the higher the margin on sales needed in order to recover those fixed costs. This means that the margin in wholesale is likely to be significantly higher than in retail.
- We assume that the incumbent and the entrant have the same variable retail costs.

## Demand

- We make an assumption on the extent to which the entrant would ‘steal’ downstream business if access is provided. This is represented by the how much of the entrant’s retail customers (when access is provided) that the incumbent can capture for itself if it does not provide access.
  - If the incumbent can reach most of the entrant’s retail customers then the business stealing effect is high and the entrant does not expand the market much beyond what the incumbent could achieve. This would represent limited product differentiation in the retail market.
  - On the other hand, the lower the proportion of the entrant’s customers that the incumbent can address, the lower the business stealing effect, the higher the market expansion effect and the higher the degree of retail product differentiation.
  - In the example below, we assume a high market expansion effect so that the incumbent only captures 50% of the entrant’s retail customer base by withholding access.

## Assumptions for the case where access is provided

### Retail

We assume that the incumbent has more **retail customers** than the entrant – 250 vs. 100. In the wholesale segment all these customers are served by the incumbent, i.e. the incumbent provides wholesale services to support 350 end-users.<sup>57</sup>

Therefore, **retail revenues** are the number of customers multiplied by the assumed retail price of €35, which leaves incumbent with retail revenues of €8,750 and new entrant with retail revenues of €3,500.

We assume that **variable retail costs** are the same for the incumbent and entrant at €12 per customer.

**Fixed retail costs** at €200 are also assumed to be the same for the incumbent and entrant since we assume they have the same cost structure. So, for example, the entrant's total retail costs are €1400 = fixed costs (€200) + variable cost €12 x 100 customers), hence fixed costs are 14% of total retail costs for this number of customers. It is important to note that fixed costs are excluded from the calculation of gross margins. Since these costs are not scalable, they do not enter into analysis of incumbents incentives to foreclose downstream rival, i.e. the incumbent's fixed costs remain unchanged whether the access is provided or not.

We also include the **wholesale charges** that the entrant's and incumbent's retail units pays to the incumbent's wholesale division (an implicit transfer in the case of the incumbent) This wholesale charge should, by definition, be equal to the wholesale revenues of the incumbent. We assume a simple charging structure of a single charge per retail end-user of €20. So the sum of the wholesale charges to the incumbent and entrant is €5,000 + €2,000 = €7,000, the same as the incumbent's wholesale revenues.

**Retail gross margin** is thus retail revenues minus the sum of *variable* retail costs and wholesale charges, see table below. The incumbent's gross margin (corresponding to area B in the **Figure 7** above) is higher than the entrant's (area D) due to our assumptions that it has a larger share of the retail market.

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<sup>57</sup> These numbers loosely represent the sorts of figures that may be expected in urban areas. To make the calculations simple, we assume 250, rather than 250,000 and 100, rather than 100,000 end customers.

**Table 1.** Retail gross margins with access (per month)

	Incumbent	Entrant
Retail customers	250	100
Retail revenues	8,750	3,500
Fixed retail costs*	-200	-200
Variable retail costs	-3,000	-1,200
Wholesale charges	-5,000	-2,000
<b>Retail gross margin</b>	<b>750 (B)</b>	<b>300 (D)</b>

\*Fixed retail costs excluded from the calculation of gross margins

Notes: the labels on the gross margin figures indicate how the numbers correspond to **Figure 7**

Source: Frontier Economics

### *Wholesale*

As we said above, the incumbent provides wholesale services for the end-user of its own retail unit and those of the entrant, and supports 350 end-users in total. **Wholesale revenues** are the same as the total wholesale charges that the retail segment pay - €20 x 350 retail end-users, i.e. €7,000.

**Variable wholesale costs** are assumed to be €3 per end-user which amounts to €1,050 for 350 end-users.

**Fixed wholesale costs** are much higher absolutely and proportionately than for retail at €4,500. I.e. at this level of demand fixed costs are 81% of total wholesale costs. Again, fixed costs are excluded from the calculation of gross margins.

**Wholesale gross margin** is simply the incumbent's wholesale revenues minus its variable wholesale costs. In **Table 2** below, we show the incumbent's wholesale gross margin arising from supporting its own retail customers and from supporting the entrant's retail customers (corresponding to areas A and C in the above).

**Table 2.** Wholesale gross margins with access (per month)

	Incumbent	Entrant
Wholesale customers	350	0
Wholesale revenues	7,000	0
Fixed wholesale costs*	4,500	0
Variable wholesale costs	1,050	0
<b>Wholesale gross margin</b>	<b>5,950 (A+C)</b>	<b>0</b>

\*Fixed retail costs excluded from the calculation of gross margins

Notes: the labels on the gross margin figures indicate how the numbers correspond to **Figure 7**

Source: Frontier Economics

**Table 3** summarises the incumbent's and new entrant's profitability, measured as a sum of retail and wholesale gross margins, in the case where wholesale access is provided.

**Table 3.** Profitability of incumbent and entrant when access is provided (per month)

	Incumbent	Entrant
Retail customers	250	100
Retail revenues	8,750	3,500
Fixed retail costs*	-200	-200
Variable retail costs	-3,000	-1,200
Wholesale charges	-5,000	-2,000
<b>Retail gross margin</b>	<b>750 (B)</b>	<b>300 (D)</b>
Wholesale customers	350	0
Wholesale revenues	7,000	0
Fixed wholesale costs*	4,500	0
Variable wholesale costs	1,050	0
<b>Wholesale gross margin</b>	<b>5,950 (A+C)</b>	<b>0</b>
<b>Total profit (gross margin)</b>	<b>6,700 (A+C+B)</b>	<b>300 (D)</b>

\*Fixed retail costs excluded from the calculation of gross margins

Notes: the labels on the gross margin figures indicate how the numbers correspond to **Figure 7**

Source: Frontier Economics

### Assumptions for the case where access is not provided

In the case where access is not provided, shown in the **Table 4** below, we assume that the incumbent gets 50% of the retail customers the entrant would have served i.e. the incumbent has 300 customers in total.

The revenues per customer, and the retail and wholesale costs are calculated in the same way as before.<sup>58</sup> For example, **fixed wholesale costs** are again €4,500.

<sup>58</sup> Again, note that we assume that there is a strong retail pricing constraint so that the incumbent cannot increase the retail price in case the access is not provided. This implies that the area E in **Figure 8** is effectively equal to zero.



**Variable wholesale costs** are the same per end-user, and this gives total variable wholesale costs of €900 (€3 x 300 end-users).

**Table 4:** Profitability of incumbent when access is not provided (per month)

	Incumbent	Entrant
Retail customers	300	0
Retail revenues	10,500	0
Fixed retail costs*	-200	0
Variable retail costs	-3,600	0
Wholesale charges	-6,000	0
<b>Retail gross margin</b>	<b>900</b>	0
Wholesale customers	300	0
Wholesale revenues	6,000	0
Fixed wholesale costs*	-4,500	0
Variable wholesale costs	-900	0
<b>Wholesale gross margin</b>	<b>5,100</b>	0
<b>Total profit (gross margin)</b>	<b>6,000</b>	0

\*Fixed retail costs excluded from the calculation of gross margins

Source: Frontier Economics

### Comparison of the two cases

In the case where access is provided, the incumbent's **retail gross margin** is €750. Its **wholesale gross margin** is €5,950 making a **total profit** of €6,700.

In the no access case, the incumbent's **retail gross margin** is higher at €900 because it has more retail customers as the entrant does not 'steal' some of its customer base. However, **wholesale gross margin** is lower at €5,100 because the total number of customers is lower (the market expansion effect of the entrant is missing). **Total profit** is also lower at €6,000.

This illustrates why, given the assumptions, the incumbent has a strong short-term incentive to provide access, since it is better off to the tune of €700 total profit by providing access compared to not.

This is because, the benefit of avoiding business stealing by not providing access - €150 increase in retail profits – is outweighed by the absence of market expansion by the entrant which delivers an extra €850 in wholesale profits (equivalent to the shaded area of F in **Figure 8**)

### *The importance of the market expansion effect*

Clearly, the market expansion effect is a significant factor in providing an incentive to grant access. We assumed that the entrant effectively expands the total market from 300 to 350 when access is provided. Another way of looking at this is that the business stealing effect is limited because 50% of the entrant's retail customers come from sources other than the incumbent.

The market expansion effect would need to be much more limited in order to make the incumbent just indifferent between providing access or not.

One way of looking at this is to ask how many more customers would the incumbent need in the no access case to make its total profit the same as the case where access is provided. The answer is that the incumbent would need 335 as opposed to 300 customers in the no access case.

Therefore, by providing access the total retail volume increases from 335 to 350 even though the entrant has 100 customers. There is a large 'stealing' effect as of the 100 customers, the entrants takes 85% of them from the incumbent.

**Table 5:** Profitability of incumbent when access is not provided – assuming higher business stealing / lower market expansion effect (per month)

	Incumbent	Entrant
Retail customers	335	0
Retail revenues	11,725	0
Fixed retail costs*	-200	0
Variable retail costs	-4,020	0
Wholesale charges	-6,700	0
<b>Retail gross margin</b>	<b>1,005</b>	0
Wholesale customers	335	0
Wholesale revenues	6,700	0
Fixed wholesale costs*	-4,500	0
Variable wholesale costs	-1,005	0
<b>Wholesale gross margin</b>	<b>5,695</b>	0
<b>Total profit (gross margin)</b>	<b>6,700</b>	0

\*Fixed retail costs excluded from the calculation of gross margins

Source: Frontier Economics

### *The importance of the relative margin on wholesale vs. retail services*

The relative margin on wholesale compared to retail services also has an effect on the incentive to provide access. This is because the business stealing effect relates to retail profits and the market expansion effect to wholesale profits.

Therefore, if the retail margin is lower relative to wholesale, the business stealing effect would be less important in relation to the market expansion effect, and hence the incentive to provide access would be higher.

### **Conclusion**

Using a stylised but broadly realistic example of the Irish NGA situation the above analysis shows that as long as access-based entry expands the utilisation of

eircom's NGA network sufficiently, eircom would have a limited incentive to foreclose entry. Therefore, there may be limited risk that eircom would not have the incentives to provide access to its NGA network.

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## Annexe 3: Empirical evidence for the ladder of investment

We set out below the empirical evidence related to the ladder of investment.

The empirical research in this area was initially focused on the US. This research provided strong evidence that mandatory unbundling had a negative impact on the investment by incumbent and alternative operators.<sup>59</sup> Both Crandall, Ingraham and Singer (2004)<sup>60</sup> and Hazlett and Bazelon (2005)<sup>61</sup> reject the hypothesis that the uptake of LLU facilitates infrastructure based investment by competing operators. In particular, by examining the variation in facility-based investment in loops across U.S. states and over time, Crandall et al. find a higher growth of facility-based lines relative to LLU lines in those states with higher costs for LLU. Hazlett and Bazelon examine the trends of subscribers for incumbents, various types of re-sellers and facility-based competitors and conclude that “*market place evidence strongly rejects the hypothesis that regulated unbundling of telecommunications networks provided a stepping stone to facility-based competition in the U.S.*”<sup>62</sup>

This was corroborated by case studies considered by Hausman and Sidak (2005)<sup>63</sup>. They considered five countries (the US, UK, New Zealand, Canada and Germany) in the period 1993-2003 to investigate how investment by the incumbent and alternative operators is affected by mandatory unbundling. In particular, Hausman and Sidak’s descriptive analysis casts doubt on the stepping stone hypothesis. More recently, there has been an uptake of the empirical research investigating the relationship between access regulation and investment in Europe. This literature provides partial support for the ‘short-ladder’ of investment i.e. a few papers have found a positive relationship between wholesale broadband access and LLU, but not for the complete ladder of investment story. A common result is that greater access regulation, including lower prices or higher take up of LLU, has a negative impact on facility-based entry.

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<sup>59</sup> It is standard in the literature to proxy the level of facility-based investment by the number of facility-based lines. This is, for example the case of Crandall, R. W., A.T., Ingraham and H.J. Singer (2004): “Do Unbundling Policies Discourage CLEC Facility-based Investment?” *Topics in Economic Analysis and Policy*, 4(1), article 14.

<sup>60</sup> Crandall, R. W., A.T., Ingraham and H.J. Singer (2004): “Do Unbundling Policies Discourage CLEC Facility-based Investment?” *Topics in Economic Analysis and Policy*, 4(1), article 14.

<sup>61</sup> Hazlett, T. and C. Bazelon (2005): “Regulated Unbundling of Telecommunications Networks: A Stepping Stone to Facility-based Competition?”, presented at TPRC 2005, available at [http://web.si.umich.edu/tprc/papers/2005/503/SteppingStoneTPRC\\_9\\_20.pdf](http://web.si.umich.edu/tprc/papers/2005/503/SteppingStoneTPRC_9_20.pdf)

<sup>62</sup> See Hazlett and Bazelon (2005), abstract.

<sup>63</sup> Hausman, J. and G. Sidak (2005): “Did mandatory unbundling achieve its purpose? Empirical evidence from five countries” *Journal of Competition Law and Economics*, 1(1), 173-245.

- Grajek and Röller (2009)<sup>64</sup> analyse firm level data for 20 countries over 10 years (1997-2006) to test the impact of access regulation on investment incentives.<sup>65</sup> They find that access regulation has a negative impact on investment by both incumbent and entrant operators, concluding that “*easier access pushes entrants towards service-based competition*”.<sup>66</sup> These results are in line with the findings reported by Friederiszick et al. (2008).<sup>67</sup>
- Waverman et al. (2007)<sup>68</sup> do not directly estimate the relationship between access regulation and investment. Instead, using data for the period 2002-2006, they find that a 10% reduction in the price of LLU results in a 18% decrease in the subscriber share of alternative infrastructure providers, which would suggest a negative impact on investment.
- Recently, Bacache et al. (2011)<sup>69</sup> have considered a more complete picture of the ladder of investment theory by distinguishing between three modes of entry: bitstream access, local loop unbundling and new access facilities. Using data from 15 European countries for the period 2002-2009 they find that whereas bitstream access seems to foster LLU, as previous research has found there is no empirical support for the hypothesis that the adoption of LLU enhances investment in new access infrastructures.
- Garrone and Zaccagnino (2011)<sup>70</sup> have found similar results using a wider sample of 29 European countries over the period 2002-2009. They again find support for the ‘short ladder’ version of the theory (that the larger the experience cumulated by entrants through resale and

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<sup>64</sup> Grajek, M and L. –H. Roller (2009): “Regulation and Investment in Network Industries: Evidence from European Telecoms”, Working Paper, ESMT No.09-004.

<sup>65</sup> In contrast to most of the papers which use the number of lines as the investment variable, in this paper investment is proxied by firms’ tangible fixed assets deflated by the producer price index for telecoms equipment.

<sup>66</sup> Grajek and Roller (2009), page 16.

<sup>67</sup> Friederiszick, H., M. Grajek and L.-H. Roller (2008): “Analyzing the Relationship between Regulation and Investment in the Telecom Sector”, March 2008.

<sup>68</sup> Waverman, L., M. Meschi, B. Reillier and K. Dasgupta (2007): “Access Regulation and Infrastructure Investment in the Telecommunications Sector: An Empirical Investigation”, LECG, September 2007.

<sup>69</sup> Bacache, M., Bourreau, M. and Gaudin, G. (2011): “Dynamic Entry and Investment in New Infrastructures: Empirical Evidence from the Telecoms Industry”, Working Paper ESS-11-01, Telecom ParisTech.

<sup>70</sup> P. Garrone and M. Zaccagnino (2011): “The relationship between local loop unbundling and the deployment of alternative broadband networks. An empirical analysis”, working paper.



bitstream access, the more likely their subsequent entry through unbundling) but do not find that service based LLU entry leads to subsequent facility-based entry.

Recently, in view of the evolution towards NGN networks, a strand of the literature has focused on the effect of access regulation on investment in new fibre networks.

- For example Wallsten and Hausladen (2009),<sup>71</sup> empirically examine the relationship between LLU and investment in new fibre networks, using data for 27 European countries from July 2002 to July 2007. They find a significant negative correlation between the number of unbundled DSL connections per capita and the number of fibre connections.
- Briglauer et al (2011)<sup>72</sup> estimate the impact on FTTx deployment<sup>73</sup> using data from the EU27 member states for the years 2005 to 2010. Considering a dynamic model<sup>74</sup> and a wide set of controls<sup>75</sup> they find that a stricter previous ex ante regulation has led to a negative impact on NGA infrastructure investment.

## Conclusion

From the academic papers surveyed above there is no evidence that usage of network access products leads to investment in competing platforms.

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<sup>71</sup> Wallsten, S. and S. Hausladen (2009): “Net Neutrality, Unbundling, and their Effects on International Investment in Next-Generation Networks”, *Review of Network Economics*, Vol.8, Issue 1 – March 2009.

<sup>72</sup> Briglauer, W. G. Ecker and K. Gugler (2011): “Regulation and Investment in Next Generation Access Networks: Recent Evidence from the European Member States”, working paper available at <http://epub.wu.ac.at/3291/>

<sup>73</sup> Measured as homes passed by FTTx per capita.

<sup>74</sup> A partial adjustment approach to estimate the long run effect of regulation on investment.

<sup>75</sup> Including competition, demand and cost variables.



## **Annexe 4: Effect of access regulation of eircom in the presence of increasing competition from UPC**

[●See separate (confidential) document]



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Submissions to Consultation Document No. 12/27

ComReg 12/97

## **6 E-net**



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# Proposed remedies for Next Generation Access

Response to ComReg's Consultation Paper 12/27

by



e|net  
enasc éireann teoranta

**July 2012**

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## 1 INTRODUCTION AND SUMMARY

e|net welcomes the opportunity to provide its response to ComReg's Consultation and Draft Decision on Proposed Remedies for Next Generation Access ('NGA') Market (ComReg Document No. 12/27). This is an important consultation for ComReg and for stakeholders, given the crucial role that regulation is likely to play in facilitating Ireland's transition from the provision of communications services using current generation legacy networks to an environment where these services will be provided over NGA infrastructure.

Just as regulation was such an integral factor in the transition from monopoly to competition within the communications sector – indeed, without regulation there would have been no such transition – so too will the role of the national regulator be central to the shift to NGA-based service provision. By ensuring that an appropriate suite of wholesale products were made available to competing operators, most at cost-based rates, ComReg was able to play a significant role in the development of competition for current generation communications services. As this consultation demonstrates, NGA-based wholesale product and service definition and the way in which such services should be priced by the SMP operator is set to be a major issue in the transition to an NGA environment. As a result, the decisions that ComReg takes pursuant to this consultation are ones that will have significant long-term effects on the trajectory of the market.

This is all the more so because, unlike its regulation of Eircom in the transition to full market liberalisation, the NGA network which ComReg now proposes to regulate has yet to be built. This, in turn, means that the simple application of current generation regulatory rules to NGA are unlikely to work, in particular because these rules are not specifically geared towards incentivising the SMP operator to invest substantial sums in deploying new network infrastructure and neither do they specifically deal with the need to encourage new network build by alternative players.

The regulation of NGA services thus involves a delicate balance between, on the one hand, ensuring efficient wholesale access to the NGA network for competing market player and, on the other, providing sufficient incentives to the SMP operator to deploy this network in the first place, while ensuring that new network build by other operators is also encouraged. It is a balance that ComReg needs to get right, as otherwise there is a real risk that NGA deployment could become stalled.

In this regard, ComReg need to be very careful about its proposal to define NGA Footprint Areas. It appears that there will be little or no transparency in how these areas are defined and e|net believes that ComReg needs to do all it can to ensure that far more visibility is brought into this process. In addition, ComReg needs to make sure that Eircom makes a formal commitment – with a strict rollout timetable, backed up by substantial performance guarantees – to build out its planned FTTC/H network infrastructure within the defined NGA Footprint Area. Moreover, after making this commitment, Eircom should not be allowed to change plan to target investment in areas where competing operators are actively planning to deploy their own NGA

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infrastructure, and thereby effectively always be in a position to undermine a competing operator's business case to build. Such an activist approach will be needed by ComReg to ensure that NGA networks are rolled out the maximum extent possible and that deployment of NGA networks by operators other than Eircom is facilitated and encouraged.

e|net also believes that ComReg is making a mistake by rushing to provide regulatory support for Eircom's planned deployment of vectoring technology in its VDSL network. Vectoring may or may not become a commercial reality and it is far too early for ComReg to consider the possible withdrawal of existing SLU obligations within the proposed NGA Footprint Area in the expectation that Eircom will at some future point deploy this technology. Where other regulators (for example in Belgium) have done so, this has only occurred after the extensive deployment of VDSL (which Eircom has yet to commence) by the SMP operator. It is e|net's strong opinion that ComReg should adopt a 'wait and see' approach to this issue and should only consider the possible withdrawal of the SLU obligation on Eircom if and when Eircom has completed an extensive VDSL rollout and there is clear evidence that vectoring can deliver in a commercial context the kinds of data speed improvements that are currently being claimed.

These caveats aside, e|net broadly supports the thrust of ComReg's proposals in relation to the definition of the types of NGA wholesale access required within both the WPNIA and WBA markets and the way in which it is proposed that price control of these services should operate. e|net believes that the proposed approach of underpinning this with margin squeeze tests at both the wholesale and retail level should be sufficient to deal with any concerns regarding possible anti-competitive pricing by the SMP operator, providing ComReg is vigilant in ensuring that Eircom's pricing complies at all times with the various margin squeeze tests.

e|net also supports ComReg's proposal that access to Eircom's civil engineering infrastructure is provided at historic costs. Given that most of the costs relating to NGA deployment arise in the final connection to the end-user, it is vital that access is granted to the SMP operator's duct, pole and fibre infrastructure. In addition, e|net believes that emerging technological solutions, by making full use of existing ducts and poles and enabling unbundling at the distribution point, offer the opportunity of providing customers with guaranteed data speeds in excess of 100Mbps at significantly lower cost compared to full FTTH deployment. e|net would be happy to discuss the practicalities of such solutions with ComReg and to explore how they may be accommodated within the regulatory framework for NGA services in Ireland.

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## 2 RESPONSES TO CONSULTATION QUESTIONS POSED BY COMREG

***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.***

This question is obviously more appropriate for those operators who are – unlike e|net – currently providing copper-based services and so the issue of what the transitional period for the switch to fibre will be is clearly of more relevance to such operators. e|net believes that ComReg’s view<sup>1</sup>, i.e. that the transitional period will be of 3-5 years from the start of NGA rollout is a reasonable one, although it goes without saying that there remains considerable doubt at this stage over Eircom’s NGA rollout plans.

***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.***

While it may be appropriate at some point in the future for the Government to consider how best to manage or incentivise – from a national perspective, in line with the targets for the take-up of ultra-fast broadband services within the EU that are contained in the European Commission’s *Digital Agenda for Europe*<sup>2</sup> – a migration from copper to fibre, it is clearly not appropriate for ComReg, as national regulator, to be considering this issue now. At the present time, the main concern has to be to ensure that an appropriate climate for NGA investment is in place (one that protects and fosters competition) and it is only when NGA deployment is well advanced that consideration, from a national policy point of view, might need to be given either to incentivising customers to switch from copper to fibre or incentivising the SMP operator (through regulated pricing or other measures) to ensure that such migration occurs.

Clearly, pricing of copper-based and fibre-based services (both at wholesale and retail) will be of key importance in this regard, as will other issues such as consumer awareness of the benefits of fibre and the emergence of services that can only operate fully on fibre-based connections. For now, however, the key concern from a policy perspective has to be that the deployment of NGA starts to get underway, with the issue of how best to migrate customers onto the NGA

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<sup>2</sup> As well as setting a target of 100% availability of 30Mbps broadband services, the *Digital Agenda* also specifies a take-up target of 50% of EU households subscribing to services of “above 100Mbps” by 2020. See: <http://ow.ly/bgGWI>.

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best left for detailed consideration at a later date, depending on market developments in the meantime.

**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.**

Yes. As ComReg notes<sup>3</sup>, the NGA Recommendation stipulates that access to civil engineering infrastructure is essential to encourage efficient investment and infrastructure competition. e|net believes that efficient and timely access to civil engineering infrastructure (including, where reasonable, access to dark fibre) that is under the control of the SMP operator could be a major determinant in lowering the cost of NGA deployment by alternative players.

e|net therefore welcomes ComReg’s proposal to mandate such access and to oblige Eircom to publish a Civil Engineering Infrastructure Reference Offer, which should set out clearly the processes and timescales involved in accessing the product, which should be made available at fair market rates. In this latter respect, e|net also welcomes ComReg’s proposal that the regulated price for this type of access should be cost-oriented, based on a depreciated historical cost accounting (‘HCA’) method.

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

No. As ComReg makes clear in the Consultation Paper<sup>4</sup>, both BT and Vodafone have already stated that there is a need for an obligation mandating access to the terminating fibre segment in the context of FTTH. ComReg justifies its proposal not to mandate the terminating segment on its unproven assertion that “*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*” and hence that unbundled access to the fibre loop (which includes the terminating segment) is sufficient.

However, as ComReg itself makes clear, the NGA Recommendation specifies that access to the terminating fibre segment should be mandated and ComReg’s reasoning for its proposal not to do so does not appear to be sufficiently robust, in particular given the fact that two operators have already stated their support for such an obligation. In e|net’s opinion, an obligation on the SMP operator to provide access to the terminating segment would not be unduly burdensome and, if designed properly, would be easy to implement. As a result, e|net urges

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<sup>3</sup> Consultation paper, Para. 5.15.

<sup>4</sup> Ibid., Para. 5.55.

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ComReg to reconsider its proposal on this issue.

**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.**

ComReg's preliminary conclusions in this area are based on two principal policy proposals, i.e.

- the definition of Eircom's "NGA Footprint Area", and
- the possible withdrawal of SLU obligations within the NGA Footprint Area.

We set out below our position on each of these two proposals.

### **Definition of Eircom's NGA Footprint Area**

In its Consultation Paper, ComReg explains that it proposes to define the NGA Footprint Area as the *"geographic area served by Eircom's largest exchanges, i.e. those with greater than 1,800 connections, which includes approximately 194 exchanges. A NGA footprint area is an area where fibre is likely to be deployed in the access network"*<sup>5</sup>. ComReg further states (at footnote 22) that the delineation of the NGA Footprint Area will be based on an analysis of "confidential data" which *"will be provided to Eircom separately as part of the consultation process and Eircom will be required to confirm whether the proposal is a reasonable basis for determining the likely NGA Footprint Area"*.

Based on the above, e|net notes that the definition of Eircom's NGA Footprint Area is an issue that will be decided upon in a non-transparent manner by ComReg and Eircom. While e|net understands that considerations relating to commercial confidentiality need to be taken into account, it is nevertheless important for competing market players to have as much visibility as possible on the inputs used by ComReg (and shared between ComReg and Eircom) in arriving at its determination of what constitutes Eircom's NGA Footprint Area.

e|net also notes that ComReg has not clarified how and in what manner it proposes to formally delineate Eircom's NGA Footprint Area. e|net would expect that ComReg would do so by way of a formal Decision, in which full details of the Eircom exchange areas that are to be included would be set out in a transparent manner. Furthermore, such a Decision must include a formal commitment on the part of Eircom specifying a clear timescale in which it will roll out its planned NGA services within the Footprint Area. This commitment should be supported by substantial performance guarantees which would be forfeited if Eircom fails to

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<sup>5</sup> Consultation Paper, Para. 2.3.



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comply with the relevant rollout targets.

e|net further takes the view that, once ComReg has adopted a Decision formally defining Eircom's NGA Footprint Area, the SMP operator should not have the freedom to roll out its NGA network beyond this area, unless and until (1) it has fully completed its rollout within the NGA Footprint Area and (2) it has received ComReg's approval for such additional rollout. Such a restriction on Eircom is, in e|net's view, necessary to prevent the SMP operator from targeting any NGA deployment outside of its NGA Footprint Area in a tactical manner with the aim of undermining NGA investment by alternative operators.

By restricting Eircom in this way, ComReg will be able to ensure the NGA deployment across the country is maximised, via Eircom within its NGA Footprint Area (which is where UPC's network is also currently concentrated) and via alternative providers and, subject to its approval, Eircom outside the NGA Footprint Area.

### ***Withdrawal of SLU obligations within Eircom's NGA Footprint Area***

e|net notes that ComReg's aim in defining such an NGA Footprint Area appears to be solely driven by its desire to facilitate "potential restrictions on co-location in the cabinet, where bandwidth enhancing technologies are planned". In this regard, ComReg's proposal appears to be predicated entirely on Eircom's plans to implement vectoring with its deployment of VDSL, with the aim of providing a further boost to throughput speeds over and above that which could be attained with VDSL alone. In e|net's view, ComReg's apparent willingness to accept Eircom's position on this matter is deeply flawed, for the following reasons:

- As ComReg itself states, the shorter loop length from the cabinet to the end-user premises yields "considerably greater speeds" compared to standard ADSL technologies currently used by Eircom. Current data speeds are typically 'up to' 8Mbps (for ADSL) and 'up to' 24Mbps (for ADSL2+) with uplink rates for both usually well below 1Mbps. Expected speeds from FTTN/C proposed by Eircom, based on its own data on loop lengths, are projected to reach 40Mbps downstream and 20Mbps upstream to the approximately 50% of premises that are located within 500 metres of a street cabinet. This means that, without adding vectoring to the mix, Eircom will be in a position to offer a five-fold increase in data speeds through the deployment of VDSL;
- Vectoring *could* potentially add a further 50% in data download speeds within areas less than 600 metres from a street cabinet but this technology is as yet unproven by Eircom and has not yet been rolled out commercially in any other fixed incumbent's network. As a result, ComReg appears to be willing to take a very considerable leap of faith – one that involves the withdrawal of an important regulatory obligation – in support of Eircom's plans to deploy this unproven solution and for a marginal speed increase in NGA terms;
- While operators such as Belgacom in Belgium are also committed to using vectoring in conjunction with VDSL and the Belgian regulator is



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supporting this move via the withdrawal of the SLU obligation in those areas where Belgacom plans to roll this out<sup>6</sup>, it needs to be borne in mind that Belgacom first began to deploy VDSL several years ago and that it already has this technology extensively rolled out, with 76% of Belgian households able to access VDSL2 services and with 85% able to do so by 2013.<sup>7</sup> As a result, that operator's plans to deploy vectoring appears far more credible (and the regulator's accommodative stance more understanding) compared to Eircom's plans to commence the deployment of VDSL at some point in the future.

In e|net's view, ComReg should at this juncture adopt a far more cautious approach to Eircom's proposal for the deployment of VDSL with vectoring and it should not make any moves either to withdraw the current SLU obligation or to consider designating NGA and non-NGA areas (which appears to be little more than the identification of a Next Generation Digital Divide). Instead, ComReg should first see how Eircom is proceeding with its VDSL rollout and, at the same time, ComReg should monitor how the deployment of vectoring is proceeding in other jurisdictions, such as Belgium, where VDSL has already been rolled out extensively. At such time when Eircom has completed a widespread VDSL rollout and if it has been established that the deployment of vectoring alongside VDSL has commercial and technical merit, then ComReg could revisit this issue.

***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.***

e|net has considered making a request for access to the sub-loop in the past and such a request remains under consideration.

<sup>6</sup> See European Commission's 'Article 7' letter dated 20/06/2011 to CRC relating to Cases BE/2011/1227-8 at: <http://circa.europa.eu/Public/irc/info/ecctf/library?l=commissionsdecisions/be-2011-1227-1228/EN1.0&a=d>

<sup>7</sup> Ibid., Page 10.

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***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.***

e|net intends to have an appropriate bandwidth enhancing technology available for deployment.

Our preferred bandwidth-enhancing approach is to deploy a technology which is more future-proof than bonding, vectoring, phantom etc.. We do see an application for VDSL2 and related enhancements in certain locations but our preference is for a combination of FTTH and FTTDP (Fibre to the Distribution Point).

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

Yes, e|net agrees that backhaul and exchange and cabinet co-location are all required.

As ComReg points out<sup>9</sup>, NGA access seekers who intend to unbundle the sub-loop require access to backhaul services, otherwise the wholesale products they are seeking to access are rendered ineffective. e|net agrees with ComReg's position<sup>10</sup> that such backhaul access should be priced on a BU-LRAIC basis.

Likewise, e|net supports ComReg's reasoning<sup>11</sup> supporting its conclusion that exchange and cabinet co-location are both required in the context of FTTC. Regarding the latter, e|net agrees that two-cabinet approach would appear to be the most sensible option. As ComReg states<sup>12</sup>, unless exchange co-location is available then access to Next Generation WPNIA products, such as VUA and FTTH, cannot be guaranteed.

***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.***

Yes, e|net concurs with ComReg's preliminary conclusions in relation to its assessment of Market 5 obligations in the context of NGA. e|net notes that the Market 5 wholesale products that ComReg has proposed are consistent with those that are emerging in other EU Member States and are also in line with those proposed by Eircom under its NGA pilot initiative.

***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.***

Yes: e|net believes that, as is the case for Next Generation WPNIA products, backhaul will also be required in the context of Next Generation WBA products. However, unlike backhaul for WPNIA services, ComReg needs to recognise that Eircom is not the sole supplier of backhaul services to support WBA. As a result, regulation in this area should be geared in a way that provides transparency in

<sup>9</sup> Consultation Paper, Para. 5.113.

<sup>10</sup> Ibid., Para. 5.114.

<sup>11</sup> Ibid., Paras. 5.117-5.122.

<sup>12</sup> Ibid., Para. 5.122.

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relation to the SMP operator's pricing and its operational arrangements so that commercially viable alternative offerings by other providers are facilitated.

***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.***

Yes. Obligations ensuring that the provision of wholesale access by the SMP operator occurs in a manner that is fair, reasonable and timely will be required in the context of NGA services in exactly the same way that they are for current generation services. e|net also agrees with ComReg's preliminary conclusion that, as part of its access obligation, NGA access provision by Eircom should – as is the case with current generation wholesale services - be supported by appropriate Service Level Agreements (SLAs).

***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 WPNIA market (Market 4)? Please provide reasons for your response.***

Yes. As ComReg points out<sup>13</sup>, the ability to migrate seamlessly and efficiently between different wholesale products is a characteristic of all wholesale products and this facility should obviously also include next generation products in the WBA and WPNIA markets.

***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.***

Yes. e|net agrees that the standard of Equivalence of Inputs (Eoi) should apply where possible in the provision of wholesale NGA services by the SMP operator. e|net notes that it is Eircom's stated intention that the Eoi standard should apply in relation to its provision of NGA services but we also recognise, as ComReg points out<sup>14</sup>, that there may be instances where Eoi provision may not be possible and that, in such circumstances, the Equivalence of Output (EoO) standard would need to apply. ComReg will, however, need to be vigilant in its monitoring of this issue, to ensure that EoO remains the exception in relation to NGA provision by Eircom and not the norm.

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<sup>13</sup> Consultation Paper, Para. 7.37.

<sup>14</sup> Ibid., Section 8.6 (a).

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***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.***

Yes. Transparency in relation to pricing and non-pricing terms and conditions encompasses a number of important regulatory obligations that underpin Eircom's provision of current generation wholesale services. It is vital that similar obligations – covering such issues as network development and rollout, product development and product changes, information on available services and facilities, advance notice on price changes and the publication of relevant Key Performance Indicators (KPIs) – are also put in place in the context of Eircom's provision of NGA wholesale services.

***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.***

e|net agrees with ComReg's assessment<sup>15</sup> that an integrated operator such as Eircom could have a natural advantage in arranging "multi-touch" service delivery and so it is important that OAOs are not placed at a competitive disadvantage arising from this situation. Given that access to customer premises is likely to be required in an NGA context in order to install Network Termination Units (NTUs) and, possibly, associated Customer Premises Equipment (CPE) one way of ensuring that Eircom does not leverage its market power from the wholesale market to the area of retail provisioning and in-home equipment would be for ComReg to place an obligation on Eircom to install, on request, managed CPE at cost on behalf of OAOs.

***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.***

e|net would largely accept the Eircom position, as set out by ComReg, that barriers to entry to the retail VOIP market are likely to be low based on Eircom's proposed NGA wholesale product set. As ComReg points out<sup>16</sup>, many operators already offer VOIP services and VOIP accounts for increasing volumes of voice

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<sup>15</sup> Ibid., Para. 10.3.

<sup>16</sup> Ibid., Para. 10.9.

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traffic. In an NGA environment, voice will evolve to become yet another data service delivered using IP and so, as ComReg states, it will be important that Eircom offers OAOs suitable Quality of Service (QoS) guarantees within its active wholesale products so that OAOs are able to offer managed VOIP services of a similar quality to those offered by Eircom and others (such as UPC over its cable network). Providing Eircom does so, there are unlikely to be any significant barriers to entry to the retail VOIP market in an NGA context.

***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.***

***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.***

e|net notes that ComReg's proposed approach to price control in the area of NGA wholesale services is closely aligned with its existing regulatory approach for current generation services. e|net believes 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.

***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.***

e|net is of the view 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 update has been completed.

***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.***

Yes – it clearly makes sense that access to these assets be priced on the basis of historical rather than current costs. ComReg needs to ensure, however, that the basis for calculating the historic cost-based charge is transparent and verifiable. In particular, the onus must be on Eircom to prove any historical claims it makes as regards when a particular piece of infrastructure was put in place. In

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this respect, ComReg should adopt the position that, unless Eircom can prove to the contrary, it must be assumed that costs relating to civil engineering are fully depreciated.

ComReg also needs to ensure that any additional incremental costs associated with remediation and maintenance that Eircom charges for duct sharing access are not excessive and do not act as a barrier to sharing by other operators.

***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.***

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. As a result, ComReg must adopt a vigilant approach in relation to ComReg's retail and wholesale pricing for NGA services to ensure that such pricing complies with the various margin squeeze tests that ComReg proposes to put in place.

***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.***

Yes. 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.

*Note: There is no Q24 in ComReg's Consultation Paper.*

***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.***

Yes. ComReg's proposed retail margin squeeze test appears to be appropriately framed and the flanking proposals – covering pre-notification and the preparation of a statement of compliance by the SMP operator – also appear to be sensible.

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***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.***

No - given Eircom's position as the SMP operator for current generation WPNIA and WBA services and, arising from this, given the clear incentive it would have to leverage its dominance into adjacent markets, e|net questions the logic of ComReg's "materiality" test as it would appear to open the door to Eircom to engage in anti-competitive pricing in order to gain a significant foothold in the market for NGA retail services. If Eircom has a blanket obligation to provide ComReg with a statement of compliance regardless of the size of its NGA retail customer base then such a threat would be greatly diminished and so e|net does not support ComReg's proposals in this area.

***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.***

Yes – these obligations follow those ComReg is proposing for the application of the retail margin squeeze test.

***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.***

Yes – e|net supports ComReg's approach to allow sufficient 'economic space' between the various products with the overall goal of incentivising more infrastructure-intensive market entry.

***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.***



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e|net agrees with the principles of the margin squeeze test as set out by ComReg, with the exception of its proposal to use a portfolio approach rather than a product-by-product approach. e|net takes the view that the use of a portfolio approach - combined with the proposal that Eircom would only be obliged to submit a statement of compliance with the retail margin squeeze test where the new product is likely to represent 20% of Eircom's NGA customer base (or 20,000 retail NGA customers, whichever is lower) – provides too much pricing flexibility to Eircom which is not warranted given the SMP positions it holds in relation to the provision of current generation WBA and WPNIA services and is likely to hold in relation to their NGA equivalents.

e|net takes the view that the test should instead be based on a product-by-product approach and that furthermore it should include the principle that pricing consistency is maintained between different bandwidth services provided over copper and fibre.

***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.***

Given the current position in relation to NGA rollout and the fact that, as ComReg points out, the adoption of any one of Options 1-4 “could give rise to significant political, economic, social and technological issues”<sup>17</sup>, e|net favours the maintenance of the status quo (i.e. Option 5). e|net also agrees with ComReg<sup>18</sup> that regardless of which option is eventually chosen, an appropriate economic space needs to be maintained between SLU and LLU and services like WLR, VUA and Bitstream.

***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.***

It is important that ComReg keeps an open mind on different possible co-investment approaches for NGA deployment but it is equally important that any agreements in this area which involve the SMP operator are, as ComReg states they will be<sup>19</sup>, subject to pre-notification to it. Likewise, it should, of course, also be the case that co-investment initiatives which do not involve the SMP operator do not receive any regulatory scrutiny.

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<sup>17</sup> Ibid., Para. 11.304.

<sup>18</sup> Ibid., Para. 11.310.

<sup>19</sup> Ibid., Para. 11.362.

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e|net believes that an important principle regarding co-investment is that Eircom is not allowed to use its market position - as the SMP operator in current and, most likely, next generation WBA and WPNIA markets - to give itself more preferential treatment in any co-investment agreement. For this reason, it should be the case that any co-investment agreements involving Eircom happen on an arm's length basis, via the establishment of a separate entity where all those involved in the co-investment are shareholders.

**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.**

e|net would favour the use of a one-off migration charge, as opposed to a recurring monthly charge. As ComReg points out, a recurring migration charge for VUA would be inconsistent with the approach used for current generation migrations, where – for example in relation to LLU – a one-off migration charge occurs.<sup>20</sup>

e|net agrees that Option 1 (ComReg's proposed universal migration charge) would appear to be the most appropriate option for migrations in the WPNIA and WBA markets.

**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.**

**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.**

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<sup>20</sup> Consultation Paper, Para. 11.373.

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**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.**

**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.**

**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 with NGA services? Please provide the details as part of your response.**

**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.**

e|net has no specific comments to offer in relation to the above questions posed by ComReg on the way in which it proposes to formulate the retail-to-wholesale NGA Bitstream (and End-to-end NGA Bitstream) margin squeeze test.

**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.**

Yes – e|net agrees with ComReg's proposed approach to base the costs that are specific to End-to-end NGA Bitstream on additional NGN backhaul costs and IP connectivity costs.

*Note: There is no Q45 in ComReg's Consultation Paper.*

**Q. 46 Do you agree with the proposed approach for determining the cost stack for NGA Bitstream? Please provide reasons for your response.**

Yes – e|net agrees with ComReg's proposed approach for determining the cost stack for NGA Bitstream.

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***Q. 47 What are your views regarding the parameters for determining the relevant costs for a Multicast service. Please provide reasons for your response.***

e|net has no views it wishes to offer in response to this question.

***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.***

Yes – e|net agrees with ComReg’s proposed approach for determining the cost stack for the VUA product in the WBA market.

***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.***

Yes – e|net supports the inclusion of a 95:5 probability weighting factor in determining the costs of the VUA product, given that Eircom’s NGA rollout plans (i.e. where the VUA product will be available) will largely replicate its existing LLU footprint.

***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.***

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. The pricing of such a product needs to reflect this fact and it is for ComReg in the first instance to assess whether or not the cost elements that should be included within such a VUA product are the same as those included for Multicast in the context of NGA Bitstream services.

***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.***

e|net has no views it wishes to offer in response to this question.

***Q. 52 Do you agree with the proposed outputs from the NGA Margin Squeeze Model? Please provide reasons for your response.***

Yes – e|net agrees that the proposed outputs of the Margin Squeeze Model, as set out in Table 16 of ComReg’s Consultation Paper, are appropriate.

***Q. 53 Do you agree that the proposed price control period should be for at least three years in the context of NGA services in the WPNIA and WBA markets? Please provide reasons for your response.***

No – e|net is of the view that a three-year price control period would be too short, given the likely time required for the deployment of Eircom’s NGA network and for OAOs to migrate customer connections in meaningful numbers to the new network. In e|net’s opinion a price control period of five years, which could be reviewed midway to take account of market developments, would be more appropriate in this regard.

***Q. 54 Do you believe that the draft text of the proposed Decision Instrument is from a legal, technical and practical perspective, sufficiently detailed, clear and precise with regards to the specifics proposed? Please explain your response and provide details of any specific amendments you believe are required.***

***Q. 55 Do you believe that the draft text of the proposed Decision Instrument is from a legal, technical and practical perspective, sufficiently detailed, clear and precise with regards to the specifics proposed? Please explain your response and provide details of any specific amendments you believe are required.***

e|net has no specific comments to offer on the draft text of the proposed Decision Instrument. In e|net’s opinion, it is for ComReg – in framing its proposed Decision Instrument – to satisfy itself that the draft text contained in the document is sufficiently detailed, clear and precise from a legal, technical and practical perspective as regards the specifics proposed.

Submissions to Consultation Document No. 12/27

ComReg 12/97

## **7 Imagine Communications Group**

# Imagine response to consultation

## 12/27

**Imagine welcomes the opportunity to respond to this consultation.**

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.

***At this stage it's impossible to say what the transitional period should be with any certainty as there are so many unknowns particularly in the success of the rollout and its take-up. A lot of this will depend on the simplicity of product, the simplicity and seamlessness of provision and the actual price and usage of any service. Imagine believes that these factors will only become clear after phase 1/2 is actually rolled out and these factors can be satisfactorily analysed. Imagine believes that the provision of non NGA services over copper will be required for a very long time particularly for those customers that don't require NGA services. Taking these factors into account Imagine believes that the transitional period will need to be longer than 5 years and cannot see a circumstance where this period should be less than 5 years.***

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.

***Imagine believes that the market will decide and if the product is properly priced at a wholesale level, the provision is simple and seamless and the product actually delivers its KPI's the market will drive change itself.***

***There is no doubt regardless of the above any incentivisation by ComReg in terms of more favourable regulated pricing would undoubtedly speed up any transition.***

**A migration strategy should be documented outlining the appropriate actions to be taken once the copper access network is no longer commercially viable. Metrics describing the commercial viability should be included along with the obligations of Eircom, the OAO and/or the copper customer.**

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.



***The availability of such products is justified on the basis that it allows OAO to fully determine the most effective manner in which to enter the market. Imagine agree with ComReg's preliminary conclusions that civil engineering infrastructure be mandated. Cost plus related pricing for this would be the only way that this could work.***

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

***Imagine agrees with ComReg's preliminary conclusions on network access in the context of FTTH. Unbundled access to the fibre loop should always be available regardless of the network topology.***

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.

***Imagine believes that the SLU obligation should be maintained particularly as bandwidth enhancing technologies are not available and there is no well understood or known timeframe for their availability, known cost or compatibility. ComReg should monitor the market and the technology developments and if appropriate consult on the removal of SLU in the future.***

**It is Imagine's opinion that SLU should be mandated in the short term (until availability of bandwidth enhancing technologies becomes more clear) however given the increasing demand of data services future decisions should be weighted in favour of the long term benefits associated with bandwidth enhancing technologies such as vectoring**

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

***Imagine agrees with the general conditions which would apply to all options. It does not however deal with the scenario of existing OAO's that already have SLU access.***

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.

***Imagine has not yet decided if this is a strategic direction that it is going yet.***

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

***Imagine has not yet decided if it will deploy a bandwidth enhancing technology for NGA. There are too many unknowns including technology roadmaps, and technology costs. There are still many unknowns regarding the availability of alternative access technologies, the demand for the increased bandwidth enabled by these technologies or the pricing of such services.***

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

***Imagine agrees with ComReg's analysis and that Backhaul and exchange and cabinet co-location are required.***

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.

***Imagine agrees with ComReg's preliminary conclusions in relation to its understanding and assessment of Market 5 obligations.***

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.

***Imagine agree with ComReg's conclusion that Eircom should have an obligation to provide backhaul to enable the provision of next generation WBA products and services. The obligation should also require Eircom to provide a backhaul facility with Customer Sited Handover, In-span and In-building variants.***

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.

***Imagine in general agree with ComReg's preliminary conclusions on the terms and conditions of the access obligation which are common to WPNIA and WBA.***

***Imagine reinforces that adequate notice has to be given for the withdrawal of access and this will only be acceptable if equivalent access is available in the new network. Imagine believes that 5 years is reasonable.***

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 WPNIA market (Market 4)? Please provide reasons for your response

***Imagine agrees in general with Comreg's preliminary conclusions. It is imperative that a working and seamless migrations process is in place and that there is absolute equivalence between OAO's and Eircom retail. Lessons should be learnt from the LLU experience where the process did have difficulties which had a knock on negative affect on competition and undoubtedly reduced the number of migrations. E.g.***

- ***Customer's experiencing outages***
- ***Delays in getting into exchanges***

**Any migration must follow a clear and simple process which minimises service interruption.**

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

***Imagine believes that equivalence particularly for the smaller operators has to be implemented absolutely unless there is an overwhelming reason not to. OAO's should be made aware of where this is the case and why. It has become obvious during the forum meetings that there seems to be equivalence issues across the board from product delivery through process and SLA. These have to be addressed successfully to ensure an equal playing field. Imagine in particular supports Vodafone's view on this detailed in the consultation and supports BT's SOR's and comments on equivalence that are reflected in the minutes of the forum. While ComReg's analysis is comprehensive it has to be acted on to make sure that discrimination does not occur.***

**Imagine sees the value in ComReg explicitly documenting the strategy, processes, procedures and overall "Transparency Obligations" to manage any such potential discrimination.**

**While the objective of margin parity between operators with network infrastructure and those without is valuable, it is the opinion of Imagine that this objective should be over-ridden by overall market competition. In other words pricing should not necessarily be elevated for the benefit of infrastructure owning operators to the cost of the consumer.**

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

***Imagine agree with BT's assertion that "strong and effective transparency remedies" are required in order for a non-discrimination obligation to work. We believe that the obligations set out in the consultation are the minimum required by Eircom as a vertically integrated operator to meet transparency needs and this should be under constant review by ComReg.***

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.

***Imagine believe that this will be one of the areas where Eircom as a vertically integrated operator has the potential to gain great advantage over OAO's. Particularly on the scheduling of multiple appointments and the working state of customers premises (in terms of physical operation) after the service is enabled (be it wires only or wholly outsourced installation). Home alarms wiring (particularly Eircom Phonewatch), internal wiring hookup, POT's access to STB's plus any re-positioning of the NTU because of the need for additional powerpoints are all areas for contention and advantage for Eircom. We believe that even though these issues are being addressed in workshops there is the potential for undue advantage for Eircom and we believe that absolute equivalence and transparency in terms of appointment scheduling and personnel as well as post installation tests and NTU installation procedures are crucial. We believe it will be upto ComReg to monitor this and provide assurances that individual breaches or failings in process and procedure are addressed.***

Imagine sees the value in an industry wide standard approach to demarcation points and the treatment of internal wiring. From experience it is Imagine's view that all operators should agree to avoid any interaction with internal wiring.

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.

***Imagine do not agree that the barriers to entry into the VOIP market are low. Providing an equivalent to a PSTN service is different and comes with more obligations than an OTT VOIP service. Number porting, ECAS delivery, local power issues are all areas that have to be considered when replicating PSTN. There is also the requirement for Legal Call Intercept which is always required.***

***Also the MTBF of the back end soft switch has to be equivalent to older PSTN services which requires investment.***

***FAX, Modem and DTMF support as well as credit card machine support and the support of SMS to landline all add complication and no service can be truly seen as replicating PSTN without these being addressed.***

***We believe that the investment, skillset to configure and manage and the obligations detailed above cannot be considered a low barrier to entry for anyone serious about voice delivery.***

***Also in the narrow band bitstream market there is generally a copper alternative to provide PSTN services. In FTTX this crutch may be removed.***

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

***Imagine believes 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 Imagine do believe as detailed by ComReg that price control obligation is warranted in relation to NGA products and services.***

***Therefore Imagine in principle agrees with ComReg's views with the caveat's detailed above.***

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.

***Imagine do believe that a cost-oriented price control is appropriate.***

***Imagine do not believe that pricing can in any way be related to retail pricing but be on a cost plus model only. This would include services including migration services. Even though ComReg in this consultation say that proposals are not in the traditional manner retail minus it is important that they are not.***

***Imagine agrees with ComReg's assertion that there is currently insufficient evidence to indicate that it is in Eircom's interest to provide access on reasonable terms without regulation and believe that light touch regulation may not be appropriate.***

***Therefore Imagine in principle agrees with ComReg's views with the caveat's detailed above.***

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.

**Yes, based on the reasons stated in the question.**

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.

**We believe that at the current time adopting an HCA basis is a practical approach however 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.**

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 NGA: should this period be and what triggers for a change should be considered? Please provide reasons for your response.

**Yes – there should be some link, however – a further review of the different cost structures for the implementation and maintenance of copper vs fibre should be carried out to determine if this has a material effect on the respective pricing of related services. Migration to fibre should not be encouraged by differential pricing unless this is founded or based on the actual cost differentials.**

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.

***Notwithstanding the fact that a Margin Squeeze test is the established approach in the Irish Market* Imagine 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 and is one of the main factors leading to the poor take up of LLU services in the Irish Market.**

***We believe 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 services.***

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.

**No, until the NGA/WBA market evolves further it is not clear if the reduction in compliance obligations is justified as it is not possible to determine what impact changes to Eircom's retail prices will have on competition and the**

**market or whether these apply to or could indeed be restricted to only the customer base in the proposed tests.**

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

**No – it cannot be predicted in advance whether any such changes are likely to be material or not therefore at the current time and until the NGA/WBA market evolves further we do not believe that there should be any reduction in compliance obligations**

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.

**Imagine favours an overall approach based on cost plus rather than margin squeeze.**

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

**Imagine favours an overall approach based on cost plus rather than margin squeeze**

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.

**Imagine favours an overall approach based on cost plus rather than margin squeeze**

**Imagine disagrees with the use of EEO as the operator base cost for VUA to SLU**

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.

**Yes**

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.

**Its difficult to answer this question as the whole provision of POTS is subject to an outstanding action in the Forum and will not be addressed until after the answers to this consultation are drafted.**

**Imagine would like to point out that there is a huge difference to fixed line replacement over VOIP and an OTT VOIP service. For today in Ireland Fixed line replacement is really the only acceptable option given the requirement of customers to hook certain devices to their telephone line. This includes:**

- **Set top boxes for satellite services**
- **Other Modem based services**
- **Alarms (particularly Eircom Phone Watch)**
- **Other DTMF based services**
- **Fax**
- **Credit Card machines**

**These requirements are not going to be migrated to be OTT VOIP friendly quickly.**

**Imagine do believe 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 believe that those lines that are not able to receive NGA services should also benefit from this new pricing.**

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.

**Any of the described options may be appropriate however it is not possible to determine in advance the exact nature and terms of any co-investment agreement and therefore what measures if any are necessary to maintain a consistent and non discriminatory regulatory approach. We believe that any such arrangement should be subject to consultation once the details are made known.**

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. . 223

**Migration costs (including connections where appropriate) should be one off charges.**

**We would also strongly disagree with the statement 11.400 that Eircom may be allowed to charge operators the incremental cost of running the copper network in addition to the fibre network.**



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.

**We are unable to agree or disagree as there is not sufficient information made available to determine the overall impact of the different options – we would like to see some worked examples with information such as the range, minimum, maximum and average costs for different scenarios and also to understand further what if any impact this would have on migrations outside the NGA footprint.**

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

**No, we would expect that the following cost categories would be susceptible to some form of economies of scale/scope:**

- **Accommodation**
- **Help Desk**
- **Order Handling**
- **Backhaul Charges**
- **Server Collocation**
- **Corporate**

**We also expect that backhaul and server costs are variable dependant on the number of NGA lines.**

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.

**No, as this assumes that all OAO are in fact large (multinational) network operators and as such discriminates against smaller indigenous OAO. Therefore we do not believe that any retail costs should be subject to an EEO approach.**

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.

**Whilst we agree that the above statement is true it assumes that an operator (OAO) is large enough to have such another part to its business**

**which may not be the case therefore we do not agree that this should be a factor when determining appropriate approaches.**

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.

**Yes, we see no reason why this should not be the case for similar reasons given in our response to Q36 and Q37**

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.

**At the current time it is not possible to provide an accurate response based on the number of uncertainties still remaining in the migration process. However based on previous experience of migrations from xx to xx the costs could range anywhere from €xx to €yy**

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.

**Yes**

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.

**Yes**

Q. 42 What do you consider is a reasonable estimate of the likely installation costs involved with NGA services? Please provide the details as part of your response.

**At the current time it is not possible to provide an accurate response based on the number of uncertainties still remaining in the installation process. We do however believe that experience gleaned in the pilot would be a good guideline.**

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.

**Imagine has insufficient information to respond to this question at the current time.**

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.

**Yes**

Q. 46 Do you agree with the proposed approach for determining the cost stack for NGA Bitstream? Please provide reasons for your response.

**Yes**

Q. 47 What are your views regarding the parameters for determining the relevant costs for a Multicast service. Please provide reasons for your response.

**We believe that costs for multicast services would include platform and marketing costs as well as additional elements in the following categories:**

- **Sales**
- **Product management and development**
- **Help Desk**
- **Billing**

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.

**No, we agree with the overall approach however we do not believe that the cost of fault clearance should be included (as per Qu. 51) and also that costs should be based on an SEO approach.**

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.

**No, given that the rollout of NGA will be limited to a subset of exchanges/areas the rollout excludes those areas that would be deemed unlikely to be feasible – therefore there is no need to apply any weighting factor.**

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.

**No we do not believe that there are any additional costs for VUA to support multicast services.**

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.

**No the cost of fault clearance should be kept separate in order that it remain transparent and monitored. This should however be reviewed again in the future once appropriate data for the NGA is available**

Q. 52 Do you agree with the proposed outputs from the NGA Margin Squeeze Model? Please provide reasons for your response.

**No, we believe that the costs that have resulted are too high and do not reflect a level that would stimulate innovative and competitive offerings in the broadband market**

Q. 53 Do you agree that the proposed price control period should be for at least three years in the context of NGA services in the WPNIA and WBA markets? Please provide reasons for your response.

**We believe that it should be for a minimum period of 5 years with the option to review after 3 years. Only if it can be shown that competitively priced equivalent broadband services on a par with other benchmarked countries are available should price controls be removed. Likewise if it is shown that the resulting development of the broadband market is not in line with benchmarked countries the will be a strong argument for further price control.**

Q. 54 Do you believe that the draft text of the proposed Decision Instrument is from a legal, technical and practical perspective, sufficiently detailed, clear and precise with regards to the specifics proposed? Please explain your response and provide details of any specific amendments you believe are required.

**We have not reviewed this in detail as we believe that based on the consultation responses there will be many changes to the draft text.**

## **8 Magnet Networks Limited**

Magnet Networks welcomes this consultation as it helps outline the issues that OAO's are having with current negotiations with Eircom around NGA.

The following problems/issues have arisen and have failed to be adequately addressed in the forum or via bilaterals but are being addressed either head on or tangentially by this consultation:-

1. Business customers and business products are not been dealt with in the forum
2. Inferior services may be given to OAO's.
3. Inhouse FTTH and FTTC wiring
4. Migrations
5. Multicast is not a product and is not on eircom's roadmap.

*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.*

As outlined in Clause 3.24 a transition period between 3 years to 5 years is appropriate. Some of the technologies such as vectoring that Eircom are proposing are not currently in commercial usage stage. It cannot be seen as a fait accompli that Eircom will actually roll out vectoring or a similar product.

Eircom has also moved out of the deployment plan i.e. moving goalposts, as well as the impact this consultation will have on the products that are offered at launch date.

Magnet Network believe that the main issues here are the ability to sweat LLU or potential strand LLU, actual services what they are and their deployment dates and take up/demand. If no big take up then longer transition period. Thus, it is important to maintain copper services to allow LLU players sweat their assets.

*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.*

There is a very fine line Eircom and ComReg have to thread as incentivising would lead to the issue of stranding LLU and not allowing companies sweat an asset that has cost a lot to invest and has not taken off over the 10 year period.

*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.*

Overall Magnet Networks agrees with ComReg's preliminary conclusion and Eircom has already stated that access will be provided to civil engineering infrastructure; however, OAO's are awaiting the publishing of a reference offer. It is important to allow alternative suppliers fibre to a cabinet or premises and dark fibre if space in a duct is not available.

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

Magnet Networks agree with ComReg conclusions that Eircom should be mandated to allow fibre unbundled access. Magnet Networks agree with the mandate to access the terminating segment and agree with the other mandates in relation to access.

*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.*

Magnet Networks believe option C, which is to maintain current SLU mandate. However, ComReg must continue to monitor the market and the technology and if appropriate, remove the SLU mandate in identified area. A carte blanche should not be given to Eircom or any provider which prevents others providing SLU i.e. exchange banking should not be allowed. Also, if ComReg does remove the SLU mandate from a certain area or exchange, and if the provider who sought the removal of that mandate does not unbundle those cabinets within a 12 month period, the SLU mandate should be restored.

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

Overall, Magnet Networks agree with the conditions, however, Magnet feel that if SLU is withdrawn post this decisions a further consultation is required. Also, formal industry meetings in relation to rollout/technology/equipment and compatibility with modems etc will be required.

*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.*

**Confidential Answer provided.**

*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.*

**Confidential Answer provided.**

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

**Confidential Answer provided.**

*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.*

**Confidential Answer provided.**

*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.*

Backhaul is extremely important. Also, mandating backhaul in a WBA market is removing a barrier to entry and inviting more competition in the marketplace.

*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.*

Magnet Networks agree for the following reasons:-

1. Obligation negotiated in good faith
2. Obligation not to withdraw important LLU services, agree with Clause 7.12 5 years unless some settlement is reached on a commercial basis
3. OSS access is vitally important and there must be no discrimination.
4. Access obligation is extremely important and the SLA must be stringent especially relating to multicast and television as well as VoIP quality.
5. Obligation to allow colocation services to remain even if the LLU service is withdrawn from that exchange. This is to allow WEIL/WSEA and VUA.

*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 WPNIA market (Market 4)? Please provide reasons for your response*

Migrations are a contentious issue. The biggest issues that Magnet sees will be in relation to decoupling the service from the line. Currently, eircom's UAN's are based on the phone number. However, with the advent of new services like business grade VoIP and multicast telephone numbers may no longer belong to the provider providing the line, or may not be utilised by the end user at all. Thus, a more creative solution is required. However, Magnet does wholeheartedly agree with ComReg's preliminary conclusion that Eircom is obliged to offer intra and inter migrations. Consultation 12/40 in relation to Interoperability Process should hopefully give light to how the migration process should, ideally work.

*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.*

Magnet Networks agree that equivalence of input (EoI) should apply in NGA irrespective of legacy issues. Magnet Networks is not in favour of ex post regulation or relying on Section 13d requests. As outlined in Clause 8.55 services offered before the effective date of the decision require Eircom to demonstrate that these services are complaint and Eircom have 6 months to do so, is too long. Prior to the decision, ComReg should be examining the products and services on offer by Eircom and satisfying themselves that they are complaint. A 6 month period is sufficient period to allow competition damage to take place.

*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.*



Magnet believes Clause 9.29 raises an interesting point that a 2 track approach to NGA is happening, on one track is Eircom and its product development. On the second track is ComReg who are publishing consultations and skirting around issues and trying to come up with the optimal solution, whilst Eircom are pushing ahead. A declaration within 6 months is insufficient and inefficient and Eircom should only get 1 month to show that all the published products are compliant. Eircom and ComReg will have spoken many times before the decision is published and thus, Eircom has the foreknowledge to create a compliant product set in anticipation of ComReg's decision.

Magnet agrees with Clause 9.32 KPI's mandated from beginning based on 05/11 and the KPI's need to be stringent and strict to ensure and encourage non-discrimination in product development.

Overall, Magnet agree with the conclusions outlined by ComReg in relation to transparency and the terms and conditions imposed on next generation products.

*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.*

The only way for home wiring to work is as outlined in Section 10.3. Magnet agrees that the CPE adheres to a standard.

Magnet Network also feel that due to the lack of understanding by the general public and the customer about the amount of wiring required and the requirement of an electricity point near the NTU will potentially cause problems. The customer when they realise the work the engineer will need to do they may not wish to switch, as they may not see any benefit in increased speeds, versus the disruption to their hall. Thus, Magnet proposes some education of the public in relation to the practical, home wiring impact of moving to an NGA product.

*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.*

Overall, Magnet does not accept that there are low barriers to entry to the retail VoIP market. There are numerous reasons for this especially if an operators wants to compete with POTS :-

1. Interconnect is still required
2. Numbers are still required i.e. Number ranges from comreg,
3. GNP costs charged by operators
4. Class of Service (CoS) comes at an extra cost – to ensure voice gets priority over generic broadband and data.
5. Equipment cost i.e. splitters,
6. Engineer install costs at both business and residential
7. 95<sup>th</sup> percentile costs re traffic.

*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.*

It must be noted that Phase 1 NGA rollout has now been pushed out until Q1 2013 or Q2 2013.

Magnet believe the costs in Clause 11.14 will be more for accessing and clearing the duct rather than new duct, thus will reduce SLU costs and thus must reduce LLU pricing.

Magnet agrees that currently, a retail margin squeeze test is the most appropriate as outlined in Clause 11.26.

Magnet agrees with the preliminary conclusions set out by ComReg at Clauses 11.63, 11.69 and 11.70. However, it is now necessary to take the responses and decision in Consultation 12/63 as this has an effect on the products and bundles of products that Eircom are proposing in the NGA market.

*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.*

Magnet is glad that ComReg have identified in Clause 11.79 that less costs to be recovered in VUA as subloops a lot shorter. This will have an impact on the price of LLU due to the interrelationship proposed by ComReg of LLU and VUA pricing in this consultation (Clause 11.82).

Clause 11.84 outlines on what basis that LLU pricing was determined, however, with a consultation, 12/63 consulting on this basic premise i.e. removing the Large Exchange Area from correlation to exchanges with greater than 2,500 to a list of 4 requirements, which gives a variance to the Larger Exchange Area and potential reducing down the number of exchanges included in this area.

Magnet Networks agree with the proposal that eircom's ducts and trenches have been depreciated and unless Eircom is installing new ducts and trenches the cost of ducts is a depreciate or nil value.

Magnet believes that it is very important that a pricing methodologies review takes place for LLU and SLU. Factors being considered not only in this consultation but also Consultation 63/12 require such a consultation and sooner rather than later as the market is moving very swiftly.

Magnet agrees that if Eircom reduce the SLU charge than there must be a corresponding reduction in the LLU price. However, as Magnet has stated above it is necessary to now have a pricing methodology review for SLU and LLU pricing.

Magnet agrees that all Eircom is required to do is just remove copper price and insert fibre price in the LLU cost stack i.e. unbundled fibre cost.

Magnet agrees with Clause 11.23 that where infrastructure is being reused such as ducts and trenches then historical costs should be used including anything that has fully depreciated should have a zero value associated with it. This would prevent over recovery of costs.

Magnet Networks believe that the copper fibre link should be maintained for a period of 5 years or until 75% customer penetration in the exchanges within the final NGA footprint have been upgraded to using NGA.

*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.*

Overall, Magnet Networks agrees with the fact that Eircom are geographically limited to urban areas with shorter loop lengths and better maintained civil's and cabinets means that the network costs for providing SLU will be lower. Also, the fact that NGA is in urban areas means that exchanges have been upgraded over time to accommodate air-conditioning and co-location space etc. Due to the fact that the areas are overlapping the LLU exchange areas the copper will be well maintained due to the level of faults that LLU providers may have risen with Eircom over the last number of years. It must be noted that most of the ducts will be underground and not subject to as much weather degradation as pole based infrastructure.

*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.*

Overall Magnet agree that the HCA is appropriate and should be mandated in the context of civil engineering infrastructure as the copper already is in the duct and the cost of the civils and the installation of copper has been recovered via LLU and WBA costs.

*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.*

Magnet believes that keeping the link to copper allows OAO's who took an investment decision to unbundle exchanges should be allowed sweat their asset for an interim period until NGA reaches a defined threshold. Magnet believe that there should be no differentiation in pricing as that would be to eircom's advantage to have lower fibre prices. They have effectively already recovered some assets costs as using some assets that have been fully depreciated.

*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.*

Overall, Magnet agrees with ComReg's view that a cost orientation obligation is not deemed appropriate for now in the contest of NGA in the WBA market. 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 a comparative price to those in NGA areas. It is also now extremely important that LLU pricing methodologies are reviewed in light of Consultation 12/63.

*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.*

Magnet does not agree with the statement set out in Clause 11.179. Magnet believe that the compliance report should not just relate to standalone products but must also be furnished in relation to all NGA products including bundles. Magnet also contend that 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.

Magnet believe the requirement for an annual statement of compliance is too long and thus, Magnet suggest every 6 months such a statement should be given or maybe even 3 months from the date the product is launched. Failure to properly ensure that there is compliance in the market may lead to a foreclosure of segments of the market and this is detrimental to the customers and the OAO's.

However, despite the reservations outlined above Magnet overall, agrees with the retail margin squeeze test as well as the pre notification and the statement of compliance.

*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.*

Magnet believes that the percentage outlined to define 'materiality' is still too high. Thus, 20% or 20,000 is a large number of customers considering the low level of penetration by OAO's in the general marketplace especially, those who have made penetration would be those reselling Eircom products. Thus, the materiality should be at somewhere like 5% of retail base or 5,000 customers.

Also, these products could be very high margin product and be developed specifically for a segment of the market and is not material under this test, but could do huge damage to the marketplace especially SME and business sector. These sectors have small numbers but differing demands from both residential and corporate customers and thus, could be targeted and this target may not be seen as material as outlined by ComReg. Thus, Eircom may be able to foreclose market segments with ComReg's implicate approval.

*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.*

Overall, Magnet agree but feel that the statement of compliance obligations needs to have a shorter time span such as each quarter as part of the quarterly report or every 6 months. This is to ensure that no market distortion takes place, or let Eircom release a product 1 day after

statement of compliance and has another 12 months before next one due and this product needs to be reported or examined.

*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.*

Again, in general Magnet agrees with the proposed margin squeeze test. However, Magnet would like to see a hypothetical worked example using costs known to us to ensure that Y is a sufficient margin.

*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.*

Overall, Magnet agrees with the margin squeeze in principle but not to the 25% market share being outlined for a new market entrant. Though Magnet notes that this is the European standard unfortunately, Ireland's marketplace has such a low customer base i.e. 4 million (or 1.8 million homes) it is a different market place and has differing growth opportunities than our European counterparts. ComReg outlined at 11.238 that Eircom has a 70% market share and thus, Magnet asks the questions how can one other rival operator obtain a 25% market share when there are already numerous operators in the market some with large European and international corporate backing such as BT, Vodafone and O2 and these companies share a 30% of the market between them. With smaller operators such as Magnet, Digiweb and Imagine are all vying for their share of this 30% of the market too. Magnet feels that a 10% market share is achievable even potentially 15%, but 25% is ridiculous based on the facts in front of ComReg.

Magnet believes SEO as customers are not at scale. Though companies mentioned are larger see above they share with other providers a 30% market share of the Irish Market. It is necessary just to look at the Irish context rather than their worldwide entity.

Magnet does not agree with the intention outlined at Clause 11.258, which for NGA standalone broadband a LRAIC plus model can be used. Though there may be little difference between LRAIC plus and ATC it should be necessary not to allow Eircom over recover or under sell and effectively squeeze a market sector, irrespective of the number of customers in the customer base.

Magnet Networks agrees with the portfolio rather than product by product, however, ComReg should reserve the right to do a product by product assessment if needs be.

Again, Magnet refers to its answer at question 27 in relation to what is material and the statement of compliance.

Magnet Networks agrees with ComReg's use of discounted cash flow model.

*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.*

Overall, Magnet agrees that a product by product approach should be utilised if a product (new or existing) is likely to represent 5% or 5,000 customer base. Magnet has highlighted earlier that 20% or 20,000 customers is too high a threshold and the threshold suggested by Magnet is 5% or 5,000 customers. Magnet believes in the lower threshold to prevent market segment foreclosure within regulatory compliance.

*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.*

Each option has its strengths and weaknesses; Magnet agrees with ComReg that Option 1 is not viable at this current time. In relation to Option 2, Magnet believes that it would benefit Eircom over and above any OAO and would also be difficult to police, monitor and regulate. As Option 3 is just a different flavour of Option 2, however, would be more favourable to IP providers, and may encourage Eircom to invest in IP telephony, it may be difficult to monitor and regulate. Magnet believes that Option 4 may be the best option for the moment. Though ComReg have outlined that implementing this option requires a Consultation, the adage 'more haste less speed' springs to mind. Though it would be advantageous and quicker to put another option in place, in the long term, it may take ComReg a much longer time to unravel the consequences of any hasty or seemingly easier decision being made within this consultation. Magnet does not support any discounts for WLR within NGA areas.

*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.*

Magnet believe option 4 is the most appropriate option 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.

*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.*

As industry is used to paying a one of charge then this should not change. Also, including the migration charge in the VUA cost would lead to an over recovery of costs over the lifespan of the user.

Magnet believes that it is unlikely that the customer will ever migrate back to LLU or WBA once upgraded to NGA.

*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.*

Overall, Magnet believes the universal charge is the appropriate charge however, there are a few questions. What if the footprint area increases, thus, this means more lines so cost should reduce. Though, Magnet agrees that an early adopter should get an initial lower rate. Magnet would like to point out that it is difficult to manage multiple charges and forecasting and thus, a universal charge is the most appropriate.

*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.*

Magnet Networks overall agrees with the views of ComReg set out in Figure 11. These are the retail costs relevant not just to NGA but any product assessment.

*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.*

Magnet does not agree with the EEO approach being applied to some categories. All that is talked about here is 2-3 providers some not even in the residential space where advertising spend is the greatest. Utilising EEO is creating a barrier to entry to smaller providers like Magnet. Thus Magnet feel to create a more level playing field an SEO should remain. Those 2-3 providers are obtaining discounts due to large orders with advertising firms but they may be advertising mobile and well as fixed i.e. 2 separate ads incorporated in the same spend and thus there is a cross subsidisation of the mobile to the fixed or vice versa.

*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.*

Magnet believe that certain providers can leverage advertising costs. Advertising is bought in space and minutes thus the content in the ad is irrelevant. Thus, Vodafone or Eircom negotiate a good rate for say ten 30 second advert slots on RTE, RTE doesn't care if its Vodafone fixed or mobile contained in these slots, same for Eircom whether its Eircom landline, broadband, emobile or music hub. The space has been bought and discounts have been applied for purchasing large quantities. So only one cost and it is not or may not be proportionally allocated to the right part of the business.

*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.*

Magnet agrees with ComReg's preliminary view that help desk costs should be adjusted to SEO costs. Help desk costs are labour intensive costs and thus a small company may have huge inefficiencies in their cost of help desk cover, while a large company gains efficiencies with scale. For example a larger company with 10 help desk staff might answer 1,000 calls

between 9am -9pm Monday to Friday; this gives scope to cover shift patterns, sick leave and holiday absences. A small company might have 5 help desk staff, to enable shift patterns, sick leave and holiday absences but might only answer 250 calls during the same help desk hours due to lower customer numbers, but yet the cost for the smaller company is only 50% of the larger company who answer 4 times more calls.

*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.*

**Confidential Answer provided.**

*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.*

**Confidential Answer provided.**

*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.*

**Confidential Answer provided.**

*Q. 42 What do you consider is a reasonable estimate of the likely installation costs involved with NGA services? Please provide the details as part of your response.*

**Confidential Answer provided.**

*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.*

**Confidential Answer provided.**

Thus, the question should not be retail multicast the question should be the cost of providing IPTV. Thus, content is expensive and comes with a lot of obligations and costs. The next major cost is bandwidth usage costs and transit costs. A provider also requires the equipment to receive the channels, interpret them and to change them into IP, then to encrypt the channels and send them out. Also, each TV content provider requires unique encoder cards to receive each channel as each potentially comes in via different frequencies. Also, people are exceptionally sensitive to the loss of their TV packages. They are more understanding and tolerant if their telephone or broadband has a fault, but far less so with TV. Thus, helpdesk and someone on call 24/7/365 to repair TV faults is essential.

*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.*

Magnet agrees with the proposed approach for determining the cost stack. The costs outlined are the additional costs associated with providing end to end NGB. Magnet assumes that the line repair/fault costs are included in the bitstream stack.



*Q. 46 Do you agree with the proposed approach for determining the cost stack for NGA Bitstream? Please provide reasons for your response.*

Magnet Networks believe that a single point of handover between Eircom and the OAO may lead to a potential failure in the system.

In Section 11.457, ComReg believes that it will see an increase bandwidth usage of between 140kbps and 230kbps in the years 2012 -2015. Magnet believes the expected raise in bandwidth usage outlined by ComReg is too low and should be revised upwards. Data now seems to be utilising Moores Laws especially with the advent of smart TV, ebooks, Netflix, skygo and moving more to the cloud and companies using dumb terminal desktops.

*Q. 47 What are your views regarding the parameters for determining the relevant costs for a Multicast service. Please provide reasons for your response.*

**Confidential Answer provided.**

*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.*

As outlined in a more fulsome manner in answer 51, Magnet believes 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.

Magnet would like to point out that it feels that pricing methodologies should be revisited and consulted upon in light of Consultation 12/63 and the proposals outlined therein.

*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.*

Comreg's assumption is that 50% of lines will be instantly migrated to NGA in 2012 and the remaining 50% over 7 years. It must first be noted that Eircom have confirmed that their NGA launch will now, not occur until at least February/March 2013 but may be as late as May/June 2013. However, Magnet would like to state that it believes that ComReg's assumption in relation to migration is a very big one, and it seems to be supported by little evidence.

Migration cost as well as the cost of the services will have a lot to do with whether people will move. Another issue which will influence whether people migrate is the requirement of NGA to change in home wiring. To avail of NGA, the customer must have an electrical power point to enable the service to work. This could mean that some customer will be reticent to move to an NGA product as it may potentially do undue damage to their house. Magnet Networks believe that if LLU can provide a compelling offer or be let provide such an offer i.e. regulated prices decrease, then the LLU providers' market share will increase, leading to a slower than ComReg expected migration.

Magnet does not agree with the 95:5% costs as outlined in the project plan. The reason that Magnet does not agree is that the lines already unbundled are greater than or more likely to be greater than 50 lines, and thus, Magnet believe that it is best to amend the decision to allow the Copper Access Model to be incorporated within the VUA.

Magnet does not agree, with the 95:5%, as no rural lines are been upgraded even locations such as Letterkenny are deemed to be large urban areas. Magnet from experience has found that there is a lower LFI in fibre and this should be reflected in the cost orientated pricing model.

*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.*

Magnet Networks does not believe the price of VUA should increase where multicast service is provided, as multicast is just data or information carried over broadband and the equipment in the exchange already. However, it must be noted that broadband consumption will increase dramatically due to the bandwidth required to give a viewer a proper TV service. Thus, 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 will ensure Eircom recovers the cost of providing multicast. Thus, 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.

*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.*

Magnet would prefer a per fault charge. Currently, a per fault charge is the charged for LLU faults. Thus, industry is used to a per fault charge. Also, as LLU faults are very high, Magnet would hope that VUA should be lower and thus including fault cost in price may lead to recovery. It must be noted that the NGA areas proposed are all in urban areas, where one would hope that copper has been repaired and kept in good condition which would in turn lead to a reduced number of faults being reported. Thus, to keep in line with LLU and to effectively manage faults, thus, a per fault charge is more amenable.

*Q. 52 Do you agree with the proposed outputs from the NGA Margin Squeeze Model? Please provide reasons for your response.*

Overall, Magnet Networks agree that it is necessary to include the cost of quality of service (class of service) i.e. multicast and voice, are two services that require a higher class of service as they need guarantee packet delivery. If these services degrade or have any slight delay it is noticed by the customer who will not be happy with the service and will seek to churn to either the traditional POTS or an alternative provider such as cable, where available.

*Q. 53 Do you agree that the proposed price control period should be for at least three years in the context of NGA services in the WPNIA and WBA markets? Please provide reasons for your response.*

Overall, yes may need to review in year 3 to push it to year 5 considering potential exit from exchanges by Eircom. However, Magnet Networks wishes to note that Consultation 12/63 has effectively ‘put the cat amongst the pigeons’ in relation to the definition of large exchange area, and how the pricing for SLU and LLU is calculated. Thus, it is now imperative that a new WPNIA pricing methodologies consultation is published to take account of the recommendations set out in Consultation 12/63.

*Q. 54 Do you believe that the draft text of the proposed Decision Instrument is from a legal, technical and practical perspective, sufficiently detailed, clear and precise with regards to the specifics proposed? Please explain your response and provide details of any specific amendments you believe are required.*

Magnet Network believes that the NGA footprint definition is too prescriptive and should be amended to be more fluid and flexible, to allow change to happen.

Magnet feel that protracted negotiations may take place around the implementation of SLA and thus, would recommend that Clause 7.2(ii) outlines a time line for SLA negotiations that if a SLA is not agreed within 3 months of this decision, ComReg will intervene and publish a SLA. By Eircom and ComReg allowing SLA negotiations to become protracted means that the service suffers and customers will not wish to upgrade to NGA due to the poor quality of service.

*Q. 55 Do you believe that the draft text of the proposed Decision Instrument is from a legal, technical and practical perspective, sufficiently detailed, clear and precise with regards to the specifics proposed? Please explain your response and provide details of any specific amendments you believe are required.*

Magnet Network believes the workings in Option 1 are the preferred workings.

Magnet also believes that ‘multicast’ should be defined on its own rather than “Multicast Service for Next Generation WBA”. Though the definition of ‘multicast’ itself is acceptable.

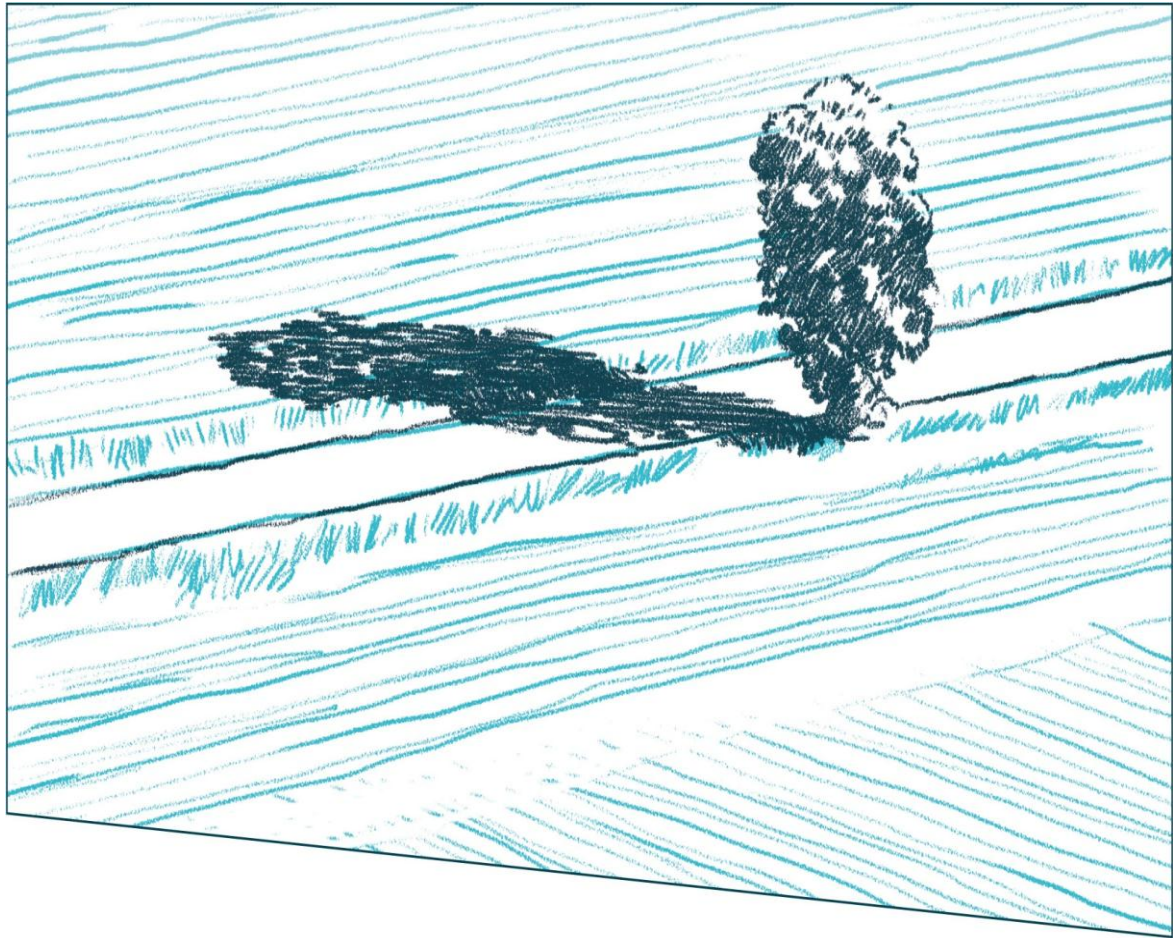
Magnet feel that protracted negotiations may take place around the implementation of SLA and thus, would recommend that Clause 7.2(ii) outlines a time line for SLA negotiations that if a SLA is not agreed within 3 months of this decision, ComReg will intervene and publish a SLA.

Submissions to Consultation Document No. 12/27

ComReg 12/97

Submissions to Consultation Document No. 12/27

## **9 Telefonica O2 Ireland Limited**



**RESPONSE TO NGA ACCESS REMEDIES (COMREG DOC: 12/27)**

Telefonica is pleased to respond to the Consultation on Next Generation Access Remedies. Telefonica believes ComReg needs to continue to maintain the Current Generation Access product sets along with using powers and framework remedies available to it to promote investment and competition in NGA products.

**Response to Consultation Questions:**

**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.**

Ireland is dependent on eircom and its NGA roll out in terms of competitive access to fibre. eircom, is investing in NGA technologies and products, and thus needs to find significant investment funds in excess of €500 million to complete a substantial NGA roll-out plan. This cost will have to be added to any current and existing investment plans at a time when the incumbent is losing market share. eircom has said it will invest €1.5 billion capital over the next five years, however it's not clear how much of this is for the continuation of existing services, and how much is for NGA.

Other operators have invested significantly over the last three to four years and are now starting to offer services to 100Mbit/s with a capability of supporting 150mbit/s.

Given the current unfavourable financial and competitive position Telefonica believes that it is premature of ComReg to be discussing transition periods and the prudent approach would be to put in place a review once the incumbent has significantly deployed.

Telefonica therefore strongly recommends that ComReg indicate formally that it will review NGA progress in approximately two years' time and consult concerning transition periods. To do otherwise, will almost definitely commence foreclosure on current markets and undermine the return in investment for eircom.

**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.**

In Telefonica's view it is too early at this time to discuss retiring of the copper network in Ireland, for the following reasons:

1. eircom have not yet even launched NGA services;
2. The eircom NGA solution is dependent on the copper WLR services for voice traffic;
3. It will take three years to deploy NGA in key urban areas;
4. Signalling the retirement of the Copper platform sends "do not invest" signals, and therefore ComReg should not consider such until there is increased certainty as to Eircom NGA rollout.
5. eircom will not rollout NGA services to all areas so copper will still be required to serve a subset of customers, ComReg should consider how these customers will continue to be supported.

ComReg should postpone any and all decisions on retiring the copper network until there has been a substantial rollout of NGA and its future is clearly sustainable.

**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.**

Telefonica believes there is an opportunity for others to deploy NGA solutions in the market and the availability of Market 4 facilities such as such as Sub-Loop



Unbundling – SLU, and duct access etc., dark fibre are essential for competitors in Ireland.

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

Telefonica agrees with ComReg conclusions that eircom should be mandated to allow fibre unbundled access. Telefonica also agrees with a mandate to access the terminating segment and agree with the other mandates in relation to access.

**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.**

Telefonica summarise the options discussed by ComReg:

1. **Option A** – Modification of the obligation of SLU in NGA Area;
2. **Option B** – Access to the sub-loop withdrawn in NGA area, conditional on the roll out of bandwidth enhancing technology by eircom;
3. **Option C** – Access to the sub-loop continues to be mandated.

Telefonica would make the following points on the options above:

- It maybe another two or three years before Vectoring is commercially available;
- eircom have stated on numerous occasions it is a follower of technology, and hence it will only buy proven solutions;
- VDSL technology is still evolving and the track record of DSL evolution is there is more to come as incumbents seek ways to sweat their assets further;
- A considerable part of eircom’s NGA deployment will be operational before commercial vectoring is available; and

- The introduction of the 17khz band doubles the available VDSL line rate from 40Mbit/s to 80Mbit/s without the issue of exclusivity.

As it will take at least another two or three years until Vectoring is 'maybe' commercially available, we believe that it is unreasonable for the regulator to create a market restriction based on something that might or might not happen.

Our view is there should be no restrictions at this time and where multiple operators deploy services in the same areas in the next two years the situation should remain without Vectoring.

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

Telefonica agrees with ComReg concerning continued obligation on eircom to provide Sub-Loop Unbundling in non-NGA areas.

**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.**

Telefonica have no comments to make at this time.

**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.**

No Comment

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

Telefonica agrees with ComReg there is a clear requirement for backhaul, exchange and cabinet co-location.

**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.**

Telefonica agrees with ComReg's technical assessment except Sub-Loop Unbundling still offers more functionality and control including the ability to implement new technologies at the operator's choice and higher speed bonded services etc.

**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.**

Telefonica agrees with ComReg's conclusion on the need to mandate *ex ante* the provision of backhaul services and facilities for WBA. Telefonica would add the following comments:

- It is not always viable to provide our own backhaul to an exchange due to the extent of civil engineering work and other access issues.
- Most NGN/NGA nodes will be at the serving exchange however where this is not the case we will require eircom to backhaul the traffic to the remote serving node.

**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.**

Telefonica have concerns relating to the current proposal for five years notice for the closure of an MDF site. We note approval from ComReg will be required before any such notice can be issued, however no detail is provided as to the tests that must be performed prior to such a decision.

Telefonica also notes that the current eircom NGA proposal is based on the use of the traditional voice platform hence the existing MDF and infrastructure would appear to feature in eircom plans for NGA at least for the medium term. Our view on the test required should include but not be limited to:

1. A public consultation at the time prior to the approval to close an MDF site so that the concerns of all are considered;
2. Demonstrable evidence that the market has effectively migrated to new platforms and the existing services are at a point of end of life;
3. Compensation for other parties whose investments and business maybe damaged by such an initiative.

In relation to SLA's Telefonica believes that it is helpful that ComReg are mandating that eircom must negotiate legally binding SLAs.

**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 WPNIA market (Market 4)? Please provide reasons for your response.**

Telefonica agrees with the proposals from ComReg.

**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.**

Telefonica agrees with the proposals from ComReg.

**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.**

Telefonica agrees with the conclusions on transparency.

**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.**

No Comments

**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.**

Telefonica does not accept the eircom position that the barriers in Ireland for deploying VoIP are low. The deployment of carrier class VoIP switches includes a considerable amount of cost and activity to integrate with existing technology, billing systems, etc. There may also be costs to end users with of deployment of VoIP compatible CPE.

**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.**

Telefonica agrees with ComReg's views on price control

**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.**

Telefonica agrees with ComReg's views on price regulation

**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.**

Telefonica does not agree that 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.

The reasons for our comment are as follows:

- eircom has not yet deployed a commercial NGA network, hence it faces at least three years (the time it has stated it will take to reach a million premises) of considerable new capital investment costs as well as maintenance costs of the new network.
- eircom are proposing to offer the existing WLR Voice services as part of its NGA offering, hence the traditional voice platform is part of NGA. Simple logic means Current Generation Access – CGA, plus NGA must be more costly than just CGA.
- SLU deployment uses the legacy copper network from the customer, including the entire relevant access infrastructure, up to and including the cabinet.
- A three-year eircom deployment plan suggests that the volume of customers will continue to consume CGA services for many years to come.

Regrettably, the situation in Ireland does not support the view in the short to medium term that NGA using SLU will attract much lower costs than the network costs of providing current generation services.

**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.**

Telefonica considers that the HCA is appropriate and should be mandated in the context of civil engineering infrastructure as the copper already is in the duct and the cost of the civil works and the installation of copper has been recovered via LLU and WBA costs.

**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 NGA: should this period be and what triggers for a change should be considered? Please provide reasons for your response.**

Telefonica agrees that the link between copper (LLU) and fibre based (SLU) services should be maintained during the transition as one continues to be a physical component of the other.

**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.**

Telefonica would argue that a price control must be established in the WBA market as eircom has both the opportunity and motive to squeeze upstream margins.

No question Q24.

**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.**



Telefonica would refer to our earlier response to Q.23

**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.**

Telefonica does not agree with ComReg's preliminary views that "materiality" should mean the lower of either:

1. 20% of eircom's Next Generation retail customer base, in terms of subscriber numbers; or
2. 20,000 new retail subscribers for eircom's next generation services.

**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.**

Telefonica agrees with ComReg's preliminary views 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.

**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.**

Telefonica agrees with the proposed margin squeeze test.

**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.**

Telefonica agrees with ComReg's preliminary views 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.

**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.**

Telefonica agrees 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 10% of the eircom retail NGA customer base.

**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.**

Telefonica have no comments on this 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.**

Telefonica's view is that the options appear to suit different operators in different ways, for example, an aggregator may take a different view on volumes and risks compared to a retail provider. Telefonica considers that the various options should be left available or open for consideration and that any co-investment should comply with the Regulations and Competition Law.

**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.**

No Comments.

**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.**

No Comments

**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.**

Telefonica agrees with ComReg's preliminary views, as set out in the table in Figure 11 of the consultation, regarding the retail costs in the context of NGA

**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.**

Telefonica does not agree an EEO approach should be applied in the case of some retail cost categories (e.g., advertising), where other larger network operators in Ireland are susceptible to similar economies of scope to that of eircom.

**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.**

No comments

**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.**

No Comments

**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.**

No Comments

**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.**

No Comments

**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.**

No Comments

**Q. 42. What do you consider is a reasonable estimate of the likely installation costs involved with NGA services?**

Telefonica considers a reasonable estimate of the likely installation costs is in excess of €100 as this is the current cost orientated charge eircom applies when an engineer visits the customer premises where no fault is located on the eircom network.

**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.**

Telefonica considers that all of the costs relating to retail multicast are as follows:

1. DSLAM cost;
2. Content cost/Transit costs;
3. Headend;

4. Encryption;
5. Encoder cards;
6. Satellites/Transponders;
7. Helpdesk.

**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.**

Telefonica agrees with the proposed approach for determining the cost stack for end-to-end Next Generation Bitstream as such should align with the costs experienced by other operators. As such the cost should also include the QIB and PIB costs as well as any ancillary charges that apply.

#### **Question 45**

We note there is no question 45.

**Q. 46. Do you agree with the proposed approach for determining the cost stack for NGA Bitstream? Please provide reasons for your response.**

Telefonica agrees with the proposed approach for determining the cost stack for NGA Bitstream as it aligns with the components consumed.

**Q. 47. What are your views regarding the parameters for determining the relevant costs for a Multicast service. Please provide reasons for your response.**

No Comments

**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.**

Telefonica agrees with the approach for determining the cost stack for the VUA product in the WBA market.

**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.**

No Comments

**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.**

No Comments

**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.**

No Comments

**Q. 52. Do you agree with the proposed outputs from the NGA Margin Squeeze Model? Please provide reasons for your response.**

No Comments

**Q. 53. Do you agree that the proposed price control period should be for at least three years in the context of NGA services in the WPNIA and WBA markets? Please provide reasons for your response.**

No Comments

**Q. 54. Do you believe that the draft text of the proposed Decision Instrument is from a legal, technical and practical perspective, sufficiently detailed, clear and precise with regards to the specifics proposed? Please explain your response and provide details of any specific amendments you believe are required.**

Telefonica believes that the NGA footprint definition is too prescriptive and should be amended to be more fluid and flexible, to allow change to happen.

Telefonica feels that protracted negotiations may take place around the implementation of SLA and thus, would recommend that Clause 7.2(ii) outlines a time line for SLA negotiations that if a SLA is not agreed within 3 months of this decision, ComReg will intervene and publish a SLA. By ComReg allowing SLA negotiations to become protracted that means that the service will suffer and customers will not wish to upgrade to NGA due to the poor quality of service.



**Q. 55. Do you believe that the draft text of the proposed Decision Instrument is from a legal, technical and practical perspective, sufficiently detailed, clear and precise with regards to the specifics proposed? Please explain your response and provide details of any specific amendments you believe are required.**

Telefonica believes the workings in Option 1 are the preferred workings.

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**10 UPC Communications Ireland Limited**

**UPC Ireland response to ComReg's Consultation and Draft Decision  
(ComReg Document No. 12/27) on Proposed Remedies for Next Generation Access Markets**

**Section A – Overview of UPC's views on ComReg Consultation Document No. 12/27**

## **1 Introduction**

UPC Communications Ireland Limited ("UPC") welcomes the opportunity to provide its response to ComReg on its Consultation and Draft Decision ("the consultation") on Proposed Remedies for Next Generation Access ("NGA") Markets (ComReg Document 12/27).

UPC recognises and acknowledges the considerable effort on ComReg's behalf in producing such a comprehensive consultation and draft decision on what is undoubtedly a key regulatory issue as the remainder of the Irish communications sector transitions to NGA. As it does so, it is clearly very important for market players to have certainty about what NGA wholesale products will be mandated and the terms and conditions, including pricing, of such products.

Because of UPC's particular position in the market, as an operator with its own local access network which means that UPC is not reliant on securing access to wholesale physical and broadband inputs from Eircom, many of the detailed specifics of this consultation are not relevant to UPC. It is for this reason that UPC has not provided detailed replies to each of the questions set out in ComReg's consultation document. Instead, this response is, by necessity, of a more general nature and, as such, sets out the need for ComReg to continue to provide the correct incentives to promote platform competition in the provision of communications services so that benefits to consumers and businesses may be maximised in the transition to an NGA environment. In this regard, UPC was heartened to see ComReg reiterate its previously held position and that of the European Commission that the main objective in its consideration of the future regulatory framework is to ensure the continued promotion of "efficient investment and innovation in new and enhanced infrastructure" and the recognition that there is a need to maintain "effective competition [since this] is an important driver of investment over time". This position was also recently reiterated by Vice President, Nellie Kroes who confirmed the European Commission's continued commitment to ensure regulation was an "enabler not an obstacle ... to underpin sustainable competitive and efficient investment" in NGA networks.<sup>1</sup>

## **2 UPC's investment in NGA**

UPC has invested heavily in the upgrade of its cable networks so as to be in a position to offer high speed broadband access services to its Irish customers. By the end of 2012, approximately 610,000 homes will be 100Mbps capable and this is expected to extend to 700,000, 730,000 and 745,000 homes for the years 2015, 2018 and 2020 respectively.<sup>2</sup> Based on these

<sup>1</sup> Enhancing the broadband investment environment- policy statement by Vice President Kroes, July 12, 2012. <http://europa.eu/rapid/pressReleasesAction.do?reference=MEMO/12/554&format=HTML&aged=0&language=EN&guiLanguage=en>

<sup>2</sup> *Enabling a Connected Society* Report of the Next Generation Broadband Taskforce (NGBT Report), Department of Communications Energy and Natural Resources, May 2012. Pg. 34, <http://www.dcenr.gov.ie/NR/rdonlyres/1AE24C27-40AD-4A73-879F-4536250C87BC/0/FullReport.pdf>



projections, the investment in NGA by UPC alone should result in approximately 44% Irish homes being 100Mbps capable by 2020.<sup>3</sup> These projections are important since they demonstrate UPC's commitment to continued investment in its cable infrastructure and they also highlight that UPC is and will continue to be a key contributor to Ireland meeting the targets as set out by the European Commission in its Digital Agenda for Europe (DAE).

### 3 Promoting NGA platform competition

ComReg's regulatory policy on current generation services has been supportive of platform competition and ComReg needs to ensure that this remains the case in an NGA context. As the recent NGBT Report points out<sup>4</sup>, NGA services are likely to be provided in Ireland over a mix of FTTH, FTTC (most likely via VDSL with vectoring), cable, fixed wireless and, over the medium-term, LTE and 4G mobile networks. Because of this, it is important that ComReg does all it can from a regulatory perspective to encourage the infrastructure investment that needs to take place if these networks are to be built as planned.

It is important that Eircom is allowed to achieve an appropriate return on its NGA investment and to determine appropriate price levels for NGA services. ComReg's proposal in the consultation that margin squeeze tests are used to prevent possible pricing abuses would appear to be a sensible approach in light of the increased price flexibility it proposes to grant to Eircom.

In this context, ComReg must also be mindful of the costs associated with these services and the bandwidth consumed by future services and applications such as broadband, phone, IPTV and others. It is clear that the provision of increased bandwidth services to customers and the ever-increasing amounts of data being transmitted when using these services will have cost implications for network operators in an NGA environment. [ X ]

UPC is one of the few platform providers that has deployed a NGA network in Ireland. As a result and further to substantial investment in the upgrade of its networks, UPC subscribers have access to the highest speeds currently available to the Irish residential market. The company therefore has the largest number of subscribers on high speed broadband services not least due to the fact that UPC's current entry level product is 25Mb. As such, UPC is in a unique position to provide ComReg with insight into consumer take-up and associated network costs in the provision of NGA services.

[ X ]

Given the above (and while ComReg has acknowledged that the peak hour rate is subject to change), UPC would have a concern that ComReg's projection of peak hour rate for VDSL broadband would appear to be too low<sup>5</sup> and therefore the proposed cost and resulting wholesale charge levels are also too low.

As the above would attest, there are significant network costs associated with managing high bandwidth and ensuring that there is sufficient capacity to meet peak time usage. 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). UPC would therefore expect that operators will incur additional costs and these

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<sup>3</sup> Based on estimates that there are 2 million homes within the country at the present time of which 1.7 million are currently occupied, NGBT Report Pg. 34.

<sup>4</sup> NGBT Report, pages 34-5.

<sup>5</sup> Projected peak hour rate for broadband of between approximately 140kbps and 230kbps, note 4, Pg.250, ComReg 12/27



costs will need to be recovered within Eircom's retail and wholesale pricing structures. Further, 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. Indeed UPC's recent increasing of entry-level broadband and phone from €40.50 to €42 is testament to this and the higher cost of providing this service as usage increases. [ X ]

In this regard and for the purposes of the current consultation, ComReg will need to ensure that cost recovery is provided for within its proposed approach to NGA price control and 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.[ X ]

#### **4 Avoiding imposing extra costs on Eircom**

It is important to ensure that NGA regulation does not (inadvertently or otherwise) result in imposing additional extra costs on Eircom. In this manner, UPC believes that ComReg's approach in the area of equivalence of access is practical and sensible and should ensure that Eircom does not incur unnecessary additional costs in meeting an obligation to provide Equivalence of Inputs (Eol) in each and every instance.

As ComReg has noted in its consultation document,<sup>6</sup> the European Commission has already expressed the view that the duplication of the terminating segment of the fibre loop would be considered "costly and inefficient".<sup>7</sup> UPC recognises that at this time ComReg is not proposing to impose an obligation on Eircom to provide access to the terminating segment and is instead proposing to require Eircom to offer access to the full unbundled fibre loop (including the terminating segment). In doing so, ComReg needs to ensure that this obligation does not involve the imposition of any additional fibre deployment costs on Eircom.

#### **5. Investment Incentives for NGA**

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.

It is also important for ComReg to ensure that the NGA investment incentives are appropriately framed. 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

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<sup>6</sup> ComReg Consultation Paper, paragraphs 5.52-3.

<sup>7</sup> Commission Recommendation of 20 September 2010 on regulated access to Next Generation Access Networks (NGA) (2010/572/EU), Section 16.



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.

Clearly, ComReg's NGA access pricing regime also needs to incentivise the SMP operator to deploy its NGA network in the first place. UPC believes that ComReg's proposal to afford Eircom a significant degree of pricing flexibility at both the wholesale and retail level, while at the same time encouraging access seekers to migrate to own infrastructure and WPNIA-based products, is an elegant way of addressing two important regulatory principles. These principles are obviously important and while striking an appropriate balance may prove a challenge, it will be for Eircom, in the first instance to determine the retail and wholesale price offerings that will provide it with an acceptable return on its investment and ensure it meets the margin squeeze tests as set down by ComReg.

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. We highlight in this regard that the EC NGA Recommendation (Annex I, Section 2) calls for consistency of the costing methodology for civil infrastructure access with the methodology adopted for unbundling of the copper loop.

As a counter-weight to the increased pricing flexibility that ComReg proposes to afford Eircom, the consultation document also sets out details of transparency obligations that will apply in relation to the pre-notification of service launches and price changes by the SMP operator. These pre-notification requirements are important in ensuring that ComReg can verify that Eircom is meeting its regulatory obligations – in particular, in relation to pricing – and that it does not enjoy any 'first mover advantage' solely arising from its SMP position. ComReg needs to ensure that the proposed pre-notification periods work in practice for all market players and that the proposed timelines are not shortened in a way that is advantageous to the SMP operator.

## **5 Concluding remarks**

As noted at the outset of this response, UPC operates an alternative local access network which means many of the issues covered in this consultation are not of direct relevance to UPC. As a result, UPC is not in a position to respond in considerable detail to the questions as set out in the consultation paper. Notwithstanding this, as a NGA platform provider, UPC is an interested party to this debate and in order to contribute to ComReg in this consultation process, UPC has attempted to map the commentary above to groups of questions from the consultation paper (see Section B). UPC trusts that despite the broad nature of the commentary provided will be useful to Comreg in particular with respect to the need to ensure incentives the regulatory process needs to provide in order to encourage continued investment in NGA networks such that platform competition continues to evolve to the benefit of Ireland and Irish consumers.



**Introduction:**

Please note that UPC has provided answers where it considers its contribution to be relevant. Given this, UPC does not have detailed viewpoint on many of the questions raised. Notwithstanding this, as one of the few operators that has deployed a NGA network and as the network provider that currently offers the highest residential broadband speeds, UPC has does have particular views that may be useful to ComReg in its deliberations on the future regulatory framework for Eircom's NGA network. Please see commentary provided in Section A above.

**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.**

Answer questions 1-2: UPC does not have a view on these questions.

**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.**

Answer: 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. Therefore ComReg needs to give careful thought to how this proposal will apply in practice. See also Section A5.

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

Answer: UPC recognises that at this time ComReg is not proposing to impose an obligation on Eircom to provide access to the terminating segment and is instead proposing to require Eircom to offer access to the full unbundled fibre loop (including the terminating segment). In doing so, ComReg needs to ensure that this obligation does not involve the imposition of any additional fibre deployment costs on Eircom. See also Section A4.





**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.**

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

**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.**

**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.**

**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.**

**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 WPNIA market (Market 4)? Please provide reasons for your response.**

**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.**

Answer Questions 5-14: UPC does not have a view on these particular questions.

**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.**

Answer: These pre-notification requirements are important in ensuring that ComReg can verify that Eircom is meeting its regulatory obligations – in particular, in relation to pricing – and that it does not enjoy any 'first mover advantage' solely arising from its SMP position. ComReg needs to ensure that the proposed pre-notification periods work in practice for all market players and



that the proposed timelines are not shortened in a way that is advantageous to the SMP operator.

Please see also commentary provided at Section A5.

**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.**

**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.**

**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.**

**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.**

Answer Questions 16-20: UPC does not have a view on these questions.

**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.**

Answer: 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. We highlight in this regard that the EC NGA Recommendation (Annex I, section 2) calls for consistency of the costing methodology for civil infrastructure access with the methodology adopted for unbundling of the copper loop. See also Section A5.

**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.**



**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.**

Question 22-23: UPC does not have a view on the specific details of these questions however with regards commentary of a more general nature, please see commentary provided in Section 5 above.

**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**

Answer Questions 25-26: UPC does not have a view on these questions.

**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.**

Answer: See response to question 15.

**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.**

**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.**

Answer questions 28-29: Please see commentary provided at Section A5 above.

**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.**

**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.**

**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.**



**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.**

Answer questions 30- 34: Please see commentary provided at Section A3 above.

**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.**

**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.**

**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.**

**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.**

**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 with NGA services? Please provide the details as part of your response.**

**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.**

Answer Questions 35-43: UPC does not have a view on these particular questions.



**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.**

Answer: UPC does not have a view on this question.

**Q. 46 Do you agree with the proposed approach for determining the cost stack for NGA Bitstream? Please provide reasons for your response.**

Answer 44-46: As set out in Section A 3 above, ComReg's regulatory policy on current generation services has been supportive of platform competition and ComReg needs to ensure that this remains the case in an NGA context. As the recent NGBT Report points out<sup>8</sup>, NGA services are likely to be provided in Ireland over a mix of FTTH, FTTC (most likely via VDSL with vectoring), cable, fixed wireless and, over the medium-term, LTE and 4G mobile networks. Because of this, it is important that ComReg does all it can from a regulatory perspective to encourage the infrastructure investment that needs to take place if these networks are to be built as planned.

It is important that Eircom is allowed to achieve an appropriate return on its NGA investment and to determine appropriate price levels for NGA services. ComReg's proposal in the consultation that margin squeeze tests are used to prevent possible pricing abuses would appear to be a sensible approach in light of the increased price flexibility it proposes to grant to Eircom.

In this context, ComReg must also be mindful of the costs associated with these services and the bandwidth consumed by future services and applications such as broadband, phone, IPTV and others. It is clear that the provision of increased bandwidth services to customers and the ever-increasing amounts of data being transmitted when using these services will have cost implications for network operators in an NGA environment. [ ✕ ]

UPC is one of the few platform providers that has deployed a NGA network in Ireland. As a result and further to substantial investment in the upgrade of its networks, UPC subscribers have access to the highest speeds currently available to the Irish residential market. The company therefore has the largest number of subscribers on high speed broadband services not least due to the fact that UPC's current entry level product is 25Mb. As such, UPC is in a unique position to provide ComReg with insight into consumer take-up and associated network costs in the provision of NGA services. [ ✕ ]

Given the above (and while ComReg has acknowledged that the peak hour rate is subject to change), UPC would have a concern that ComReg's projection of peak hour rate for VDSL broadband would appear to be too low<sup>9</sup> and therefore the proposed cost and resulting wholesale charge levels are also too low.

As the above would attest, there are significant network costs associated with managing high bandwidth and ensuring that there is sufficient capacity to meet peak time usage. 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). UPC would therefore expect that operators will incur additional costs and these costs will need to be recovered within Eircom's retail and wholesale pricing structures. Further, 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

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<sup>8</sup> NGBT Report, pages 34-5.

<sup>9</sup> Projected peak hour rate for broadband of between approximately 140kbps and 230kbps, note 4, Pg.250, ComReg 12/27



regular speed upgrades at constant or even falling prices is not holding. Indeed UPC's recent increasing of entry-level broadband and phone from €40.50 to €42 is testament to this and the higher cost of providing this service as usage increases. Independent research carried out by UPC indicates that for non-UPC customers, higher broadband speed is valued more than a cheaper priced offering. [ ✕ ]

In this regard and for the purposes of the current consultation, ComReg will need to ensure that cost recovery is provided for within its proposed approach to NGA price control and 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.

**Q. 47 What are your views regarding the parameters for determining the relevant costs for a Multicast service. Please provide reasons for your response.**

**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. NGA: Specification of appropriate remedies in the WPNIA and WBA Markets ComReg 12/27 Page 247 of 383.**

Answer 47-48: Please see commentary provided in Sections A3 and A4 above.

**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.**

Answer questions 49- 51: UPC does not have view on these particular questions

**Q. 52 Do you agree with the proposed outputs from the NGA Margin Squeeze Model? Please provide reasons for your response.**

Answer: See commentary provided at Section A5 above.

**Q. 53 Do you agree that the proposed price control period should be for at least three years in the context of NGA services in the WPNIA and WBA markets? Please provide reasons for your response.**

Answer: UPC does not have view on this particular question.

**Q. 54 Do you believe that the draft text of the proposed Decision Instrument is from a legal, technical and practical perspective, sufficiently detailed, clear and precise with**



**regards to the specifics proposed? Please explain your response and provide details of any specific amendments you believe are required.**

**Q. 55 Do you believe that the draft text of the proposed Decision Instrument is from a legal, technical and practical perspective, sufficiently detailed, clear and precise with regards to the specifics proposed? Please explain your response and provide details of any specific amendments you believe are required.**

Answer to questions 54-55: Yes, subject to the outcome of the notification to the European Commission, the other NRAs and BEREC, and any relevant commentary received by ComReg in the context of this consultation process.



Submissions to Consultation Document No. 12/27

ComReg 12/97



Submissions to Consultation Document No. 12/27

## **11 Vodafone Ireland Limited**



Vodafone Response to ComReg Document 12/27

Next Generation Access:

Proposed Remedies for Next Generation Access Markets

Public Version

## Introduction and summary of views

Vodafone is pleased to have the opportunity to respond to ComReg's consultation on the regulation of next generation access markets. As ComReg is aware the appropriate investment and deployment of NGA technologies has the potential to bring substantial benefits to consumers and to the wider economy, and is at the heart of Government's competitiveness agenda.

Getting the regulatory framework right in the NGA environment is critical to ensuring that consumers enjoy the full benefits of efficient investment in next generation technology. Vodafone believes that in developing the regulatory framework ComReg must have regard to:

- Ensuring that eircom is not able to exploit its SMP to the detriment of consumers or competition;
- Ensuring that investment in NGA technologies is efficient and is sustainable in the long-term;
- Ensuring that incentives for consumers to take up NGB services are appropriate;
- Ensuring that the hard fought competition that has emerged in the legacy market is preserved and strengthened so that OAOs have the ability to fully compete with eircom in the provision of NGB services to customers;
- Ensuring that, if economically efficient, the ladder of investment is preserved so that OAOs continue to have the incentive to invest in developing their own infrastructure to the long term benefit of competition and consumers.

Vodafone is deeply concerned that ComReg's proposed regulatory approach will not deliver against these objectives. Vodafone believes that the current proposals are not in keeping with the European Commission's recommendations, will significantly weaken competition in the market and will result in consumers facing poorer choice and paying higher prices. Vodafone is very surprised that ComReg's position has shifted so radically from its original consultation paper, where it appeared to set out clearly the justification for cost orientation and the necessity to have the utmost regard to the European Commission's recommendation.

Below we summarise the key areas of the proposals where we urge ComReg to consider carefully the approach it proposes. These relate to:

- Regulation of VUA
- The approach to SLU and vectoring
- Regulation of WLR/VOIP, and
- The equivalence and notification obligations placed on eircom

### *Regulation of VUA*

Vodafone strongly believes that VUA should be cost oriented. This is in keeping with the European commission's recommendation and the proposed approach set out by ComReg in its original consultation document.

In its first consultation document ComReg appeared to accept that "the European Commission has expressed a general preference for the application of cost-oriented access prices for NGA networks and products". ComReg also noted the views of the Commission with respect to BNetzA's market analysis "In order to ensure regulatory certainty for access seekers and, thus, promote efficient investment by all operators access prices need to be cost-oriented, transparent and set with sufficient notice in advance."

Vodafone is surprised, therefore, that ComReg now appear to be disregarding the Commission's recommendation and suggesting a price control based entirely around a margin squeeze approach.

Vodafone believes that this approach is wrong for the following three reasons:

- ComReg’s thinking and market analysis is flawed
- The proposed approach will remove an independent price point from the market and weaken competition to the detriment of consumers
- The proposal is unworkable in an NGA environment where products are most likely to be sold in bundles rather than on a stand alone basis.

#### *Flawed thinking and analysis*

The rationale for ComReg’s proposed approach is that eircom’s prices will be constrained by retail competition from UPC and from legacy broadband. However, ComReg’s assessment is not supported by the facts:

- eircom has maintained substantial market share despite pricing at a substantial premium to OAOs and to UPC, in areas where UPC is present. Eircom’s prices are between 10%-20% higher than rivals. Yet, over the past two years it has seen its fixed broadband market share decline by just 6 percentage points, and it still has a larger market share than Vodafone and UPC combined.
- eircom has not reduced its wholesale products to their floor prices, and has maintained its cost oriented prices at the maximum allowed by ComReg. For example, the ComReg price floor for backhaul (per MB) is €8.14, whereas eircom currently charges €30. If eircom were genuinely constrained one would expect to see wholesale prices at their floor to maximise eircom’s ability to compete in the retail space. One would also expect to see eircom lower its LLU price in order to provide headroom to compete in the retail space – eircom have indicated that they have no intention of reducing LLU prices.
- The move to NGA is not going to change this competitive constraint – if anything eircom will face less competitive pressure from UPC, given that the quality of its offering will now be closer to UPC’s.

#### *Weakening competition*

Currently, there are three independent prices in the market for a large number of customers – eircom; UPC; and OAOs such as Vodafone who purchase wholesale inputs from rival wholesale providers to eircom based on cost oriented Market4 inputs.

Under ComReg’s proposals this will diminish to two. This is because:

- At a wholesale level, the business case for SLU entry is more challenging than for LLU. And if SLU entry proves to be limited then eircom will face no competition in the supply of VUA and NGA Bitstream. SLU entry may also not be possible if ComReg removes the SLU mandate (see below).
- If VUA were cost oriented this would be less of a concern, as OAOs would be able to determine their retail strategy independently of eircom. However, with all wholesale prices based on a control referenced to eircom’s own retail price, OAOs pricing will not be differentiated from eircom’s.
- This will allow eircom to price its NGA services above the competitive level, and will limit OAO’s ability to compete with eircom in the retail market.
- This will also allow eircom to effectively set the pricing differential between NGA and legacy broadband products, thereby allowing it to optimise the speed of migration to match its own internal priorities and requirements, rather than allowing the migration process to be optimised to the customers interest.
- Ultimately, competition in the market will be weakened, and consumers will face higher prices and poorer choice.

*An unworkable proposal*

ComReg's proposal for interweaving retail and wholesale margin squeeze controls is also entirely unworkable in an NGA context. We believe ComReg and its advisors continue to think of the retail space in the traditional copper context of a broadband product that may be bundled with a narrowband voice product.

However, the purpose of NGA is to create a product of sufficient speed and reliability that a wide range of additional services can be bundled with it. The most obvious example is television, however, it may also include home security, assisted living, home automation and control, energy management and power control and home management. These services are unregulated, and ComReg will have very limited understanding of their costs of provision. In this environment it is highly likely that ComReg will find it impossible to determine whether eircom is complying with the various retail and wholesale margin squeeze tests.

*SLU and vectoring*

Vodafone would be very concerned to see ComReg remove the SLU obligation on eircom. We believe that:

- it would be disproportionate to do so in advance of vectoring technology being commercially proven.
- vectoring in tandem with SLU has the potential to change substantially the economics of SLU and infrastructure competition. If SLU is maintained alongside vectoring, an OAO that invests in SLU would likely, even at low levels of market penetration, be a supplier of wholesale inputs to eircom. Up to now eircom has made it clear that it would not purchase wholesale services from OAOs, which has had a chilling effect on infrastructure investment. In the event that vectoring were introduced this is likely to change, with a result that competition at the infrastructure level could increase substantially to the benefit of competition and consumers.

Vodafone urges ComReg not to remove the SLU mandate, or make any provision for eircom exclusivity. Vodafone believes that to do so would make it impossible for infrastructure competition to develop and would effectively curtail the ladder of investment at VUA.

Moreover, we note that while ComReg refers to eircom's proposals as a fibre solution, they are not. Vodafone believes that there is a very important distinction to be made between Fibre to the Home/building (Fibre end to end) and Fibre to the cabinet services (Copper last mile). Fibre to the cabinet still maintains copper in the access path, with fibre feeding the local cabinet. Fibre to the home, on the other hand delivers an end to end fibre solution. Vodafone's understanding is that the vast majority of the proposed NGA rollout, over 90%, will be based on copper VDSL.

Vodafone therefore believes that in the longer term further investment in the market will be required to deliver a true fibre to the home solution, notwithstanding the potential of vectoring to increase speeds in the medium term.

Vodafone would hope that ComReg is mindful of this likely future investment requirement, and will not make lasting regulatory decision that facilitate short-term investment decisions by eircom at the expense of foreclosing the appropriate development of the market.

*Regulation of WLR/VOIP*

Vodafone believes it is critically important to maintain the status quo with respect to the regulation of WLR and VOIP, and we therefore strongly support ComReg's proposed option 5.

At a practical level the fundamental distinction for an end user between the POTS based and Standalone services is that for Standalone services voice services must be implemented as a Next Generation "Over The Top" service using VOIP, while for POTS based products voice services are provided using current generation technology and platforms.

Where operators wish to avail of any cost advantages arising from VOIP based services they should make the necessary investment in IP voice platforms to realise such benefits. Vodafone notes that Question 17 sets out that it is eircom's view that the barriers to entry to for VOIP based services are low. If however eircom is incorrect and the barriers to entry are non-trivial, then operators should be properly incentivised for making the necessary investments. It is Vodafone's view that any approach other than Option 5 does not encourage efficient investment.

### *Transparency and non-discrimination obligations*

It is very important that OAOs receive appropriate notice of eircom's proposed wholesale products and prices, so that they have the time to analyse and develop their own pricing and product propositions, and are in a position to compete effectively with eircom in the retail market.

Vodafone believes that the notification periods proposed by ComReg are discriminatory – as part of its NGA investment business case eircom will have factored its retail systems development costs. These will have been a relatively small proportion of its overall business case and therefore eircom retail does not have to wait for pricing certainty on the wholesale input before it commences its development. eircom made the NGA investment decision almost 12 months ago and therefore can proceed with certainty as soon as the product details are stable. On the other hand the retail IT development costs for OAOs will be a very significant part of their investment and they must construct a business case and get the necessary investment decision approved before any serious development activity can commence.

ComReg may argue that the indicative pricing in the consultation is sufficient to allow an OAO business case to be constructed but this is not correct. The proposed price control only guarantees that eircom cannot set its wholesale price below the point where an OAO with 25% market share makes zero margin. The margins on fixed are so tight that we cannot take the risk of constructing a business case on the indicative pricing.

There are also timing issues with OAOs own IT development cycles. The timing of the eircom publications are likely to be aligned with its internal IT development cycle. Given the already short proposed notification periods it will be impossible for OAOs to deliver their retail developments earlier than the NGA launch date and therefore they will always be later than the eircom launch date.

**Q1. 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.**

### Summary

- We believe it is important to distinguish between a true NGA solution such as FTTH and eircom's proposed FTTC solution
- We have therefore defined the transition period as the time taken to move from traditional circuit switched voice and ADSL to OTT VoIP services and VDSL/FTTx
- We believe that VDSL is a copper technology that suffers from many of the same issues as ADSL and should not be confused with true end to end fibre services
- We believe a period of two years following the completion of the NGA rollout is required as a transition period but a review 24 months after initial launch should take place
- Vodafone believes that in order to encourage investments in NGA services, in particular VoIP and IMS (IP multi-media sub system), no preferential treatment of traditional circuit switched services should be offered.

It is important to be clear what is meant by transition and Next Generation services. Vodafone assumes that the term "transition period" refers to the time taken to move from exchanged based ADSL broadband PLUS voice over circuit switched technology to standalone over the top voice services delivered on VDSL copper technology.

Vodafone believes that there is a very important distinction to be made between Fibre To The Home (fibre end to end) and Fibre To The Cabinet services (copper last mile). FTTC still maintains copper in the access path, with fibre feeding the local cabinet. FTTH delivers an end to end fibre solution. Vodafone understands that the vast majority of eircom's proposed NGA rollout, over 90%, will be based on copper VDSL. Vodafone is therefore of the view that there will need to be two transition periods in Ireland. The initial transition is made in the move from a circuit switched environment to one that is primarily based on a packet switched core and access path (eircom's FTTC rollout). The second transition will be made when we move from copper based solutions to a true FTTH technology. This second transition appears to be outside the scope of the consultation but Vodafone believes it is important that ComReg does not lose sight of this reality, or implement regulatory arrangements that foreclose the appropriate development of the market.

In considering the transition period, it is important to highlight that The Digital agenda for Europe does not set out 100% take up of next generation broadband services, which are ultimately required to deliver NGA based services (VoIP, IPTV etc) using newer technologies and in reality 100% broadband take up in any area is unlikely in the foreseeable future. Given this, and as some services still depend on traditional circuit switched services, there is a requirement for a transitional period.

In considering the transition period, we believe three issues are important:

- Duration of the transition period
- Treatment of traditional circuit switched services, and
- Technical issues associated with the transition

With respect to duration, it is important that the transition period strikes a balance between encouraging investment in NGA services and protecting investment in legacy services. If the transition period does not get this balance right, it will have a chilling impact on investment in the market.

In NGA, a long transition period might well discourage investment in next generation services such as NGA voice services (VoIP/IMS) or other over the top services that would enhance the services offered to end customers and would also enhance the overall range of services offered over NGA networks in general.

In the legacy market, a too short transition risks jeopardising investments in LLU and existing infrastructure competition. For example, it is questionable whether there is currently an incentive for an operator to unbundle a new exchange using ADSL2+ technology, knowing that VDSL (with possible vectoring later) will be available in the near future to lines in the same exchange. This will limit the take up of exchange based LLU in NGA areas. Vodafone notes, however, that there are some instances where this may still happen, as it has in the UK in particular if there was a premium price applied to NGA based services or where people only had a requirement for a basic set of services.

Consequently Vodafone would be of the view that a transition period of two years from full NGA deployment seems reasonable at this point but should be subject to a review 24 months from initial launch when more on the uptake of NGA services is known and a more accurate picture of consumer behaviour has been observed based on initial NGA deployments. It should be noted that a report produced by the ESRI in 2010<sup>1</sup> showed that broadband take up reached a peak approximately 2.5 years after an exchange was enabled.

Vodafone believes that the regulatory treatment of traditional circuit switched services during the transition period will also have a substantial impact on investment incentives. Vodafone believes that in order to encourage investments in NGA services, in particular VoIP and IMS (IP multi-media sub system), no preferential treatment of traditional circuit switched services should be offered.

Moving to NGA services should ultimately be lower cost for operators after the initial investment as the power requirement, maintenance and simple structure of the technology have the impact of driving down costs, therefore NGA services have a natural long-term cost advantage. No incentive in traditional services should be allowed to artificially erode this advantage and discourage investment in NGA services such as Voice over IP.

Vodafone also believes that in order to facilitate a possible incentivised transition to a full FTTH solution in the future, it is critical that there is no preferential treatment of traditional services as by doing so would lessen the impact of any incentive and would remove any sense of urgency associated with a move to full NGA based services.

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Finally, from a technical perspective the main issues cited with moving from traditional circuit switched services are around monitored alarms, remote access to set top boxes and some other bespoke solutions such as home monitoring & alerting for the elderly or sick. However this itself is changing with many monitoring companies now moving to IP based monitoring (Netwatch for example) and most current generation set top boxes being IP enabled (UPCs "Horizon" set top box). Equally, the uptake of mobile phones has removed the dependence on having a phone service independent of the local power supply.

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<sup>1</sup> <http://esri.ie/UserFiles/publications/WP361/WP361.pdf>



**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**

### Summary

- Vodafone fully support the move to a copper switch off
- We do not believe the long terms needs of consumers can be met with VDSL technology nor will it meet the Digital Agenda targets
- Eircom’s solution continues to rely on the copper network, and so there is not a true migration from copper to fibre. Similarly, there is no prospect of retiring the copper network under eircom’s current proposed roll-out
- We therefore believe it is too early to evaluate ComReg’s position in managing any incentive to migrate from copper to fibre
- Regulation should be forward looking and encourage investment – no preference should be given to traditional or legacy systems in an NGA environment
- We believe a possible two-step approach to an eventual true NGA rollout with FTTH technology should be evaluated and we have provided indicative timelines for this.

Vodafone fully supports a full migration from copper to fibre services and would support ultimately setting a “copper switch off” date as was set with analogue TV. However, we believe ComReg are confusing eircom’s proposed FTTC rollout with a true fibre solution. In reality, ComReg are referring to an incentive in moving from traditional based copper services (current generation ADSL & WLR) to next generation copper services (VDSL & VoIP) and it is in this context that we provide the remainder of our reply.

Vodafone do not believe that the long term needs of consumers can be met with copper-based services, including VDSL, even with the potential use of speed enhancing technologies, such as vectoring. Vodafone do not believe that VDSL, even with speed enhancing technologies, can meet the objectives of the Digital agenda in providing speeds of 100Mbps to 50% of the population by 2020. We provide further detail on this in our reply on bandwidth enhancing technologies later on.

Moreover, the problems with copper, such as water ingress, confusing “up to” speeds, high line fault index, low immunity to noise, ingress interference & time decay of copper all still exist to some degree in a VDSL environment. These problems are dramatically reduced in a true FTTH NGA deployment.

Vodafone believe that regulation in the context of NGA should therefore be forward looking and create the correct environment for the ladder of investment to be followed and aspire to a true NGA FTTH deployment nationwide. At this point in the cycle of eircom’s rollout it is too early to assess ComReg’s role in managing an incentive, or what timing or trigger could be used to incentivise a move from traditional to next generation copper services. We believe that ComReg will need to be better informed as to consumer demand and take up, before such a decision could be taken.

At this stage Vodafone believes that what is more important is that no incentive is given to traditional copper based services such as circuit switched voice services. If ComReg were to do so, it would create the wrong climate and message to encourage future investment and would ultimately damage the roll out of true NGA services.

The main incentive for operators in moving to NGA is that it should bring about lower operational costs, simplified IT systems and easier to manage networks. This in itself is an incentive to drive NGA take up and to retire legacy systems and networks.

In assessing future options for migration to fibre, Vodafone suggest that one option would be a two-stage approach where stage 1 would include a partial copper switch off with the move to VDSL (Fibre + copper hybrid) and stage 2 would be a full copper switch off (FTTH/B) at a future date. This would create the right message and context and set Ireland on a true NGA path to providing fibre in the access path.

At a minimum stage 1 would include the current NGA rollout plan plus any time allowed for transitional arrangements as outlined in our reply to Question 1. Stage 2 could really only be defined once actual uptake of VDSL based services are known and it is simply too early to define at this point.

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**Q3. 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.**

**Summary:**

- Vodafone strongly endorses the principle that duct access be mandated. This is essential if investment in parallel fibre networks is to occur.
- Similarly, where it is not possible to provide requested duct access then Vodafone believes it is proportionate that eircom be mandated to provide access to "dark fibre".
- Vodafone strongly disagrees with ComReg's proposals relating to the request by request negotiation of duct access pricing.
- ComReg's proposed margin squeeze test includes a network price for duct access. Vodafone believes this figure should be used as the basis for standard duct access pricing.

Notwithstanding the existence of SLU remedies in a variety of European jurisdictions there has to date been limited uptake of SLU. Vodafone believes that amongst the contributors to this situation are the economics of the cabinet based equipment and also the economics of Altnets connecting to the cabinet. The cost to an Altnet of building new duct to the cabinet locations will be considerable and will form the majority of the capital cost of this connection. The incumbent's physical infrastructure between the exchange building and the cabinet is part of the access network and should be available on an "unbundled" basis. It is Vodafone's belief that making such access available has the potential to foster investment in parallel fibre networks. Empirical evidence for this view exists in other markets such as Portugal where the availability of duct access has contributed to a situation where Altnet provision of FTTB/H is sufficiently prevalent that copper based LLU is a declining feature of the market.

Vodafone therefore strongly endorses the principle that duct access be mandated. In situations where it is not possible to provide requested access to the duct then it is proportionate that eircom be mandated to provide access to "dark fibre". This fall back access provides a disincentive for eircom to spuriously refuse access to ducts.

eircom's program of NGA deployment has required it to develop new operational processes for the planning and implementation of its own self-supplied sub-duct access between the exchange and the cabinet for FTTC installations. Vodafone believes that it is proportionate and justified that eircom be mandated to ensure that this process is designed in such a way to allow an Eol interface for duct access requests from OAOs – there should be a single process within eircom for dealing with requests to install fibre between an exchange and a given cabinet or group of cabinets. There does not appear to be any reason why an obligation in this form cannot be implemented at low or no incremental cost to eircom. This approach would also lend itself to the publication of comparative KPIs showing the relative performance of eircom in dealing with OAO requests and its own internal requests for NGA duct access.

eircom is carrying out surveys of its duct access infrastructure in the context of NGA. Taking this into account, and in the context of a duct access remedy, Vodafone believes that it is proportionate, reasonable and justified to mandate eircom on foot of such surveys to keep records of the excess duct capacity which remains after it does its initial NGA deployment. This would have a low burden, be good operational practice, and prevent gaming by eircom by requiring a full network survey for every request for access.

Vodafone strongly disagrees with ComReg's proposals relating to the request by request negotiation of duct access pricing. This proposed approach means that there is no visibility in the market of even an approximate price level for duct access. In fact this approach means that in order to establish even a guideline level at least one OAO needs to make a request for access. Even where a given request establishes a price for a given set of duct access there is no provision for making this pricing information available generally to the market. Both eircom and the requesting operator appear to be constrained by both the Access Regulations and eircom's standard NDA from passing this information on to the market generally. The lack of visibility and transparency in pricing means that operators contemplating access must wait until the end of the proposed 3 month period before they can finalised their

business case for any unbundling that the requested duct access might facilitate. This at best delays OAOs' market entry and in cases where the pricing causes business cases to fail then it is likely to give rise to regulatory disputes and in any event unnecessary work on the part of both eircom and the OAO.

With respect to commercial clients, ComReg's approach will also effectively preclude OAOs from taking part in competitive tendering processes. For example, if duct access is required in order to supply services to a large commercial or industrial client, OAOs will be at a substantial disadvantage in competing with eircom for the work, as they will not know their full costs of service provision in advance of tendering for the work. Moreover, by entering a negotiation with eircom, they will alert eircom that they are tendering for the work, and if they win, will be vulnerable to eircom seeking an unreasonable price for duct access. This is likely to significantly reduce the extent to which OAOs are able to tender competitively for large industrial and commercial clients.

Vodafone notes that ComReg is proposing to model the E-side costs of the eircom network on a national basis for its proposed margin squeeze test. It would appear that this model will incorporate a network figure for duct access for NGA. Vodafone sees no reason why this figure, produced by a ComReg model to control wholesale pricing could not be used as the basis for standard pricing for duct access. The advantages of standard pricing include the follow:

- The removal of the uncertainty attaching to the proposed "negotiated" procedure;
- Market certainty over costs;
- Simplification of the process for requesting duct access;
- Likely foreshortening of the duct access process for OAOs
- Enhanced transparency in the Reference Offer
- Reduction of the regulatory burden on eircom which under the current proposals would have to carry out a detailed pricing/costing exercise on foot of every access request.

While Vodafone welcomes the proposal that this infrastructure access must be detailed in a Reference Offer it notes that the wording of the proposed Decision Instrument does not appear to give proper effect to this requirement.

**Q4. Do you agree with ComReg's preliminary conclusions on network access in the context of FTTH? Please provide reasons for your answer.**

Vodafone agrees with a number of ComReg's preliminary conclusions in respect of network access in the context of FTTH. However Vodafone believes that ComReg should mandate terminating segment access.

In considering ComReg's reasoning and proposals we make the following observations:

- Fibre based access falls within the WPNIA market definition
- The technology choice of using a GPON solution rather than a point to point solution is entirely eircom's
- eircom has stated that based on the technology solutions it currently envisages for NGA deployment it will use FTTH exclusively to serve approximately 8% of its projected roll-out foot print of one million premises. This equates to 80,000 homes passed by FTTH.
- The criterion to be used by eircom in deciding whether to deploy FTTH rather than FTTC is that these premises are directly fed from the exchange i.e. there is no cabinet.

Eircom has been designated as exercising SMP on the WPNIA market. ComReg has already determined that it is proportionate, reasonable and justified to impose an access obligation on eircom for WPNIA NGA infrastructure. It would undermine the access remedies regime if the SMP operator's unilateral choice of one technology solution over another was sufficient grounds to decide that no access remedy was appropriate. Given that unbundling solutions are possible even in the context of GPON it is Vodafone's view that the access obligation previously imposed should apply to fibre irrespective of the network topology, infrastructure or architecture deployed.

Vodafone suggests that co-location is an "associated facility" in the context of WPNIA and that it is necessary to mandate access to co-location in order to give proper effect to any access remedy imposed in respect of fibre unbundling. Given the scope for regulatory gaming by an SMP WPNIA operator, the full suite of remedies (non-discrimination, transparency and price control (in the shape of a cost oriented measure)) should apply to co-location and not just an access remedy.

Similarly Vodafone suggests that backhaul is an "associated facility" in the context of WPNIA and that it is necessary to mandate access to backhaul in order to give proper effect to any access remedy imposed in respect of fibre unbundling. Given the scope for regulatory gaming by an SMP WPNIA operator, the full suite of remedies should apply to backhaul and not just an access remedy.

In respect of mandating access to the terminating segment, Vodafone does not agree with ComReg's approach. While in terms of eircom's overall NGA deployment FTTH represents less than 10% of the planned NGA roll-out it represents 100% of the NGA solution in those areas where it will be deployed. If ComReg's analysis of the likely take up of access to the terminating segment is correct, then there is only an incremental regulatory burden on eircom in having this access mandated. This is similar to SLU in the current generation copper environment. Conversely if ComReg does not mandate access to the terminating segment, and there is market demand for such access or if the market matures to require this facility more quickly than ComReg can mandate it, then there will be adverse impacts on competition due to the inevitable delays in imposing an access remedy. On balance it is therefore Vodafone's view that it is proportionate reasonable and justified to mandate access to the terminating segment at this time.

## Background to Questions 5 to 8



### Business case for SLU

Experience in the Irish market has shown that LLU take-up is only viable in circumstances where there is sufficient scale in the downstream retail markets to reduce unit costs of unbundling to a commercially viable level. Vodafone believes that the economics of SLU are more challenging. The percentage penetration that must be obtained in order to achieve commercially viable unbundling costs is far higher on a per cabinet basis than on an exchange basis.

eircom is not obliged to deploy NGA at all cabinets and has stated that it will not do so where there are insufficient lines to justify a business case. eircom has also stated at industry briefings on NGA that in order for NGA deployment to be viable it needs Access Seekers to actively consume the wholesale service. This suggests that eircom's NGA business case requires an uptake penetration in excess of eircom's overall retail market share. This implies that NGA is only viable if it captures more than 50% of the total demand for VDSL based NGA services.

This makes SLU look exceptionally challenging for alternative operators. If eircom cannot construct a business case for NGA deployment without aggregating its own downstream demand and OAOs' downstream demand then it will not be possible for a prospective SLU access seeker to construct a positive business case for investment in Market 4 absent eircom retail's downstream demand in Market 5. In this context eircom's ability, as a vertically integrated company, to choose to self-supply from Market 4 into Market 5 means that it can effectively close out Market 4 to other operators.

Vectoring potentially changes this dynamic. The cabinet by cabinet exclusivity which Vectoring necessitates means that if an Access Seeker were to "unbundle" a cabinet in Market 4 it would create a mini monopoly in Market 5 in that cabinet. This means that it would capture the entirety of the Market 5 demand for VDSL based services in that cabinet. This includes eircom retail's upstream requirements for Market 5 inputs. In effect the Access Seeker now has the same business case as the SMP operator.

Exclusivity makes the business case for SLU. This is because whoever unbundles the cabinet captures 100% of the Market 5 NGA demand, including the incumbent's. As outlined above incumbents obtain effective exclusivity because they can withhold their Market 5 demand which means that Access Seekers will not unbundle cabinets because they are unlikely to be able to aggregate enough demand to obtain a return on their investment. If it was economic for the incumbent to unbundle a particular cabinet (or group of cabinets) through self supply with 100% of the demand, an access seeker who obtained exclusivity because of the constraints of Vectoring would find that they now have a very similar business case to the incumbent. If it was profitable for the incumbent to unbundle the cabinet on what is effectively an "exclusive use" business case it will most probably be profitable for an access seeker to unbundle it if they can also obtain exclusivity.

### Competitive impacts of a combination of SLU and Vectoring exclusivity

A Market 4 SLU remedy, in the context of Vectoring and its exclusivity requirements, may create a land grab dynamic. Both eircom and Access Seekers have a positive incentive to deploy NGA as quickly as possible, as "capturing" a cabinet on an exclusive basis guarantees their business case. This dynamic encourages prompt roll-out of NGA. It also means that in circumstances where one or both of eircom and the Access Seeker are constrained by lack of investment funds the overall burden of NGA investment is shared.

The exclusivity associated with vectoring can therefore change the economics of SLU, and can result in a very different competitive dynamic to that which exists for current generation Market 5 services based on LLU. For

current generation services eircom has no need to purchase wholesale Market 5 services from alternative suppliers. eircom's ability to keep its own demand off the merchant market means that LLU is only commercially viable in the larger exchanges. This means that LLU based Bitstream services will not be ubiquitously available from alternatives to eircom and all operators are faced with buying at least some of their wholesale inputs from eircom. eircom will always therefore be the first choice supplier, dampening demand on the merchant market, as operators would need to reach significant scale to justify a dual supplier strategy. The competitive constraint exerted by LLU based inputs on eircom's current generation Market 5 activity is therefore limited to the larger exchange areas.

In an NGA scenario, where an OAO has cabinet exclusivity, eircom would be forced to either cede 100% of the retail market to its competitors in these areas or buy wholesale inputs on the merchant market. In Portugal, Vodafone has seen a dynamic where when OAOs reached reasonably low infrastructure penetration of FTTB (perhaps as low as 5%) the incumbent could not simply forgo the retail revenue associated with these areas and was forced to purchase from the merchant market. Once the incumbent becomes a purchaser as well as a seller on the merchant market its priorities change. It will want fully featured, easy to use products. It will find it difficult to ask other suppliers to provide services to a higher standard than it itself is willing to offer to the market. In a Vectored NGA scenario a competitive constraint is potentially exercised at much lower level of penetration than is possible with current generation. However this Market 5 competitive dynamic is only possible where there is **a Market 4 access obligation for SLU**.

In consequence, ComReg's regulatory structure will be essential in ensuring that this competitive constraint is able to emerge. Similarly, any removal of the access obligation for SLU would remove the prospect of investment, curtail the ladder of investment and copper-fasten eircom's dominance in both markets 4 and 5.

### **The regulatory importance of an SLU access obligation**

Removal of an SLU obligation in effect shortens the ladder of investment as it would no longer be possible for Access seekers to fully compete in Market 5 as they could not purchase the necessary Market 4 input. While VUA may offer much of the functionality of unbundling it is, as ComReg has pointed out, not unbundling. Removal of the SLU obligation would represent a fundamental shift in the regulatory approach. Such a change would require a recasting of ComReg's overall reasoning as it applies to remedies across all markets. For example if the top rung of the ladder is to be removed then do the corresponding end point remedies such as cost orientation also move down into lower markets?

Whether or not the Ladder of Investment model is fundamentally correct is a separate issue. The key point is Regulatory certainty and consistency. The Ladder of Investment is ComReg's chosen framework to underpin its entire regulatory remedies approach. Changes to this approach cannot be implemented in a piecemeal fashion but would require a holistic review of the principles underlying ComReg's regulatory approach.

The fixed market in Ireland (and in other jurisdictions) is characterised by a bottleneck in the physical access layer. Remedies in Market 4 are designed to deal with this and to ensure that this bottleneck is not leveraged into downstream markets. The removal of the Market 4 SLU remedy would represent the abandonment of any prospect that this bottleneck could be contained in Market 4 and explicitly moves the bottleneck to Market 5.

If the SLU obligation is to be removed or circumscribed in such a way as to make SLU impossible or unviable there seems little point in mandating duct, trench or fibre access as these are essentially enablers for SLU. Elsewhere in its consultation ComReg is proposing to impose precisely these remedies. In order for ComReg to maintain internal consistency in its suite of remedies this would require that it also maintain the SLU access obligation.

In practical terms eircom has only committed to NGA deployment in some 22 exchange areas representing just over 200,000 premises passed. This is a relatively low proportion of its overall target rollout and will take perhaps until Q1 2013 to achieve. It has not yet announced its phase 3 exchanges and therefore cannot reasonably seek to block

other Access Seekers deploying SLU. Even if it did announce a further 10 exchanges for phase 3 this would likely take until Q2/3 2013 to deploy and would only extend its footprint by another 100,000 premises. There seem few reasonable grounds to grant eircom, the SMP operator exclusivity over the entirety of Market 4 for NGA while there is the possibility of market entry by other operators.

Vodafone therefore strongly believes that there are significant potential market benefits to be gained by maintaining the SLU access obligation in Market 4.

However, we suggest ComReg should consider modifying the obligation to recognise the potential deployment of Vectoring. Vodafone has considered how such an SLU obligation could be implemented in the context of Vectoring. We suggest that:

- The first step is to explicitly recognise that eircom's NGA deployment involves self-supply of SLU. High level conditions for SLU access should be the same for either eircom or an OAO. SLU access in a given cabinet (group of cabinets) should be on an exclusive basis on open, transparent and non-discriminatory terms.
- There should be a "use it or lose it" approach with a reasonably short time horizon for uptake to prevent hoarding. In the event of multiple demands a queuing system enacted potentially with bonds lodged and payable to other in the queue in the event of failure to take up deployment options.
- Exclusive Market 4 access (including self-supply) will be contingent on Vectoring implementation. In the event that Vectoring (or its equivalent) is not deployed (see below) within a defined timescale after commercial availability then existing SLU access should not bar another access seeker who commits to deploy Vectoring. This prevents hoarding by way of installation of non vectored VDSL to obtain exclusivity followed by a failure to Vector. Initial deployment of non Vectored VDSL must be followed by Vectoring to maintain the exclusivity. If this follow up does not happen then another operator who is prepared to Vector could in effect obtain step in rights and displace the non-Vectored operator.
- The right to avail of exclusive access in Market 4 should be contingent on provision of downstream access in Market 5 on non-discriminatory terms. The Market 5 access offered must be standardised to allow homogenous retail offerings by individual service providers. Vodafone notes that work is well advanced in Germany in the definition of an industry standard for a Market 5 NGA offering. In Ireland the work that is ongoing in the NGA industry forum could readily be adapted to define an industry standard.
- As all purchasers of eircom's NGA products will have to build interfaces into eircom an industry standard based on the eircom interface and product set would result in the lowest overhead for wholesale customers faced using a dual supplier strategy.

As pointed out previously Vodafone has practical experience of a dual supplier approach where there is a form geographic "exclusivity" in the choice of supplier. This approach addresses some of the overhead associated with a dual supplier strategy. Given that the wholesale inputs underpinning the BT product are eircom products this means that the Vodafone interface to BT of necessity maps directly onto the eircom interface. This results in an approximation to a de facto standardisation. It is Vodafone's view that an explicit standardisation could be achieved reasonably easily in the context of NGA.

### **Regulatory Impact on eircom of maintaining the SLU obligation**

Even in a regulatory environment which would enable SLU if there is no uptake of SLU by OAOs then the net effect on eircom is that it arrives at a position in Market 5 the same as if the SLU obligation in Market 4 had been removed. i.e. it has 100% market share. The difference is that in reaching this point its behaviour in Market 5 will have been conditioned by the Market 4 remedy overhang. If eircom wishes to dis-incentivise Market 4 investment it must make Market 5 products and services compellingly attractive. It will have incentives to price Market 5 products at or close to margin squeeze price floors and it will have positive incentives to make the functional and operational aspects of the Market 5 products as user friendly as possible. It will also have incentives for a timely deployment of NGA. These are all real benefits for the market.



Vodafone's proposal would not affect the ownership of the network. As with existing LLU the copper and all of the existing plant remains the property of eircom. The practical implementation of SLU, including self supply, appears to be that there is a second cabinet with the VDSL equipment installed in proximity to the existing copper distribution cabinet with a tie cable between them. This new cabinet is the property of whoever installs it eircom or OAO. What it would do is separate eircom's self supplied market 4 input from market 5 in areas where there was SLU deployment.



### Deployment of Vectoring

eircom has announced that it intends to accelerate its NGA deployment which will result in its target of 1,000,000 premises passed in three years. As Vectoring capable VDSL DSLAMs will not be commercially available for at least 18 months this implies that some 500,000 premises will be served with equipment that is not Vectoring capable and which will need upgrading or replacement. This will take time and further implies that Vectoring could not be ubiquitously deployed by eircom for a number of years after its first commercial availability. An approach by ComReg which means that VDSL deployment is not solely the preserve of eircom would mean that any upgrade or replacement of non-Vectoring capable DSLAMs can happen in parallel across two different equipment estates, thus shortening the overall cycle time.

Eircom has committed itself to the deployment of Vectoring but has done so without any obvious ability to construct a business case for this. The equipment will not be commercially available for some time and it is not clear what its pricing will be. Given that eircom has only commenced NGA deployment, its VDSL asset base will be very young, with most of it less than 2 years old when Vectoring becomes available, leaving it with a significant outstanding book value. Notwithstanding the significant recent remediation of eircom's balance sheet it is not clear that eircom could accommodate the write down of VDSL DSLAMs capable of supporting half of its base on this basis.

If one considers the current state of the Vectoring technology and its evolution path then further questions arise. Vodafone understands that at the moment the VDSL DSLAMs available on the market are not forward compatible, that is they will require either upgrade or replacement to support Vectoring. At some point in the Vectoring capable product evolution, an availability date will be declared by the manufacturer. Eircom will then be faced with a dilemma, does it continue to purchase the non-Vectoring capable DSLAM equipment, which will face replacement or upgrade in very short order, or does it pause its deployment program until the Vectoring capable equipment is available? When Vectoring capable equipment becomes available it is likely that Ireland will not be the only market wishing to deploy this technology there is a not insignificant chance that there will be supply constraints and it is by no means clear that eircom will be in a position to obtain preferential delivery dates in the face of the requirements of much larger customers (potentially BT). This dynamic further undermines the level of certainty that the supposed benefits of Vectoring can be offset against the short to medium term market impacts of removing the SLU access obligation.

In a parallel timeline to the development of Vectoring technology the alternate cable network of UPC will continue its evolution. As has been outlined above it is by no means certain that Vectoring will be ubiquitously available for some 3-4 years. By this stage the speed improvements deriving from Vectoring may be insufficient to meet consumer expectation set by an evolved cable network. In this scenario designing a regulatory environment which actively encourages the incumbent to focus solely on sweating its copper assets by use of Vectoring rather than the deployment of FTTH has the potential to seriously limit end-user choice. However an environment in which the incumbent faces potential disintermediation from its copper network in Market 5 would prompt a more forward looking reassessment by eircom of the economics of FTTH investment.

### Market demand for SLU

BT has requested SLU from eircom ✂

Public Version

**Q5. 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.**

Vodafone entirely disagrees with Option B as set out as this approach effectively hands monopoly control of the NGA Market 5 to the SMP operator in Market 4.

There is significant overlap between option A and Option C. No Vectoring deployment is possible in the short term so therefore any NGA deployment is on the basis of current VDSL technology. This short term deployment can be accommodated within the current SLU obligation. However, in practical terms if one operator has unbundled a cabinet no-one else contemplating competing it the retail market for TV is likely do so. This is because such a course would mean that Vectoring would not be possible and the services offered from that cabinet would not be competitive against cable.

However some market protections are required both to ensure that the short term deployment of non-Vectored VDSL is not simply a ploy to gain geographic control of areas where operators have no real intent for vectoring and to ensure that there is no market distortions arising from the withholding of either demand side or supply side activities (by eircom and SLU unbundlers respectively).

Vodafone has set out in detail above its suggested approach to a modification of the current SLU obligation which it feels addresses these issues.

**Q6. Do you agree with the general conditions which would apply to all options? Please provide reasons for your response.**

Vodafone believes that the high level approach as set out at section 5.6.1 of the consultation document is proportionate, reasonable and justified. This approach sets an appropriate boundary around what is basically the partial amelioration of an access remedy which has previously been imposed on an SMP operator.

Public Version

**Q7. Do you intend to make a request for access to the sub-loop and on what scale? Please provide reasons for your response.**

Vodafone do not currently use access infrastructure components, such as sub-loop on the wholesale market but rather purchase a range of Bitstream and WLR products on the merchant market from multiple wholesale providers.

Vodafone is fully supportive of a vibrant competitive wholesale market that supports healthy competition between operators leading to competitive merchant market pricing.

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Public Version

**Q8. 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.**

The profile of increasing end user capacity demands means that in a reasonably short timeframe standard VDSL is unlikely to be able to support services which will be functionally competitive with cable. In this context, it is highly likely that there be a deployment of some form of bandwidth enhancing technology. There will be little choice but for wholesale customers to support this deployment.

If the technology requires some form of exclusivity this has serious repercussions for the functioning of the market. If regulators accept that copper based NGA is only viable with such constraints then they face a choice:

- Either they create a single market-wide monopoly by giving the SMP operator exclusivity in Market 4, or
- They create a series of mini-monopolies by leaving Market 4 access open but on an area by area, exclusive basis.

It is Vodafone's view that while neither is ideal the second approach is considerably more advantageous from a consumer and competition perspective than the first.

**Q9. Do you agree with the ComReg's analysis for the requirement of Backhaul and exchange and cabinet co-location are required? Please provide reasons for your response.**

Vodafone indicated to ComReg that it required a longer extension to the consultation period in order to fully answer all consultation questions. Given ComReg's decision not to grant such an extension, Vodafone have been unable to complete and validate all responses to the consultation within the time period allowed by ComReg. We propose to provide follow up responses to outstanding questions as soon as possible.

Public Version

**Q10. 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.**

Vodafone indicated to ComReg that it required a longer extension to the consultation period in order to fully answer all consultation questions. Given ComReg's decision not to grant such an extension, Vodafone have been unable to complete and validate all responses to the consultation within the time period allowed by ComReg. We propose to provide follow up responses to outstanding questions as soon as possible.

Public Version



**Q11. Do you agree with ComReg's conclusion on the provision of backhaul services and facilities for WBA? Please provide reasons for your response.**

Vodafone indicated to ComReg that it required a longer extension to the consultation period in order to fully answer all consultation questions. Given ComReg's decision not to grant such an extension, Vodafone have been unable to complete and validate all responses to the consultation within the time period allowed by ComReg. We propose to provide follow up responses to outstanding questions as soon as possible.

Public Version

**Q12. 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.**

Vodafone indicated to ComReg that it required a longer extension to the consultation period in order to fully answer all consultation questions. Given ComReg's decision not to grant such an extension, Vodafone have been unable to complete and validate all responses to the consultation within the time period allowed by ComReg. We propose to provide follow up responses to outstanding questions as soon as possible.

Public Version

**Q13. 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 WPNIA market (Market 4)? Please provide reasons for your response.**

Vodafone agrees entirely with the need for a fully functioning migrations process. Vodafone believes it to be essential that ComReg set out in detail what that migration process will entail, as the absence of a clear and proscriptive direction from ComReg is likely to lead to delay and to retard competition.

Public Version

**Q14. 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.**

### Summary

- Vodafone strongly supports the general approach proposed by ComReg in respect of Equivalence of Inputs (EoI).

Non-price discrimination by an SMP is a significant risk. Even where this discrimination is not active in nature it has scope to manifest itself in a greater willingness to optimise or improve the internal processes that are used by a vertically integrated SMP operator as against the processes used by the wholesale consumers of regulated products supplied by this operator. EoI levels the playing field.

The purpose of ex ante regulation is to prospectively prevent negative market impacts arising from the exercise of SMP. These impacts can arise from either active leveraging of SMP or a more passive effect arising from a form of "neglect" where external efficiencies for wholesale customers are not as actively pursued as internal efficiencies. Activity of this second type can be difficult to detect as it will not be clear where the equivalent interfaces are between self and external supply.

Many of the non-discrimination remedies currently in place on eircom are couched as positive obligations in the following terms to:

*"**Ensure** [emphasis added] that all services and information are provided to other undertakings under the same conditions and of the same quality as the services and information that Eircom provides for or to itself or its subsidiaries or partners."*<sup>1</sup>

The current regulatory regime is based on Equivalence of Outputs (EoO) and subsequent detection and remediation to ensure equivalence. This seems to have fostered an environment where it is viable for eircom to design EoO solutions and processes which are not overtly discriminatory. The fact that there are no direct comparators to the internal processes inhibits assessment of its compliance or otherwise. This means that confirmation of lack of discrimination is at best difficult and subsequent enforcement is also challenging.

Even where there is this positive obligation to ensure equivalence, and based on public domain notified breaches, eircom has a track record of discriminatory behaviour. It would appear based on this that eircom has previously acted on the motivation and opportunity occasioned by the EoO approach to take advantage of its SMP, albeit through omission rather than commission. Examples of this are provided below. This in itself would mean that a move to an EoI approach would be proportionate, reasonable and justified.

NGA represents a completely new service set. It is unlike the situation that pertained almost 15 years ago at market Liberalisation, where the primary service was PSTN, which had been offered on a vertically integrated basis for a considerable period of time without the prospect of a non-discrimination obligation. Now there are no existing commercial NGA connections and eircom has been regulated for almost 15 years.

In a context where eircom must develop a new set of processes and interfaces to its OSS and BSS support the delivery and maintenance of NGA services. It would appear that all operators, including eircom retail, will have to develop a new set of interfaces and processes to support NGA services. The most efficient approach would be to develop a single set of processes and interfaces and to use this common approach to deal with both its own downstream arm and external consumers of its wholesale products. If it is eircom's position that the internal interface between its retail arm and the internal self-supply could be more efficiently implemented on the basis of a second set of network interfaces facing its retail arm and that the retail arm's interfaces would be easier if it used this internal approach rather than a common interface then it raises serious questions as regards discrimination. The

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<sup>1</sup> Section 9.2.ii of D06/11

mere fact that eircom might raise an argument that it is disadvantaged by using a common interface triggers the corollary that as an SMP operator it is advantaged by not using the OAO interface. This provides further justification for an Eol approach.

An example of the interface issue has arisen in respect of the handover of NGA traffic. The handover from the eircom NGN core is an Ethernet interface at Layer 2. Some physical connectivity will be required between the NGN core and the operator service platforms (this includes eircom retail). Management of this interface will be required including in terms of configuration of services on the interface, capacity management and service assurance. For OAOs this interface is by way of WEIL wholesale product. This product has a set of defined interfaces, process and procedures. eircom retail faces developing equivalent interfaces, processes and procedures. Rather than use these established processes it is eircom's position that

*"As eircom is a vertically integrated SMP operator, eircom Retail will not be ordering WEILs or Logical Connectivity. eircom Wholesale is currently in discussions with Access Seekers to see what interconnect / logical connectivity strategy would suit them best. When finalised eircom Wholesale will document the different options in the relevant section of the IPM. eircom believes that this difference in process is immaterial and reasonable."*<sup>1</sup>

This raises the question what processes will eircom retail use? There is no logical reason for eircom retail not to use the standard processes unless it can achieve greater efficiencies and lower cost through the use of alternate interfaces and processes. Given that these alternatives must be functionally equivalent to the standard WEIL processes this implies that the external interfaces are sub-optimised. An Eol obligation removes this issue. Eircom retail would be faced with using the same interface and processes as OAOs and therefore eircom would have an incentive to ensure that such interfaces were as efficient as possible.

This stance by eircom reinforces the view that there are ongoing deficiencies in an EoO approach and that Eol is necessary for the correct functioning of the market. Vodafone therefore endorses an Eol approach.

### ***Previous examples of eircom's discriminatory behaviour***

Vodafone has compiled the following list of instances where eircom has been found by ComReg to be non-compliant with its obligations including non-discrimination and transparency obligations which have been imposed following a designation of SMP. Also listed are instances where a complaint has been made or a dispute raised grounded in eircom's possible failure to meet such obligations and where, following regulatory intervention, eircom modified its activities resulting in the compliance issue or dispute being resolved without an explicit finding.

Vodafone believes that this list is not exhaustive as it believes that there may be other instances where following remediation and notwithstanding non-compliance a formal notification was not issued to eircom or published.

That such events occur even in the context of imposed obligations is demonstration of the fact that absent such obligations there are opportunities and incentives for an SMP operator to leverage its position on the market and that remedies designed to forestall such behaviour are objectively justified and proportionate.

### ***Non-Compliances***

ComReg in Information Notice 'Notification to Eircom of non-compliance by Eircom with its non-discrimination obligation', Document No. 06/27, dated 23rd June 2006 outlined that it had notified Eircom of its finding that Eircom had failed to comply with Regulation 7(1)(a) of the Interconnection Regulations by acting in a discriminatory manner in relation to the provision of information.

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<sup>1</sup> Eircom response to query No. 23 on the NGA Forum Issue Tracker

On 14th May 2007 ComReg representatives conducted a review of the Eircom remediation programme in respect of the non-compliance notified under 06/27. On foot of the review ComReg was not satisfied that Eircom systems sufficiently ensure that members of Eircom retail (including employees contracted to Eircom) only have access to the same information under the same conditions as that provided to interconnected operators providing similar services. In light of this, ComReg formed the opinion that Eircom has not complied with the non-discrimination obligation contained in Sections 6.4 and 6.5 of Decision Notice and Decision Instrument - Designation of SMP and SMP Obligations, Market Analysis: Retail Fixed Narrowband Access Markets, Decision No. D07/61, Document No. 07/61. (ComReg Document 07/107)

ComReg investigated Eircom's PSTN provisioning process which examined the use of a particular order type, known as a Line Enquiry Order and compared them to the equivalent processes provided by Eircom to its own Retail arm. ComReg found a number of differences between the processes which resulted in more favourable circumstances for Eircom's retail arm than those provided to OAOs. Consequently, on 19 July 2007, ComReg issued Eircom with a notification of a finding that it was non-compliant with its non-discrimination obligation. (ComReg document 07/44)

ComReg initiated an investigation in December 2006 in relation to Eircom's compliance with its non-discrimination obligations as they relate to the Public Switched Telephone Network ('PSTN') line service repair of customers of OAOs. ComReg found evidence that from December 2006 the performance of the repair service provided to OAOs did not meet the same conditions or the same quality as provided to Eircom Retail.

ComReg found that Eircom was not in compliance with its non-discrimination obligation, imposed on it by Regulation 7(1)(a) of the European Communities (Interconnection in Telecommunications) Regulations 1998, as continued by Regulation 8 of the European Communities (Electronic Communications Networks and Services) (Access) Regulations 2003. On 27th July 2007, ComReg notified Eircom of its finding. (ComReg Document 07/50)

On August 30 2007, Eircom announced its intention to launch a new Capacity Based Bitstream product for its wholesale customers. ComReg directed Eircom, on Friday 14th September, not to launch this product and to refrain from taking and processing orders for this product, until such a time as Eircom demonstrates, to ComReg's satisfaction, that it (Eircom) is fully compliant with all of its regulatory obligations, including those arising from Eircom's dominance of the Wholesale Broadband Access market. (ComReg Document 07/69)

ComReg initiated an investigation in June 2008 in relation to Eircom's launch of a new wholesale product comprised of underlying regulated components which will be referred to as the 'white label'. This product is made up of elements comprising Call Origination, Call Termination and Call Transit. ComReg found that Eircom was not in compliance with the transparency obligations, imposed on it:

- a) in the market for Wholesale Call Origination as set out in Annex A, Section 8 of D04/07 pursuant to Regulation 10 of the Access Regulations;
- b) in the market for Wholesale National Call Transit as set out in Annex B, Section 8 of D04/07 pursuant to Regulation 10 of the Access Regulations; and
- c) in the market for Wholesale Call Termination as set out in Section 8 of the decision instrument contained in D06/07 pursuant to Regulation 10 of the Access Regulations.

On 8th July 2008 ComReg notified Eircom of its findings of non-compliance as outlined above. (ComReg Document 08/55)

On 4 December 2008 ComReg found that information and services regarding WBA were not provided by Eircom to OAOs according to timescales, on a basis, or of a quality, which were equivalent to those provided to Eircom Retail and, as such, Eircom was not in compliance with the non-discrimination obligation set out in Paragraph 6.1 of the Annex to the Decision, pursuant to Regulation 11 of the Regulations. (ComReg Document 08/95)

On 11 February 2009, ComReg notified Eircom of its finding ("the Notification") that, with regard to the 1MB and 3MB Family TalkTime bundles, Eircom had not complied with its obligation not to unreasonably bundle. (ComReg Document 09/25).

On 8 April 2009, the Commission for Communications Regulation ('ComReg') issued a direction to Eircom Limited ('Eircom') to refrain from launching the proposed new 1MB and 3MB "free calls to Meteor" "Family" TalkTime bundles. This was on foot of eircom's obligation under the provisions of Regulation 14(2)(d) of the Universal Service Regulations and Section 7.8 of ComReg's Decision Instrument D07/61 'Retail Fixed Narrowband Access Markets' not to unreasonably bundle fixed retail narrowband access with other retail services. (ComReg document 09/31)

On 30 November 2010 ComReg found that, with regard to its bid and subsequent contract for the provision of Ethernet services to Telefónica O2 Ireland Limited, Eircom was not compliant with its Access, Non-discrimination, Transparency and Cost Orientation obligations provided for at Sections 6, 8, 9 and 11 of Decision D06/08. (ComReg document 10/93).

#### *Dispute determinations*

On 14 July 2009 ComReg made a Determination in a dispute between eircom and BT finding that a request for the provision of Ethernet based Wholesale Leased Line Terminating segments that had previously been refused by eircom should be met as it was subject to eircom's obligations in relation to access and non-discrimination. (ComReg document 09/58).

On 5 March 2009 ComReg made a Determination in a dispute between eircom and BT finding that a request for access to collocation for existing LLU service that had previously been refused was reasonable and should be met. Paragraph 227 of the Determination states "ComReg is of the view that its analysis shows that Eircom's behaviour in not meeting BT's request for access was not consistent with Eircom's ex ante obligations of access", Paragraph 230 of the Determination states "ComReg's analysis shows that Eircom's statement that there was insufficient MDF space to meet BT's access request and the manner in which it failed to consider the full range of MDF management techniques was not consistent with its obligation of non-discrimination" (ComReg Document 09/13).

#### *Issues resolved on foot of regulatory intervention*

In 2008 and 2009 an investigation was undertaken following a complaint from an OAO that a lack of reliable access to CSIDs was preventing the use of CSID by the OAO for Bitstream user authentication. The information note outlining the investigation closure states: "Based on evidence gathered during the investigation it was evident to ComReg that CSIDs are now [emphasis added] available to OAOs in a manner which facilitates CSID based user authentication." On this basis, ComReg closed the investigation. However the clear implication is that CSID was not available to OAOs at the time that complaint was made and was made available after the investigation commenced. (ComReg document 09/64)

In October 2010, ComReg became aware that changes had been made to the 12 Mb and 24 Mb Bitstream IP Broadband Uncongested products, and these were noted as a footnote in the Bitstream Price list v6.8 published on 9th July 2010. ComReg wrote to eircom on 21st October 2010 asking for the Compliance statement. Eircom replied on 22nd October 2010 stating that a Compliance statement was not supplied because it had judged that the change was not sufficiently material to warrant a compliance statement. eircom supplied the Compliance statement on the 17th November 2011. ComReg was of the view that the change is significant and should have been notified in accordance with D01/06 although no price change is required. ComReg decided that no further action would be taken on that occasion (Case 316 on the "Closed Case" page on ComReg's website)

ComReg investigated a complaint relating to "Soft Dial Tone" in respect of possible non-compliance by eircom with Section 6.5 (ii) of Decision D07/61. ComReg noted that once this non-compliance was brought to Eircom's attention, Eircom remedied the non-compliance. As such, no enforcement action was required and ComReg closed the investigation. (Case 232 on the "Closed Case" page on ComReg's website)

ComReg received a request for dispute resolution from Verizon Business on 28th September 2011 regarding Eircom's cease notice period for leased lines in Ireland. ComReg engaged with Eircom and Eircom confirmed that it was willing to discuss the issue further with Verizon and industry. After a number of meetings which were overseen by ComReg, Eircom made certain proposals to Verizon and the Industry and these were subsequently accepted by the parties concerned. Verizon confirmed on 30 January 2012 that it was withdrawing the request for dispute resolution. (ComReg Document 12/16)

Public Version



**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.**

Vodafone disagrees with ComReg's preliminary conclusions with respect to the transparency obligation. Vodafone believes that a notification period of at least 6 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.

ComReg is proposing that industry would have just two months notification of prices for new wholesale services, or for amendments to the price of existing wholesale services.

Vodafone believes that this is wholly inadequate and discriminatory. As part of its NGA investment business case eircom will have factored in its retail systems development costs. These will have been a relatively small proportion of its overall business case and therefore eircom retail does not have to wait for pricing certainty on the wholesale input before it commences its development. eircom made the NGA investment decision almost 12 months ago and therefore can proceed with certainty as soon as the product details are stable.

For OAOs, however, the retail IT development costs for OAOs will be a very significant part of their investment and they must construct a business case and get the necessary investment decision approved before any serious development activity can commence. While ComReg may believe that the indicative pricing in the consultation is sufficient to allow an OAO business case to be constructed, this is not correct. The proposed price control only guarantees that eircom cannot set its wholesale price below the point where an OAO with 25% market share makes zero margin. The margins on fixed products are so tight that we cannot take the risk of constructing a business case on the indicative pricing.

There are also timing issues with OAOs own IT development cycles. The timing of the eircom publications are likely to be aligned with its internal IT development cycle. Given the already short proposed notification periods it will be impossible for OAOs to deliver their retail developments earlier than the NGA launch date and therefore they will always be later than the eircom launch date.

This confers a significant competitive advantage on eircom to the detriment of OAOs, competition and the consumer. This is unreasonable, given that a requirement to provide information 6 months in advance would not confer any significant additional cost or burden on eircom.

Moreover, given that price is a key attribute of a wholesale product, such a limited notice period would appear to be contrary to the EC recommendation which sets out that:

*"NRAs should oblige the SMP operator to make new wholesale broadband access products available in principle at least 6 months before the SMP operator or its retail subsidiary markets its own corresponding NGA retail services, unless there are other effective safeguards to guarantee non-discrimination"*

**Q16. 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.**

**Summary:**

- the NGA remedies should explicitly state that In-Premises activity up to and including the network demarcation point forms part of the basic NGA product and is subject to the full range of regulatory remedies
- ComReg should explicitly define in-premises activity on the customer side of the network demarcation point as an associated facility.
- Vodafone believes that remedies of non-discrimination and transparency should be applied to in-premises activity.
- With respect to CPE, Vodafone believes that ComReg should mandate that at some future date, following deployment of vectoring, all CPE's be compatible with the relevant Bandwidth Enhancing technology.

***Provisioning of NGA Services and In-Home Activity***

ComReg sets out in section 10 of the consultation a high level description of the "In-Home" activity that might be associated with the provision of NGA based services. Vodafone wishes to expand on this topic.

As a preliminary point the use of the expression "In-Home" activity implies that NGA services are being considered in a consumer only context. The provision of "Class of Service" functionality on NGA services and the possibility of High Speed Internet access mean that commercial end-users' demand for NGA based services will also be a feature of the provision of these services on the retail market. While commercial end-user demand for Multicast is not likely to be as prominent as in the consumer/residential segment similar issues will arise as regards in-premises wiring. It is important therefore that the wording of any remedies applying to NGA based services is entirely neutral as to the nature of the ultimate retail end-user, either consumer or commercial. Vodafone therefore proposes that the term "In-Home" be replaced by "In-Premises".

The demarcation point for eircom's proposed NGA product set is the NTU/ONT. Where the In-Premises activity relates to exchange side activity up to and including the NTU/ONT this would, by definition, be part of the basic NGA service and be subject to the full range of regulatory remedies.

In order to ensure regulatory certainty on this important matter the NGA remedies should explicitly state that In-Premises activity up to and including the network demarcation point forms part of the basic NGA product and is subject to the full range of regulatory remedies.

In relation to In-Premises activity on the customer side of the NTU/ONT the nature of the retail services carried over NGA means that it is likely that some form of end-user CPE will be required. This could be either a set-top box for TV in the case of residential services or a termination for IP voice in the case of business customers. In either even there is a strong likelihood that this CPE will not be located in the same room as the NTU/ONT and that the existing internal customer wiring will not be in the correct location nor perhaps suitable. This means that in order to provide end-user services based on NGA some measure of In-Premises activity on the customer side of the NTU/ONT will be required.

The Framework Regulations (SI 333 of 2011) defines Associated Facilities as follows:

*"associated facilities" means those associated services, physical infrastructures and other facilities or elements associated with an electronic communications network or an electronic communications service which enable or*

*support the provision of services via that network or service or have the potential to do so and include, among other things, buildings or entries to buildings, building wiring, antennae, towers and other supporting constructions, ducts, conduits, masts, manholes and cabinets;”*

Based on the nature of In-Premises activity beyond the NTU and the definition quoted above it is clear that In-Premises activity beyond the NTU is an “associated facility” and amenable to regulation.

While it is possible for the Service Provider to carry out the In-Premises work on the customer side of the NTU/ONT this would require a separate visit. There will be a cost associated with this separate mobilisation, together with significant complexity around co-ordination of multiple visits by different providers in order to minimise the customer disruption.

Eircom itself has recognised that these separate visits are unlikely to be practical or cost effective and has proposed options whereby the In-Premises work to the NTU/ONT and beyond the NTU/ONT are carried out by the same fieldforce personnel in a single visit. This reinforces the view that In-Premises activity has all of the characteristics of an associated facility.

Eircom’s position to date at the industry forum dealing with NGA product development has been that in-premises activity beyond the NTU is not regulated and is subject to commercial terms. This approach leads to significant scope for eircom to leverage its SMP as regards offering differential terms or conditions for supply for in-premises activities. In particular issues may arise with eircom charging OAOs a wholesale price higher than its own internal incremental costs for the provision of In-Premises services beyond the NTU/ONT when these are provided in conjunction with the In-Premises activity. In order for this to be commercially attractive this price need only be a little below the combination of the operators’ own direct costs for a separate “truck-roll” to self-provide this activity and the indirect costs related to the more complicated provisioning process that a separate activity would incur also combined with the softer costs relating to an inferior customer experience

Vodafone believes that in order to deal with this issue as a minimum ComReg must explicitly define in-premises activity on the customer side of the network demarcation point as an associated facility. Vodafone is of the view that the nature and extent of the regulation required to protect against the issues that might arise with In-Premises activity on the customer side of the NTU are less extensive and less onerous than those required to deal with the NGA product itself. Specifically Vodafone believes that remedies of non-discrimination and transparency are sufficient to mitigate the identified risks.

A non-discrimination remedy would ensure that eircom could not self supply In-Premises activity on the customer side of the NTU/ONT as an incremental activity without also offering this facility to OAOs. This could be caveated by saying that the development of such an offering was conditional on wholesale market demand. A non-discrimination obligation would not set the level of pricing for this service but would ensure that the price charged to OAOs was the same as that used as eircom retail’s input cost in assessing margin squeeze in the various proposed price controls. A non-discrimination obligation would also ensure that there would not be any leveraging of eircom’s position by offering an operationally inferior service to OAOs.

In circumstances where eircom was self-supplying this facility but not currently supplying a wholesale facility due to absence of demand, a transparency obligation which required that eircom published this difference would aid the monitoring of the non-discrimination obligation. Similarly in circumstances where eircom was providing this facility on the wholesale market, a transparency obligation which required that eircom publish details of the terms and conditions for supply of this facility would ensure that there was no discrimination between OAOs nor between OAOs and eircom’s self-supply.

### ***Customer Premises Equipment***

Vodafone notes ComReg's proposed principle that *"All CPE deployed should adhere to the CLFMP and not cause any undue interference effect on the performance of other users connected to the Eircom copper plant"*

The net issue in respect of Vectoring is that CPE which is fully compliant with harmonised standards for non-Vectored VDSL, which is to be the initial deployment of NGA, may or may not support the introduction of Vectoring at a later date. In general it is Vodafone's position that CPE should be compatible with any Bandwidth Enhancing technology deployed by eircom. However given the lack of finalised standards for Vectoring it is not possible to mandate that this CPE compatibility at this time. What can be mandated is that at some point in time following deployment of vectoring that all CPE be compatible.

Vodafone believes that there are three distinct categories of CPE deployment which required to be considered. The most straightforward of these is the category that arises after a decision by eircom to deploy vectoring enabled DSLAMs in new deployments of NGA cabinets. This is not a decision in principle but the actual procurement and deployment of such DSLAMs. It is Vodafone's position that all CPE deployed in these areas should be Vectoring compatible from date of installation provided sufficient notice is given by eircom of the DSLAM deployment.

The next category is the areas where eircom has deployed current generation VDSL DSLAMs which are less likely to be forward compatible with Vectoring and which may require substantial replacement rather than simple card or software upgrade. Even after the commercial availability of Vectoring it is not clear that there will be a business case for eircom to carry out such replacements in a short timescale. This implies that there will be a lengthy transition period and that with sufficient notice all Service Providers in these areas should be required to use Vectoring compatible CPE by the end of a defined transition period. Because of the DSLAM replacement activities the CPE transition period is likely to be more straightforward to align with the Vectoring deployment plan in these areas.

Finally there will be areas where the VDSL DSLAMs are forward compatible with Vectoring requiring limited upgrades to deploy this functionality. These areas are likely to require a shorter lead-time for Vectoring deployment but will still require a defined transition period to allow for CPE swap-outs. In this scenario the lead-time for CPE swap-out is likely to be longer than the timescale for DSLAM upgrade. The issue of CPE replacement and the required lead-time will depend on the size of the installed base at the time that the Vectoring deployment is announced and then implemented. It is not possible at this time to be definitive on the length of the lead-time needed for CPE swap-out and Vodafone suggests that this issue is best addressed when eircom's definitive plans for Vectoring deployment become known.

**Q17. 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.**

### Summary

- We do not believe the barriers to entry to the VoIP market are low
- We believe the investments required to provide commercial VoIP services are non-trivial
- We do not believe that experience in the WLR or WBA markets provide any form of advantage
- We believe carrier grade VoIP solutions bring new issues and problems not previously encountered
- We highlight again the risks in providing any form of incentive towards traditional circuit switched voice in an NGA context

Vodafone does not accept the view that there are low barriers to entry into the VoIP market. Moreover, eircom has not provided any details of retail or wholesale NGA voice/VoIP services to our knowledge. Vodafone suggests that while entry to the VoIP market is certainly possible and achievable, it requires non-trivial investments.

If eircom genuinely believe that the barriers to entry to the retail VoIP market are low, then Vodafone must ask why there is a standalone POTS based variant being proposed by eircom along with Bitstream plus? Equally, if barriers to entry are low, why would special pricing treatment be sought by eircom for WLR in NGA areas? These two propositions are in direct opposition to the view expressed by eircom in this consultation and give rise to serious concerns by Vodafone.

Vodafone accepts that the proposed eircom NGA product set will support QoS (Quality of Service) and uncongested services, which will both assist in the provision on VoIP. However, while this creates a lower technical entry barrier, it does not mean that overall entry barriers are low. The facilities provided by eircom, while welcomed, are actually required in order to provide a carrier class IP based voice service.

Vodafone cannot see any correlation between the WLR and WBA markets and the provision of a carrier grade VoIP platform, nor can it see how operating in such markets would confer any meaningful advantage on an operator.

In relation to WLR, eircom currently do number management in terms of geographic number hosting and porting in relation to CPS and white label services. Vodafone currently have to outsource this function, mainly to BT, while internal capability is being built. While it is possible to do this technically, it is not trivial and it does take time.

The provision of an over the top voice service based on an all IP network also creates new complications, in particular when it comes to in-home wiring. As the VoIP service is delivered from the Home Gateway (Modem) device and not the traditional modular jack (RJ-11 wall mounted socket) existing phones, set top boxes, alarms etc may need to be rewired.

The monitoring platform required to ensure the quality and integrity of voice calls based on a MOS (Mean Opinion Score) is also dramatically different in an all IP environment, where calls have to be monitored end-to-end to ensure a consistent quality and high standard is maintained. Again, there is no advantage here for an operator currently active in the WBA and WLR markets.

Many operators such as Google & Skype (Microsoft) already deliver VoIP services on broadband networks and they do not operate in the WLR or WBA markets. Both organisations have made very significant investments in such technology and the barriers to entry were not low.

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Vodafone find it strange that eircom would imply that the deployment of a next generation, IP carrier class, voice switching architecture, along with the associated cost and elements mentioned above, would be a simple task and lead to a low barrier to entry. How much an operator invests on next generation voice services very much depends on the quality of the end service being delivered, what services the operator intends to offer and what level of integration is required with legacy systems and processes. Smaller operators may have natural advantages in this regard but for larger operators, such as Vodafone the complexity and cost as outlined above will come into play. Even for smaller operators, if they grow to scale they too will face higher barriers and complexity.

Finally Vodafone would once again highlight the importance of traditional circuit switched services not being given any form of preferential or special treatment in NGA areas as this would dramatically undermine investments made and underway in next generation voice platforms. As can be seen above, these investments are significant and take significant levels of time and skill to deploy, if they are undermined in favour of legacy networks, then the entire NGA initiative would be called into question. Vodafone would ask that all decisions in relation to IP NGN and NGA networks be forward looking to preserve the rationale involved in encouraging the right investments based on the ladder of investment.

In summary Vodafone would state

- We do not believe the barriers to entry to the VoIP market are low – we do believe it is achievable but not trivial
- We do not believe that experience in the WLR or WBA markets provide any form of advantage
- We believe carrier grade VoIP solutions bring new issues and problems not previously encountered
- We would highlight again the risks in providing any form of incentive towards traditional circuit switched voice in an NGA context

**Q18. 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.**

**Summary:**

- Vodafone strongly believes that VUA should be cost oriented
- Retail competition from UPC and legacy will not provide an effective competitive constraint on eircom
- There is a danger that SLU entry and investment may be limited
- In such an eventuality, eircom will not face effective competitive constraints at either the wholesale or retail level
- This will effectively remove OAOs as an independent price point in the market
- This is to the detriment of consumers and OAO competitors
- A cost-oriented price for VUA will ensure that OAOs are able to obtain the key wholesale input at a price that allows them to compete effectively with eircom in the retail market, to the benefit of consumers and the long-term development of competition in the market.
- ComReg's proposed margin squeeze approach is also impractical in an NGA environment, where the bundling of a wide range of unregulated services it make it all but impossible for ComReg to determine if eircom is in compliance with the margin squeeze criteria

Vodafone strongly believes that VUA should be cost oriented. This is in keeping with the European commission's recommendation and the proposed approach set out by ComReg in its original consultation document.

In its first consultation document ComReg appeared to accept that "the European Commission has expressed a general preference for the application of cost-oriented access prices for NGA networks and products". ComReg also noted the views of the Commission with respect to BNetzA's market analysis "In order to ensure regulatory certainty for access seekers and, thus, promote efficient investment by all operators access prices need to be cost-oriented, transparent and set with sufficient notice in advance."

Vodafone is surprised, therefore, that ComReg now appear to be disregarding the Commission's recommendation and suggesting a price control based entirely around a margin squeeze approach.

Vodafone believes that this approach is wrong for the following three reasons:

- ComReg's thinking and market analysis is flawed
- The proposed approach will remove an independent price point from the market and weaken competition to the detriment of consumers
- The proposal is unworkable in an NGA environment where products are most likely to be sold in bundles rather than on a stand alone basis.

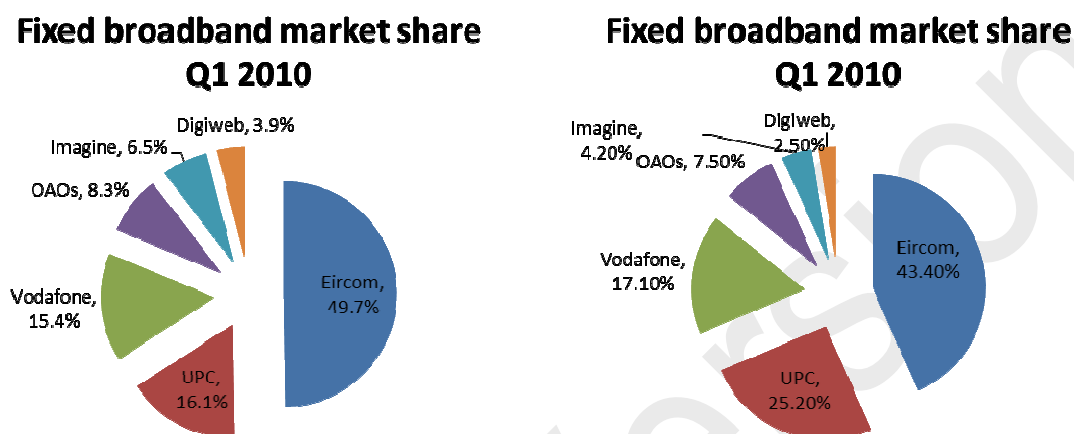
***Flawed thinking and rationale***

ComReg's rationale for the proposed price control structure is that eircom's retail prices will be constrained by competition in the retail market from UPC and from legacy broadband services (and providers). However, Vodafone does not believe that ComReg's assessment of the constraints on eircom is supported by the facts.

Eircom currently prices its services at a significant premium (10%-20%) relative to UPC and OAOs. Moreover, UPC's product offering is significantly better than eircom's in terms of download speeds. Despite this, eircom has largely

maintained its overall market share, and UPC has only gradually eroded eircom's position. For example, over the last two years we see that:

- UPC has increased its market share by 9.1 percentage points (during a period when it has rapidly expanded its footprint) and Vodafone increased its market share by 1.7 percentage points
- Eircom's share declined by 6.1 percentage points, and it still has a market share in excess of UPC and Vodafone combined
- Other operators market share declined by 4.5 percentage points



In terms of the overall fixed market eircom retains market share of 56% compared to UPC and Vodafone who both have market shares of less than 7%.

If UPC were a significant competitive constraint on eircom's behaviour then we would expect to see:

- At the very least, eircom reducing its wholesale products to their floor prices to give it the maximum headroom to compete with UPC at the retail level;
- Eircom reviewing its LLU prices (which are amongst the highest in Europe) to seek to identify efficiencies and savings, so that it has scope to further lower its retail prices to meet UPC's offering.

In reality, this has not been observed. eircom has not reduced its wholesale products to their floor prices, and has maintained its cost oriented prices at the maximum allowed by ComReg. For example, the ComReg price floor for backhaul (per MB) is €8.14, whereas eircom currently charges €30.

The move to NGA, under the current price control proposals, is not going to change this dynamic – indeed, if anything eircom will face less competitive pressure from UPC, given that the quality of its offering will now be closer to that offered by UPC.

At a more fundamental level if eircom's wholesale pricing was effectively constrained by UPC's retail activity then this level of constraint would probably be sufficient to mean that eircom would not have SMP.

In terms of the claimed pricing constraint imposed by current generation services, ComReg has adduced no evidence to support this proposition. This single ill-defined, untested mechanism is the only curb on eircom from engaging in excessive wholesale pricing.

In fact Vodafone believes that legacy products will exercise little or no effective constraint on VUA pricing. When one examines the likely retail propositions that will comprise NGA services they are likely to be multiservice bundles with many elements including TV. Content and Value Added Service differentiation will be as important if not more important than price at the retail level. As a proportion of the overall cost input the VUA element will be such that



excess pricing on VUA would allow eircom force higher costs onto OAOs and shelter margin in the wholesale market where it has SMP while still being able to maintain a competitive retail offering.

If one considers an SLU constraint, then SLU is unlikely to be sufficiently widespread to allow an OAO to offer services based only on SLU. They will have to buy a significant volume of Market 5 services from eircom.

If VUA is truly a proxy for actual unbundling then in areas where SLU is not active VUA represents the “top” of the ladder of investment. If the current regulatory approach is correct and the correct price control at the top of the ladder of investment is cost orientation then the same logic would dictate that a VUA price control should also be cost oriented.

The entire scheme of price control proposed by ComReg is a series of floors with no ceilings relying only on the downward pressure from legacy retail products to prevent the vertically integrated SMP operator excessively pricing along the wholesale product chain. Anchoring the other end of the chain with a cost oriented VUA price provides a much stronger and certain constraint. If the prices for products downstream from VUA (e.g. Bitstream+ Local Handover) are set too high then this leaves a gap into which a VUA operator can step.

In summary Vodafone believes it is necessary to at a minimum have cost oriented pricing for VUA.

### ***Weakening competition***

Currently, there are three independent prices in the market for a large number of customers – eircom; UPC; and OAOs such as Vodafone who purchase wholesale inputs from rival wholesale providers to eircom.

Under ComReg’s proposals this will diminish to two. At a wholesale level, as ComReg itself acknowledges, the business case for SLU entry is more challenging than for LLU. If in reality SLU entry proves to be limited (or non-existent in the case where ComReg removes the SLU requirement) then eircom will face no competition in the supply of VUA and NGA Bitstream, and will only face limited retail price pressure.

This will result in eircom being able to price its NGA services above the competitive level, and will limit the ability of OAOs to compete effectively with eircom in the retail market. Moreover, this flexibility will allow eircom to effectively set the pricing differential between NGA and legacy broadband products, thereby allowing it to optimise the speed of migration to match its own internal priorities and requirements, rather than allowing the migration process to be optimised to the customers interest.

In all likelihood, VUA is going to be the key wholesale product in the NGA environment. It is absolutely essential for the development of competition in the market that eircom offers VUA at a cost-oriented price. As noted above, this would also be in keeping with the European Commission’s recommendation on NGA which suggests that:

*“NRAs should in principle impose cost orientation on mandated wholesale broadband access products in accordance with Annex I, taking into account differences in bandwidth and quality of the various wholesale offers.”*

Requiring cost orientation on VUA would have the advantage that:

- It guarantees appropriate economic space between SLU and VUA, thereby maximising the possibility of SLU entry and investment, which is in the long-term interests of the customer; and
- It guarantees that, in the absence of SLU entry, OAOs are able to purchase the key wholesale input at cost, and so will be able to exercise an effective competitive constraint on eircom at the retail level.

### ***An unworkable proposal***

ComReg's proposal for interweaving retail and wholesale margin squeeze controls is also entirely unworkable in an NGA context. We believe ComReg and its advisors continue to think of the retail space in the traditional copper context of a broadband product that may be bundled with a narrowband voice product.

However, the purpose of NGA is to create a product of sufficient speed and reliability that a wide range of additional services can be bundled with it. The most obvious example is television, however, it may also include home security, assisted living, home automation and control, energy management and power control and home management. These services are unregulated, and ComReg will have very limited understanding of their costs of provision. In this environment it is highly likely that ComReg will find it impossible to determine whether eircom is complying with the various retail and wholesale margin squeeze tests.

Vodafone would therefore urge ComReg to reconsider the price control approach it adopts for VUA in the NGA context.

### *Other issues*

Vodafone notes that the proposed control for NGA Bitstream might be workable provided that the issues relating to margin squeeze in respect of retail bundles are fully reflected in the price control mechanism. However, a move to cost oriented pricing in Market 5 is our preferred approach.

Vodafone agree that in the medium term the flow through from NGA to LLU/SLU is an important one and the relationship must be protected in the medium term. There are several reasons for this, including allowing operators space to recover investments. Interestingly, in the UK where VDSL is more developed, operators continue to unbundle exchanges using ADSL & LLU therefore there is no reason why the same would not occur in Ireland to some degree. If the link between NGA and LLU/SLU were lost in the short to medium term then both existing and future investments could be undermined in the WPNIA market. Operators, who may in the future, decide to make investments in true NGA FTTH/N need to be assured that such investments will make an economic return, as those made with LLU.

Vodafone would agree in principle regarding the treatment of infrastructure (duct, chambers etc) and vertical real estate (poles etc) but would encourage pricing to be published for such items based on the proposed cost treatment. Failure to have a published or reference price will lead to long negotiations and complexity in any business case model. Where ducts are damaged, eircom could provide estimated costs for "making right" such damage and these can be subject to a final site survey. Where ducts are full or not accessible, pricing for dark fibre should be provided and such pricing should be published for both in-situ pricing or where new fibre pull is required.

Vodafone believe that it is essential that pricing is made available for assets as a reference offer as this is required for planning and the preparation of business cases. It is also vital timing and rollout planning. Failure to have such reference offers can lead to long, drawn out negotiations, complex planning and slow deployment.

**Q19.** 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.

See response to Q18.

Public Version

**Q20. 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.**

Vodafone do not agree that 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.

Looking at the cost of both LLU (full loop) and SLU (Partial loop) we find:

- The current price of full ULMP is €12.41 per month
- The current price for sub ULMP is €10.53 per month

Looking at the costs above, the difference in cost between full and sub-loop unbundling is €1.88 per month. This suggests that 85% of the cost is placed in the "last mile" of copper with only the remaining 15% providing for the cost between the local cabinet and the local exchange.

If eircom are allowed to leverage a sunk cost and thus avoiding investment in last mile infrastructure it allows them to leverage the sunk value of the copper plant to the detriment of investment and ultimately the consumer.

Further, eircom has stated that the eventual NGA footprint will extend to over 1 million buildings nationwide which will cover buildings outside of just main population centres. Vodafone would also state again that eircom have not reduced pricing to price floors even with the threat of UPC competition. Vodafone therefore do not agree with the view that 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.

**Q21. 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.**

Vodafone 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.

As alluded to at paragraph 11.123 of ComReg's paper, pricing based on a BU-LRAIC approach in effect reflects the cost that would be incurred for new network build. This general type of approach is a theoretical construct designed so as not to dis-incentivise OAOs from investing in their own infrastructure.

However, experience from other markets and other utility industries indicates that in the case of "last mile" physical access only incumbents are guaranteed sufficient scale to justify the investment in such physical access infrastructure and that OAO investment and self-supply is unlikely to be commercially possible, even in the context of BU-LRAIC pricing of incumbent wholesale infrastructure access products.

In addition it would appear that the useful life of such infrastructure assets are longer than the accounting asset lives. 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. Wholesale pricing based on BU-LRAIC means that OAOs' costs for access to the same physical infrastructure are much higher.

In the context where direct OAO investment is extremely unlikely no matter what the costing basis for wholesale pricing then an approach which creates asymmetrical costs between eircom and OAOs is distortionary and only serves to entrench eircom's dominant position.

On this basis Vodafone believes that amending the cost base for ducts and trenches to a HCA basis in the context of mandated civil engineering infrastructure is proportionate reasonable and justified.

**Q22. 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.**

As set out in response to question 2, we believe ComReg are confusing eircom's proposed FTTC rollout with a true fibre solution. In reality, ComReg are referring to an incentive in moving from traditional based copper services (current generation ADSL & WLR) to next generation copper services (VDSL & VoIP).

Given that eircom's NGA solution uses much of the existing copper network, and the substantial common costs between legacy and NGA services, it is clear that a link between the two should be maintained during the transition.

It is not clear that a move away from cost-orientation or allowing significant price discrimination would result in better long term outcomes or improve overall consumer welfare. In consequence, Vodafone believes that differential pricing should only be allowed to the extent that it is justified on cost grounds.

Finally, as set out in our response to Question 18, we note that ComReg's current solution will allow eircom substantial flexibility in managing the price differential between legacy and NGA services, and Vodafone is concerned that eircom will use this flexibility to optimise customer switch-over to its own advantage and to the detriment of consumers.

**Q23. 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.**

No, Vodafone does not agree with this point. As set out in detail in response to Q18 above, Vodafone strongly believes that VUA should be cost oriented. This is because:

- Retail competition from UPC and legacy will not provide an effective competitive constraint on eircom
- There is a danger that SLU entry and investment may be limited
- In such an eventuality, eircom will not face effective competitive constraints at either the wholesale or retail level
- This will effectively remove OAOs as an independent price point in the market
- This is to the detriment of consumers and OAO competitors
- A cost-oriented price for VUA will ensure that OAOs are able to obtain the key wholesale input at a price that allows them to compete effectively with eircom in the retail market, to the benefit of consumers and the long-term development of competition in the market.

Question 24 missing.

Public Version



**Q25. 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.**

**Summary:**

- We believe an ex-ante margin squeeze test coupled with cost-orientated price controls are workable for NGA provided that any such margin squeeze test fully reflects our position as set out in our response to the consultation on retail price controls on bundles.
- We strongly believe that testing of a portfolio of products is inappropriate and will give rise to abuse
- We believe that the use and definition of promotional activity to create artificial permanent retail price points need to be controlled
- We do not agree that a compliance statement is not needed in certain circumstances – this could be reviewed once the NGA rollout is complete

Vodafone have always been of the view that an ex-ante margin squeeze test is essential in an NGA environment **coupled** with cost oriented price controls. Vodafone's reasons and rationale were outlined at the time of the original NGA consultation.

Vodafone is concerned that the use of a "compliant spot price" for a NGA broadband product or portfolio of NGA broadband products nominally available to the market outside of 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. It is likely that there will be limited demand for a broadband and voice or broadband only product and it would therefore be relatively easy for eircom to manipulate these stop prices by putting on the market products with relatively low take-up.

In fact it would be desirable for the vertically integrated operator to maintain spot prices as high as possible and dilute the retail price with the use of bundling. This maintains a high margin within the wholesale arm, which is a real cost to alternative operators, while allowing retail pricing to remove any advantage an alternative operator can bring to market.

Vodafone do not believe that testing a portfolio of products is appropriate. The vast majority of products sold today are at the entry or mid-tier and therefore weighting would need to be directly applied based on the sales per product type. Any weighting would need to be based on the current generation NGB products actually sold in the past 12 months and not on anticipated sales to avoid an unfair advantage to be leveraged for a period of time, in particular following the launch of NGA services.

Vodafone would again highlight, as we did in our response to the bundling consultation, that ComReg previously found that testing using a portfolio of products would harm competition and we believe that the reasons put forward for this argument are still valid.

In D06/12 ComReg outlined several price floors in the WBA market. Eircom subsequently reduced some wholesale pricing but did not drop pricing to the price floor(s). As we set out in detail in response to question 18, we believe that this seriously undermines the argument that eircom's retail prices are constrained. It also validates the view that it is desirable for the vertically integrated operator to maintain higher wholesale prices and margins and use bundling and promotions to drive lower retail prices that create little or no margin for operators.

Vodafone are also concerned about how promotions are used in the context of any margin squeeze test. While short term promotions are desirable from both a consumer and operator point of view, they are being used to create semi-permanent price points in the market at the retail side. A clear example of this is the permanent nature of the 6 month price points used by eircom in above the line marketing. If a retail price point is permanent from an

advertising point of view (6 months) then consumers also view it as permanent. In such instances it is no longer appropriate to call the wholesale input a promotion and the appropriate change should be made on a permanent basis.

Further, as promotions have been driven mainly by eircom retail requirements, this gives the vertically integrated operator a significant time to market advantage and also time to prime the existing base for migrations – these are key and significant advantages. Vodafone has been asking eircom wholesale for the past 18 months to cease current promotions and has provided several alternatives, all of which have been ignored, indeed the most recent promotion starting in July 2012 is another example of an unwanted promotion and Vodafone have fed this back again to eircom wholesale.

To avoid such issues Vodafone believe that no promotion should last longer than 3 months and promotions or “similar” promotions should never be allowed to run back-to-back. If either of these events do occur then it is no longer a promotion and this should be reflected in the permanent wholesale price point.

Vodafone would not support the view that a compliance statement is not needed unless a “material” impact is likely, in particular in the build phase of NGA. The uptake of NGA will not be known for some time and in the case of ADSL, the highest level of uptake was not observed until 2.5 years after an exchange was enabled as shown by the ESRI<sup>1</sup>. This may or may not hold true in the NGA context and when coupled with the concerns on bundling, promotions and using a portfolio approach, gives significant opportunities for abuse by a vertically integrated operator. Vodafone believe that for an initial period of 3 years, a compliance statement should be required in all instances. Prudence would require that eircom must carry out some assessment during its product development process to see whether a particular product will be compliant. It would therefore seem to be a low additional burden that eircom provide these workings to ComReg in the form of a compliance statement.

Vodafone also has a concern around bulk migrations. 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.

In summary, Vodafone are of the view that an ex-ante margin squeeze test is essential in an NGA environment coupled with cost oriented price controls. Vodafone do not believe that a portfolio of products should be assessed, but rather that the test should be on a product by product basis. Vodafone would also suggest looking at how promotions, bundling and “spot” wholesale prices are used together by a vertically integrated operator to create a high wholesale margin and low retail prices that other operators cannot compete with using the same wholesale input. Finally, Vodafone would be of the view that no forbearance on a compliance statement should happen until at least the end of the NGA rollout phase, at which point the true impact and uptake of NGA, over time, is known and decisions are not made on simply a single point in time.

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<sup>1</sup> <http://esri.ie/UserFiles/publications/WP361/WP361.pdf>

**Q26. 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.**

Vodafone do not believe that any forbearance should be applied to the requirement for a compliance statement as outlined in our response to Question 25.

As the move to NGA is an evolutionary one, each region that is enabled will have a localised sales and marketing effort. This is in contrast with existing ADSL services which tend to be based on nationwide sales and marketing. This gives rise to the concern that eircom can make marginal differences to its product offerings in different geographies to ensure that they are separate products for regulatory purposes and so stay below ComReg's proposed materiality thresholds.

Vodafone has outlined in response to question 14 that eircom has in the past been associated with a substantial number of breaches of its transparency and non-discrimination obligations. Vodafone believes that this evidence is further rationale for not providing any forbearance to eircom during the NGA rollout.

**Q27. 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.**

Vodafone believes that the proposed wholesale margin squeeze test for NGA Bitstream is only workable if the issues set out in our response to the retail bundles price control consultation are fully reflected in the test. As set out in detail in our responses to other questions, we do not agree with the proposed margin squeeze test for VUA, as we believe VUA should be cost oriented.

Vodafone suggest that the notification periods for price should be longer than the three months proposed by ComReg. As ComReg will appreciate, OAOs require price information to develop the business case for new products, and to assess on an ongoing basis the business case for existing products. A notification period of just two months for industry does not provide the time necessary for industry to develop their own product and pricing strategies, and grants eircom a substantial competitive advantage.

Vodafone suggests that a notification period of 6 months would be more appropriate.

**Q28. 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.**

No, as discussed before in response to question 18, Vodafone believes VUA should be cost oriented.

Notwithstanding this position, Vodafone suggests that in the event that ComReg opts to implement a retail minus control for VUA, we would urge that in assessing the economic space between VUA and SLU it adopt an SEO rather than an EEO standard. In the event that VUA is controlled on a retail minus basis it will be essential to try to encourage entry into the SLU space in order to provide an effective competitive constraint on eircom's pricing and to provide OAOs with a merchant alternative to eircom for VUA. Vodafone does not believe that a control based on EEO would provide enough headroom to encourage entry into SLU.

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**Q29. 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.**

For the retail margin squeeze test Vodafone believe that the entirety of the cost stack should be on an SEO basis. Vodafone also believe that it is wholly unreasonable that ComReg has not included any margin provision in the cost stack. It is simply not credible for ComReg to suggest that as long as the return to an OAO is not negative, they will be in a position to enter and compete effectively in the market. As in any market, operators require a reasonable return in order to justify their entry and investment decisions.

Vodafone agree that it may be possible, for some costs, for an operator to achieve the same economies of scale as eircom and as such could be treated on an EEO basis. However, such an approach would only be appropriate in the event that an operator has reached the threshold of 25% DSL market share as outlined by ComReg in D01/06. No operator has yet reached this threshold and therefore these economies of scale simply do not apply today.

For the wholesale to whole margin squeeze:

- We agree in principle with the concept of economic space
- However, as note above we believe VUA should be cost-oriented
- If VUA is controlled on a margin squeeze basis then the space to SLU should be on an SEO basis

**Q30. 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.**

We highlight, as we did in our response to the bundling consultation, that ComReg previously found that testing using a portfolio of products would harm competition and we believe that the reasons put forward for this argument are still valid.

We therefore believe that eircom should be required to follow the product-by-product approach for all its products, and not just for those that represent at least 20% of the eircom retail NGA customer base.

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**Q31. 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.**

### Summary

- Vodafone supports the preliminary ComReg view that Option 5 represents the appropriate way to treat WLR/VOIP in the context of NGA.

Contained within eircom's proposed portfolio of wholesale NGA services are two distinct categories:

- **POTS based:** this category has a fundamental feature that a current generation Narrowband Access service (Wholesale in the form of SB-WLR or retail in the form of an eircom Retail PSTN line rental) be active into the premises to be served by the NGA service. In the case of FTTC technology the Narrowband Access would share the same copper physical access path from the cabinet to the end-user premises. The structure of a POTS based "bundle" of eircom services is such that the mandatory service component of any such bundle is POTS. POTS comes first, all other services are added-on to the Narrowband Access service. The choice of whether to add such services to be carried on any particular physical copper bearer is discretionary. It is not a "Bitstream based" service where the Bitstream is mandatory and the POTS can be added on.
- **Standalone:** for this category the physical access path only connects to eircom's wholesale NGA broadband service. For Standalone products there is only one access product purchased from eircom. The access bearer cannot be used to support other services purchased by eircom either by the operator availing of the standalone access product or any other operator (including eircom).

It would appear that eircom is seeking some form of pricing treatment of the POTS based service which would allow it to recover the access path costs on the same basis as it would for the Standalone service. Vodafone fundamentally disagrees with any such approach. Its reasoning for this position is set out below. (As an aside, we note that Question 31 seems to conflate two distinct markets. WLR is a narrowband access product while VOIP is a calls product enabler. The treatment of access path cost recovery is different from how voice services will be delivered.)

### *Copper based WPNIA inputs*

If one considers the upstream WPNIA inputs for both standalone and POTS based NGA they have direct analogues for current generation services.

Eircom's current Bitstream service is a POTS based service. It is not possible to purchase it without having Narrowband Access in place. The self-supplied wholesale input is the same. If one considers the upstream input then for an OAO this is LLU Line Share. This WPNIA input allows the OAO to offer a wholesale Bitstream service with the same prerequisite as eircom's own service i.e. that there must be a Narrowband Access in place on the same physical copper pair. The upstream WPNIA input for eircom's own market 5 WBA product is essentially self-supplied Line Share. The Narrowband Access and the "Line Share" (including self-supplied) are independent contractually. It is possible for one operator to purchase the Narrowband Access and another to purchase the Lines Share based service. The proposed NGA POTS based service conforms to this model. The only difference is that the line is not shared all the way back to the exchange but only to the cabinet.

In terms of current generation "Standalone" Bitstream services eircom has chosen not to offer such a Market 5 service at this time. However Full LLU means that an OAO can implement a Standalone Market 5 service. In this scenario Narrowband Access is not a prerequisite for either the Full LLU or any downstream Market 5 activity based on this. In this case once the line is unbundled it cannot be shared in any way. The unbundling operator has full access to the path. If any other operator wishes to provide narrowband services over the same pair then the Full LLU



contract for that line ceases and the line is “rebundled”. In the context of NGA eircom proposes to offer Standalone Bitstream services. The principles applying to the WPNIA input for this service are the same as the principles that apply to Full LLU albeit that the unbundling happens at the cabinet.

These two scenarios are mutually exclusive. If there is a Narrowband connection to the eircom network then there cannot be full unbundling (or a downstream Standalone Market 5 service). If there is full unbundling (and a downstream Standalone Market 5 service) there can be no Narrowband connection to eircom’s network.

In recent NGA Forum Workshops on service Migrations eircom has outlined a series of permitted and impermissible transitions. These constraints reinforce the view that that POTS Based and Standalone services are totally distinct categories and that POTS based is not simply a combined order type allowing co-ordinated delivery of Standalone NGA and SB-WLR. The SB-WLR and POTS based NGA services form a composite product, which is not capable of disaggregation.

### ***Cost recovery for copper based WPNIA inputs***

These two distinct forms of WPNIA access have two distinct mechanisms of cost recovery for the access path.

In imposing a price control for Line Share ComReg has explicitly recognised that the cost of the access path is almost fully recovered in the SB-WLR price. The pricing associated with Line Share reflects the incremental cost of accessing the higher frequencies in the CLFMP. In addition price controls based on margin squeeze tests have used this incremental Line Share pricing as a cost input into Bitstream cost stack estimations. This approach correctly recognises that for POTS based Bitstream services the broadband is ancillary to the primary service of PSTN. In this case the cost recovery of the access path is almost entirely by way of the charges for the Narrowband Access.

Narrowband Access is a national product with standard national pricing. If there was no broadband the cost recovery for providing this access would be from the totality of the revenue associated with the totality of the access paths. POTS based broadband has incremental costs associated with the access layer and these are recovered as such i.e. incrementally. It is immaterial whether there is one broadband connection, one million or 100% penetration, the access costs associated with the Narrowband access are separately recovered and the costs associated with POTS based Broadband are incremental. Given the inherent structure of POTS based broadband services where the majority of the access costs are recovered on a national basis from a national product there seems to be no compelling reason why the cost recovery of the primary narrowband access should be in any way geographically de-averaged based on whether there is broadband on the line.

If such geographic de-averaging of the cost recovery were to occur, resulting a lower narrowband price in Broadband areas, this would mean that there would be a reduction in the totality of the narrowband access revenues unless there was a corresponding increase in line rental pricing in non-broadband areas.

For Full Unbundling there is no cost recovery possible for eircom from the Narrowband access service as none exists. The costs of the access path must be fully and directly recovered from the unbundled service. In a situation where eircom were to offer a Standalone Bitstream Service (either current generation or NGA) then the correct approach would be to fully recover the costs from the WPNIA input.

### ***Cost Causation in the access network***

The issue of cost treatment in the copper access network for NGA resolves down to the question:

- Is the copper access associated with NGA so different to current generation services to justify a different treatment?

From an access network point of view the key difference between current generation and next generation services is the location of the DSLAM. For current generation it is in the exchange and for next generation it is in the cabinet. It

terms of the access network costs the vast majority appear to be between the cabinet and the end-user's premises (based on the ULMP Vs SLU pricing approximately 85% of the cost appears to be in this portion). However to move the DSLAM from the exchange to the cabinet the duct that previously accommodated the copper to the cabinet now must accommodate the fibre feeding the VDSL DSLAM. This increases the commonality in underlying cost causality between NGA and current generation. If one considers that for POTS based services the NGA actual has a higher cost because not only is there the full copper access path from the exchange used but there is also a fibre connection required between the exchange and cabinet based DSLAM.

When looked through a lens of cost causation it would not appear that the access element of NGA services is so different to merit or justify a different treatment.

### *Setting the right incentives for investment in NGA*

At a practical level the fundamental distinction for an end user between the POTS based and Standalone services is that for Standalone services voice services must be implemented as a Next Generation "Over The Top" service using VOIP, while for POTS based products voice services are provided using current generation technology and platforms.

Where operators wish to avail of any cost advantages arising from VOIP based services they should make the necessary investment in IP voice platforms to realise such benefits. Vodafone notes that Question 17 sets out that it is eircom's view that the barriers to entry to for VOIP based services are low. If however eircom is incorrect and the barriers to entry are non-trivial, then operators should be properly incentivised for making the necessary investments. It is Vodafone's view that any approach other than Option 5 does not encourage efficient investment.

Consider the issue of the overall evolution of Next Generation Services. eircom has invested in a Next Generation Network Core. This already supports a variety of services including NGN Ethernet and Eircom's existing Market 5 BMB service, which uses current generation access but the NGN core. The NGA discussion must therefore be viewed in this wider context of Next Generation network evolution.

In the technology evolution from Step-by-Step to Crossbar to Digital exchanges there have been issues regarding replacement of the current generation of technology with the next. This type of dynamic is true for all aspects of telecommunications. Ultimately the decision to move to the new technology is driven by the possibilities of lower costs, improved functionality or both. Given the worldwide trend towards multiservice, IP based networks the investment in VOIP capability is just another stepping stone on this path.

Such evolutions do not occur overnight and there is a point early in the migration where the predominant driver of cost structure is the current generation. To encourage a shortened transition, pricing incentives may be appropriate as against the current generation but these are counterproductive if they give incentives either to the network operator or to the end-user not to migrate.

At some future inflection point the question arises as to where the price differential has turned from a positive incentive to move to a negative incentive to remain inert. At that point there is a separate discussion to be had about those end users who through no fault of their own cannot avail of the new technology. This inflection point is some way off and there seems to be little short to medium term benefit of adjusting a pricing regime which gives the correct incentives for transition.

### **Investment by eircom**

Whether it is POTS based or Standalone the access network investment in cabinet based VDSL equipment is the same. The difference is not whether there will be investment in the access network but rather whether there will be investment by eircom in the core network service platforms required to support IP voice.

An SMP operator doesn't face market pressure to introduce new functionality, even if there is pent up end-user demand. Neither does it face the requirement to reduce long term costs if in the short term its considerations are primarily cashflow. While there has been significant remediation of its balance sheet, this cashflow imperative appears to still be very much alive for eircom.

For example, Fitch has attached a B- with a negative outlook rating on Eircom's debts after it emerged from examinership recently following a consensual debt restructuring with lenders. This indicates that while financial commitments are currently being met, Eircom's capacity for continued payment is vulnerable to deterioration in the business and economic environment. What eircom appears to be seeking is some form of favourable regulatory treatment on the pricing of the access market where it holds SMP which would allow it to defer or avoid investment in the voice markets where it also has SMP.

A treatment of the access cost recovery which departed from existing principles would allow eircom to reap the pricing benefits of a network investment while avoiding the cost of such an investment. Operators who are prepared to make the core network investments required to support next generation voice services would then be disadvantaged and forward looking investment discouraged.

### ***Vodafone's preference for option 5***

ComReg has constructed a set of regulatory remedies designed to encourage operators to climb the ladder of investment. In the context of current generation services this has included ensuring that an appropriate economic space exists between WLR plus Line Share and full Unbundling. Option 5 ensures regulatory consistency and balances the protection of current generation investment with the incentives to move to next Generation IP voice services.

ComReg has canvassed views on the requirement for incentives for end-users to move from current generation to next generation services. Vodafone believes that maintaining the current cost recovery models for POTS based and Standalone services gives 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 the 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 end users to encourage adoption of NGA enabled services.

There would also be functional impacts on consumers in facilitating a regulatory pricing anomaly which removes incentives for forward looking investment by the SMP operator. Such a course means that investment in the service platforms needed to support next generation services (as opposed to next generation access) is delayed or avoided by the SMP operator who has positive incentives to continue to leverage legacy platforms, technology and services. These delays would deny Irish consumers the opportunity to participate in the knowledge economy on the same basis as consumers in other Member States. In order to avoid this

The scheme of price controls across all regulated markets has as its underpinning cost oriented pricing at the top of the ladder of investment. This pricing is based on a replacement cost approach. Allowing a situation to arise whereby the vertically integrated 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. This reduces the scope for infrastructure based competition damaging consumer welfare in the longer term.

Current generation circuit switched voice services inextricably link the narrowband access path by eircom to the provision of voice service. The widespread adoption of Standalone NGA breaks this linkage enabling more active competition in the voice markets to the ultimate benefit of consumers. A price control regime for NGA which maintained the principles that apply to current generation POTS based and standalone services would provide positive incentives for a move to NGA based services.

It is arguable that breaking the linkage between narrowband access and the provision of voice services especially facilitates the offering of voice services by entities based in other EU member states. Therefore price control regimes which require a move away from established principles to maintain the link would seem to specifically inhibit such cross border trade.

### *Looking to the future*

While the focus of this response has been on copper based access Vodafone wishes to address the issue of so called POTS based services in the context of FTTH.

For FTTH the only intersection between the fibre-based FTTH and copper based PSTN access is that they may both use the same duct/sub-duct or pole to access the customer. This is no way different to the pair for a second telephone line using the same infrastructure or a fibre for an NGN Ethernet connection using the same infrastructure as a PSTN connection. (in this latter case we have seen no clamour from eircom to have a POTS based NGN Ethernet product).

Setting aside for the moment the issue of NGA, if a piece of network infrastructure such as duct or poles supports multiple physical access bearers then Vodafone understands that the way in which ComReg treats such usage in its cost model of eircom's network is to apportion the cost of the infrastructure across the multiple access bearers. This is not done on a duct-by-duct, premises by premises basis but at an averaged network level.

It is Vodafone's fear that what eircom appears to be attempting with POTS based FTTH is to advocate treating the totally separate fibre access as an incremental copper cost on a premises by premises basis. This approach would be a significant step away from what Vodafone currently understands is ComReg's approach to network cost modelling and would require separate and detailed consultation.

### *Summary*

In summary it is Vodafone's view 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. Therefore we agree that Option 5 is the appropriate course.

**Q32. Which option do you consider may be appropriate regarding potential co-investment in the context of NGA? Please provide reasons for your response.**

Vodafone indicated to ComReg that it required a longer extension to the consultation period in order to fully answer all consultation questions. Given ComReg's decision not to grant such an extension, Vodafone have been unable to complete and validate all responses to the consultation within the time period allowed by ComReg. We propose to provide follow up responses to outstanding questions as soon as possible.

Public Version

**Q33. 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.**

**Summary:**

- We again highlight that VDSL is a copper based technology and should not be confused with fibre
- We believe there is a distinction to be made between “network elements” and “service elements” and they should be charged differently
- We support the view that a higher charge could be placed on traditional services over time
- There are more considerations that just commercial reasons for an operator to consider when moving to NGA based services

In the section relevant to the migration of services, ComReg refers on several occasions to the “fibre network” and the “move to fibre”. Vodafone again point out that the vast majority of the NGA network will be based on VDSL, which is a copper based technology. Only a very small proportion of the network will be based on true FTTH NGA services, our understanding is that this is as low as 5-10%.

It is very important that a distinction is made between VDSL copper based services and FTTH fibre based services as Vodafone believe that VDSL, even with vectoring (when available) will only meet consumer demand in the short to medium term and because the technology is copper based, it will still have all the associated copper problems. A clear distinction between NGN (Core – fibre) and NGA (access - copper) is required.

This distinction is also important when it comes to potential future copper charging based on current generation copper services and next generation access copper services as copper remains the common denominator albeit at sub loop level in the case of NGA.

With regards to migrations there are two very separate elements:-

- The installation of the NTU (Network element)
- The provision of the services (Services element)

The requirement for a new NTU is a change to eircom’s network design and is a network element related to the physical line.

The provision of NGA services themselves is distinct from the network element and is the provision of the services on a line.

With regard to the NTU install, this may be carried out by eircom or may be carried out by a service provider. If a service provider carries out the install, then a payment needs to be made by eircom to the service provider to cover the cost of this installation to allow the provider recover their costs, eircom would then recover this in the monthly service fee as outlined below.

Vodafone believe that the most appropriate method of charging for migration of services is to charge in line with current migration charges as with WPNIA/LLU and WBA. When it comes to the provision of the NTU then it should be part of the monthly services fee as a network device. This gives rise to a hybrid charge but this is possibly required to be in-line with the options available. By having a once-off and recurring charge element, it is also more in-line with current migration charges for WBA and WPNIA/LLU that are levied on a once-off basis.

Vodafone also believe that migration charges should be cost orientated and should not only take into account the number of lines in scope but also inter-operator movement of customers over time, coupled with the typical lifetime of a customer relationship with a service provider.

Vodafone suggest that there should be Equivalence of Input when it comes to migration charges. It is not enough to state that they should not be unduly discriminatory –any element of discrimination could have the impact of creating a land grab opportunity for eircom at launch when customers are most sensitive to movement.

As set out in our response to Question 2 we believe that this is an issue to be dealt with at a future time when the dynamics of transition are clearer.

Vodafone would not agree that the decision for an operator to move to NGA services is entirely based on commercial rationale. The products must be fit for purpose and also have the appropriate processes, controls and monitoring platforms supporting them. Failure to do this will drive a very negative customer experience or may lead to the products simply not operating as promised.

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**Q34. 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.**

In principle Vodafone agree that a universal migration charge is the most appropriate option for migrations in the WPNIA and WBA markets.

However, in line with our answer to Question 33, a distinction needs to be made in relation to the network elements and the services elements.

Vodafone believe that the cost of moving from the ADSL DSLAM to the VDSL DSLAM and the NTU installation should both be considered part of the network evolution and factored into the network costs and reflected in the monthly service fee.

The remainder of the cost, in line with the current WPNIA/LLU and WBA services can then be charged as a single universal charge.

In general the move from ADSL to VDSL is an evolutionary one and over time we would expect that there would be few, if any, customers remaining on ADSL. At this point the network costs would be removed and a similar scheme to what exists today would remain. Today, a considerable number of migrations are done using a "soft migration" process.



**Q35. 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.**

Summary response:

- We generally agree that the costs outlined in figure 11 are correct
- We do not believe that backhaul charges are “fixed” with the exception of self-supplied backhaul
- We highlight how increasing usage patterns will confer additional backhaul charges on operators and substantial additional costs
- We highlight the risks of the new tiered charging system proposed by eircom for different traffic queues
- eircom could gain significant revenue from Multicast services from operators but with no return for the operator in several instances
- We have a concern in terms of eircom’s self-supply of resilient services that would require operators to pay for to replicate

Vodafone broadly agree that the costs outlined in Figure 11 are correct in terms of the retail cost stack for NGA when it comes to standard broadband services.

Vodafone has provided further details on costs in response to other questions in this section and this reply should be read in conjunction with these responses. Vodafone would caution that this retail cost stack is not complete when it comes to Multicast (TV service) and QoS (Voice services), and in particular when it comes to the retail bundling of services.

Vodafone would like to comment on one specific price point reference in the table, in relation to backhaul charges.

ComReg has identified backhaul charges as “fixed” however this is only true in the context of VUA, where a provider is providing their own backhaul service. Where an operator chooses to take an NGA Bitstream product, this cost is both variable and increasing per subscriber. In the context of NGA Bitstream products there are currently two charges levied on operators for backhaul pricing

- 1) a circuit charge (BECS or WEIL) and
- 2) a Per MB price, priced using the 95<sup>th</sup> percentile system

Each BECS/WEIL circuit has a finite level of capacity and therefore can only take a finite number of customers per circuit. While the variable usage charge is directly linked to the customer, the circuit charge is not. This gives rise to two substantial costs that operators have to bear.

- 1) When a circuit is full an operator must order a 2<sup>nd</sup> circuit and bear the entire cost of that circuit up front, even if the operator is not gaining significant extra market share or indeed any extra customers
- 2) As usage for existing customers increases, fewer customers can “fit” within the existing circuit giving rise to a new circuit being required even though the operator may in fact not be gaining any additional market share.

In both the above scenarios these are very real costs to an OAO but not to eircom. They also have the potential to lead to over-recovery of cost and, as usage grows, that element of over-recovery can also grow. The charges for BECS and WEIL circuits are significant.

As traffic growth is expected to be significant over the coming years (The Cisco Visual network index estimates a CAGR of 32%<sup>1</sup>) this gives rise to the following problems

- 1) Approximately every 3 years twice the number of circuits will be required for the same number of customer today, or
- 2) Approximately every 3 years only half the current customers will be able to use the current circuit capacity

Both of these items will not only increase the charges per MB based on 95<sup>th</sup> percentile billing but will also increase the circuit charges levied on operators. Furthermore the circuit charges are not uniform in their growth as new circuits may have very few customers using them initially but the full cost must be paid by the operator.

Even operators with potential to achieve scale and who have the option to buy higher capacity circuits (10Gbps v 1Gbps for example) will face the same problem as larger, higher cost, circuits will take longer to fill and will still have a higher unitary initial cost per customer.

Further, if an operator starts to lose market share or subscribers, the unitary cost for the circuit element does not decrease, this effectively drives down the profitability of remaining customers due to higher cost.

A further complication is introduced with the tiered pricing scheme which has been suggested by eircom. Under this scheme, Unicast, Multicast and QoS traffic will all be billed under separate usage queues. 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.

For example, at the moment all traffic is billed on the 95<sup>th</sup> percentile – so traffic during quiet times is highly likely to be covered by the peak traffic at heavy usage. By creating 3 x 95<sup>th</sup> percentile points, there are now 3 (as opposed to one) opportunities to charge for traffic within much smaller 95<sup>th</sup> percentile bandings – this will lead to increased wholesale variable costs.

Vodafone would also like to highlight the costs associated with the provision of TV services, in particular content costs, Set top boxes, conditional access etc. All of these costs need to be factored into the full retail cost stack, in particular when it comes to the treatment of bundles and promotions.

Vodafone has provided further cost details on both the provision of TV services and the provision of voice (VoIP) in our responses further on.

Finally Vodafone would highlight the additional costs that operators would have to bear in providing resilience for eircom backhaul services. Eircom will deliver service to it's own POPs in a fully redundant manner but service providers would need to purchase additional WEILS in order to provide the same level of redundancy. If eircom's handover/demarcation points for it's own retail services are delivered on a fully redundant platform and network by default then there is an equivalence issue that arises if OAOs have services handed-over on single fed delivery paths.

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<sup>1</sup> [http://www.cisco.com/en/US/solutions/collateral/ns341/ns525/ns537/ns705/ns827/white\\_paper\\_c11-481360\\_ns827\\_Networking\\_Solutions\\_White\\_Paper.html](http://www.cisco.com/en/US/solutions/collateral/ns341/ns525/ns537/ns705/ns827/white_paper_c11-481360_ns827_Networking_Solutions_White_Paper.html)

**Q36.** 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.

**Summary:**

- We agree that some costs are subject to similar economies of scale at volume
- We highlight that no DSL operator has reached a market share of 25% to date
- We do not believe that backhaul charging is similar for reasons outlined earlier
- We do not believe that similar economies of scale apply to advertising

Vodafone agree that some costs are subject to similar economies of scale as Eircom and as such could be treated as EEO. However, this should only be in the case where an operator has reached the threshold of 25% DSL market share as outlined by ComReg in D01/06. Vodafone would however state that no operator has yet reached this threshold and therefore these economies of scale simply do not apply today.

Vodafone has provided details in our earlier responses on backhaul charging and outlined our concerns on how the proposed charging and increasing consumer usage could drive additional costs to alternative operators. We do not believe that backhaul charging should be done on an EEO basis.

Vodafone also disagree that advertising should be treated on an EEO basis. 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.

✂

**Q37. 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.**

**Summary:**

- Vodafone partially agrees that an operator can leverage its retail costs to promote products on a cross platform basis
- Vodafone has provided detailed confidential information to support this

Vodafone partially agrees that an operator can leverage its retail costs to promote products on a cross-platform basis in order to gain efficiencies.

✂

**Q38. 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.**

Vodafone do not yet have sufficient information on what is being proposed by eircom in terms of retail offerings to be in a position to provide a detailed or meaningful response to this question.

Should eircom launch a retail VoIP service, then the costs of supporting the initial rollout will be different to that which would be based on standard circuit switched technology.

Similarly, the proposed TV offering may or may not drive additional costs in terms of support depending on the type of service offered and indeed if it is standard or premium content or if it is live or on-demand programming.

There are simply too many unknown items to give a meaningful reply.

In general 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. For example, such services could include:

- Broadband
- Voice/VoIP
- TV
- Home Security
- Assisted living
- Home Automation and control
- Energy management and power control
- Home management
- Remote medical diagnostics and monitoring
- Remote education

NGA is important to consumers not for higher speeds, as such, but for the services provided using the new possible speeds. It is therefore logical to base support costs not only on the initial rollout items but also on the cost of providing over the top (OTT) services common in NGA.

**Q39. 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.**

Vodafone indicated to ComReg that it required a longer extension to the consultation period in order to fully answer all consultation questions. Given ComReg's decision not to grant such an extension, Vodafone have been unable to complete and validate all responses to the consultation within the time period allowed by ComReg. We propose to provide follow up responses to outstanding questions as soon as possible.

Public Version

**Q40. Do you agree with the proposed approach taken for determining the IP connectivity costs for NGA services? Please provide reasons for your response.**

**Summary:**

- Vodafone agree in principle with the approach taken by ComReg
- We believe a cost risk exists regarding BECS and WEIL pricing based on growing usage patterns
- we are also concerned about eircom's tiered approach to backhaul pricing
- For backhaul Vodafone believe it would be more appropriate if a slightly higher per MB 95<sup>th</sup> 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

Vodafone agrees in principle with the approach taken by ComReg in assessing IP connectivity costs for NGA.

In General IP connectivity costs do not differ between current generation services and next generation services as the cost in many cases is assessed using 95<sup>th</sup> percentile billing on a cost per unit basis, usually per MB or GB. What changes in an NGA context is simply the level and types of traffic used. What is common in both Current and NGA services is that all traffic is IP based. Prices are commonly known for both transit and peering and are usually volume based.

However, Vodafone believes that a cost risk exists within the current pricing structure and model for backhaul pricing from eircom, which has the potential to worsen over time. While this is not transit or peering in the strictest form, it is a form of traffic movement between ISPs.

Currently there are two charges levied on operators for backhaul pricing

- 3) a circuit charge (BECS or WEIL) and
- 4) a Per MB price, priced using the 95<sup>th</sup> percentile system

Each BECS/WEIL circuit has a finite level of capacity and therefore can only take a finite number of customers per circuit.

While the usage charge is directly linked to the customer, the circuit charge is not. This gives rise to two very real costs that operators have to bear.

- 3) When a circuit is full an operator must order a 2<sup>nd</sup> circuit and bear the entire cost of that circuit up front, even if the operator is not gaining significant extra market share or indeed any extra customers
- 4) As usage for existing customers increases, fewer customers can "fit" within the existing circuit giving rise to a new circuit being required even though the operator may in fact not be gaining any additional market share.

In both the above scenarios these are very real costs to an alternative operator but not to eircom. They also have the potential to lead to over recovery of cost and as usage grows, that element of over recovery can also grow. The charges for BECS are WEIL circuits are significant.

As traffic growth is expected to be significant over the coming years (The Cisco Visual network index estimates a CAGR of 32%<sup>1</sup>) this gives rise to the following problems

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<sup>1</sup> [http://www.cisco.com/en/US/solutions/collateral/ns341/ns525/ns537/ns705/ns827/white\\_paper\\_c11-481360\\_ns827\\_Networking\\_Solutions\\_White\\_Paper.html](http://www.cisco.com/en/US/solutions/collateral/ns341/ns525/ns537/ns705/ns827/white_paper_c11-481360_ns827_Networking_Solutions_White_Paper.html)

- 3) Every 3 years or so twice the number of circuits will be required for the same number of customer today or
- 4) Every 3 years of so only half the current customers will be able to use the current circuit capacity

Both of these items will not only increase the charges per MB based on 95<sup>th</sup> percentile billing but will also increase the circuit charges levied on operators. Furthermore the circuit charges are not uniform in their growth as new circuits may have very few customers using them initially but the full cost must be paid by the operator.

Even operators with potential to achieve scale and who have the option to buy higher capacity circuits (10Gbps v 1Gbps for example) will face the same problem as larger, higher cost circuits will take longer to fill and will still have a higher unitary initial cost per customer.

Further, if an operator starts to lose market share or subscribers, the unitary cost for the circuit element does not decrease, this in effect drives down the profitability of remaining customers due to higher cost.

For backhaul Vodafone believe it would be more appropriate if a slightly higher per MB 95<sup>th</sup> 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. This would also make any remedy more accurate and accurately reflect costs incurred and lead to more equitable pricing schemes while allowing for accurate cost recovery.



**Q41. 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.**

Vodafone's view is that the current time period of 42 months for modems is too long. We propose a time period of 30 months for modems. We suggest that engineering visits should be written off over a period of 15 years for new installs only, and 10 years for service calls.

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Manufacturers also only offer 12 or 24 months warranty and in reality modem returns become more common after 24 months. There is nothing to suggest that this will change in the VDSL scenario.

Vodafone also warn again that the technical parameters of vectoring may change and this may lead to a change to current chipsets and software stacks, which may change processing requirements. Vectoring is introducing uncertainty for a technology that is not yet proven or available in the mass market on a commercial basis.

✂

As NGA services will also bring TV services from operators, this should also drive switching behaviour as premium content, such as sports, become available from different operators. If the customer had a dual play proposition (Voice and broadband) from an operator but subsequently moved for triple play to another operator then an engineer visit could be required. Equally if a customer moves from one operator to another because the content offer is better from the new operator, then this may also give rise to an engineer visit. As such visits are going to be more frequent than with the original install, a shorter period is required.

Vodafone believe that ComReg should review the assumptions made and reflect this in the write down period for both modems and engineer visits.

**Q42. What do you consider is a reasonable estimate of the likely installation costs involved with NGA services?  
Please provide the details as part of your response.**

Please also refer to the answer provided for Question 37.

Vodafone would view the main installation costs are as follows:

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Vodafone has assumed that the physical NTU itself in the case of VDSL and the ONT in the case of FTTH is already provided for in the network cost as the demarcation point.

Public Version

**Q43. 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.**

**Summary:**

- Vodafone has concerns about the traffic Queue pricing proposed by eircom and how multicast traffic may be charged to low density areas
- Vodafone has provided additional confidential costs associated with the provision of multicast services to end customers

eircom recently provided an update to the industry NGA forum that backhaul charges are going to be applied in tiers. Therefore, Vodafone believes that this question now needs to be extended to also cover Quality of Service (QoS).

Eircom has advised that charging will be applied to three different queues as follows:-

- Unicast traffic
- Multicast traffic
- QoS traffic

It is our assumption that the current or similar pricing model and levels will apply to Unicast traffic, but Vodafone has no visibility as to the model or scheme eircom intends to apply to both Multicast and Unicast traffic.

Vodafone has also raised the question of how multicast traffic will be charged in a VDSL and FTTH mixed area, where the number and quality of channels offered to FTTH customers may be far higher than in the lesser VDSL areas. This has the potential to lead to very high pricing for Multicast traffic but with only a very small number of subscribers able to actually take advantage of the services on offer.

Multicast by its nature is different to both unicast and other prioritised traffic as in general there is a constant stream to the multicast end point. Multicast groups are advertised to all potential customers and policy control allows or denies access. A typical standard definition channel takes 2-3Mbps and a high definition channel between 6-9Mbps. 3D TV can take up to 30Mbps per channel. Even if no subscribers use the service, it is our understanding the full charge is levied.

Vodafone believe that a different scheme may be needed for multicast, where 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.

It is important to remember that Multicast will be used to deliver TV services and this has a direct impact on bundles and their treatment in an NGA environment. Consumers in the main don't just buy high speed internet, they buy a suite of services to suit their needs and lifestyle. Multi-play in an NGA environment is the normal offering as seen with AT&T U-Verse, Verizon FiOS, BT total broadband, Free, swisscom, KPN etc. In the same way QoS will be used to deliver the voice element of the bundle and should also be factored into any decisions on bundling.

There are significant advantages to be gained by eircom to having a high "spot" price for high speed broadband on its own but then to leverage Multicast and voice to deliver an overall bundle price that would be difficult for another operator to match at the retail level. In reality, most consumers will purchase bundles.

At this point it is simply too early to provide details of exact retail costing as there are so many part undecided in terms of how the service would be delivered and how that translates into direct retail costs, however, in the main, as multicast delivers TV services we would see the costs as

Item	Cost range
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We are also of the view that QoS costs should be looked at in terms of retail costs. Delivering, for example, a voice service using QoS will have costs such as the potential cost of multiple DECT handsets, using a higher specification CPE/Modem and internal distribution, where needed.

Public Version

**Q44. 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.**

Vodafone indicated to ComReg that it required a longer extension to the consultation period in order to fully answer all consultation questions. Given ComReg's decision not to grant such an extension, Vodafone have been unable to complete and validate all responses to the consultation within the time period allowed by ComReg. We propose to provide follow up responses to outstanding questions as soon as possible.

Public Version

Question 45 missing.

Public Version

**Q46. Do you agree with the proposed approach for determining the cost stack for NGA Bitstream? Please provide reasons for your response.**

Vodafone indicated to ComReg that it required a longer extension to the consultation period in order to fully answer all consultation questions. Given ComReg's decision not to grant such an extension, Vodafone have been unable to complete and validate all responses to the consultation within the time period allowed by ComReg. We propose to provide follow up responses to outstanding questions as soon as possible.

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**Q47. What are your views regarding the parameters for determining the relevant costs for a Multicast service. Please provide reasons for your response.**

Vodafone indicated to ComReg that it required a longer extension to the consultation period in order to fully answer all consultation questions. Given ComReg's decision not to grant such an extension, Vodafone have been unable to complete and validate all responses to the consultation within the time period allowed by ComReg. We propose to provide follow up responses to outstanding questions as soon as possible.

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**Q48. 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.**

Vodafone indicated to ComReg that it required a longer extension to the consultation period in order to fully answer all consultation questions. Given ComReg's decision not to grant such an extension, Vodafone have been unable to complete and validate all responses to the consultation within the time period allowed by ComReg. We propose to provide follow up responses to outstanding questions as soon as possible.

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**Q49. 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.**

Vodafone indicated to ComReg that it required a longer extension to the consultation period in order to fully answer all consultation questions. Given ComReg's decision not to grant such an extension, Vodafone have been unable to complete and validate all responses to the consultation within the time period allowed by ComReg. We propose to provide follow up responses to outstanding questions as soon as possible.

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**Q50. 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.**

Vodafone indicated to ComReg that it required a longer extension to the consultation period in order to fully answer all consultation questions. Given ComReg's decision not to grant such an extension, Vodafone have been unable to complete and validate all responses to the consultation within the time period allowed by ComReg. We propose to provide follow up responses to outstanding questions as soon as possible.

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**Q51. 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.**

Vodafone indicated to ComReg that it required a longer extension to the consultation period in order to fully answer all consultation questions. Given ComReg's decision not to grant such an extension, Vodafone have been unable to complete and validate all responses to the consultation within the time period allowed by ComReg. We propose to provide follow up responses to outstanding questions as soon as possible.

Public Version

**Q52. Do you agree with the proposed outputs from the NGA Margin Squeeze Model? Please provide reasons for your response.**

Vodafone indicated to ComReg that it required a longer extension to the consultation period in order to fully answer all consultation questions. Given ComReg's decision not to grant such an extension, Vodafone have been unable to complete and validate all responses to the consultation within the time period allowed by ComReg. We propose to provide follow up responses to outstanding questions as soon as possible.

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**Q53. Do you agree that the proposed price control period should be for at least three years in the context of NGA services in the WPNIA and WBA markets? Please provide reasons for your response.**

The NGA environment is still very uncertain, both in terms of the speed and scope of roll-out, product offerings in the NGA space and consumer demand for those offerings and hence uptake.

The price control period therefore has to balance the need to provide certainty to eircom and OAOs about the near-term and the likely return on their investments, while ensuring that ComReg does not lock-in a set of regulatory arrangements that, as more information on the shape of the market emerges, are clearly sub-optimal.

We believe that there are enduring elements of the price control, such as the need for cost orientation, that are likely to be appropriate for longer than three years.

On balance, the proposed three year period would seem to strike an appropriate balance between the concerns outlined above. However, we suggest that, ComReg should include the prospect of re-opening the price control arrangements, in the event of certain behaviours or outcomes being observed in the market. These include:

- A substantial technology shift, that casts doubt on the appropriateness of eircom's proposed technology solution (for example if vectoring technology is less viable or less beneficial in terms of speeds than currently anticipated)
- Evidence that eircom's pricing is not being constrained in the retail market – for example, this could include triggers relating to eircom's price premia in the market, or triggers relating to the extent to which wholesale costs are above the price floors implied by the margin squeeze model described in ComReg's consultation document.

Finally, we note, again, that Vodafone believes that there is a very important distinction to be made between Fibre to the Home/building (Fibre end to end) and Fibre to the cabinet services (Copper last mile). Fibre to the cabinet still maintains copper in the access path, with fibre feeding the local cabinet. Fibre to the home, on the other hand delivers an end to end fibre solution.

Vodafone's understanding is that the vast majority of the proposed NGA rollout, over 90%, will be based on copper VDSL. Vodafone believes that ultimately the market in its entirety must move from copper based solutions to fibre to the home/building technology, and that ComReg must be mindful of this when considering its approach to the next price control period.

**Q54. Do you believe that the draft text of the proposed Decision Instrument is from a legal, technical and practical perspective, sufficiently detailed, clear and precise with regards to the specifics proposed? Please explain your response and provide details of any specific amendments you believe are required.**

Vodafone indicated to ComReg that it required a longer extension to the consultation period in order to fully answer all consultation questions. Given ComReg's decision not to grant such an extension, Vodafone have been unable to complete and validate all responses to the consultation within the time period allowed by ComReg. We propose to provide follow up responses to outstanding questions as soon as possible.

Public Version



Vodafone Supplemental Response to ComReg Document 12/27

Next Generation Access:

Proposed Remedies for Next Generation Access Markets

Non-Confidential



## Introduction

As set out in our initial response to this consultation there were a number of questions where it was not possible for Vodafone to give a reasoned response in the time originally allowed by ComReg. This supplemental submission provides detailed responses to those questions and should be read in conjunction with our initial response.

Non-confidential

**Q9. Do you agree with the ComReg's analysis for the requirement of Backhaul and exchange and cabinet co-location are required? Please provide reasons for your response.**

Vodafone agrees with ComReg's preliminary conclusions in respect of the requirement for Backhaul and exchange and cabinet Co-location.

Eircom has been designated as exercising SMP on the WPNIA and WBA markets. ComReg has already determined that it is proportionate, reasonable and justified to impose an access obligation on eircom for both markets.

In order to give effect to such remedies it must be possible for an access seeker to connect its network to the wholesale inputs it obtains on foot of imposed access remedies.

It would undermine the access remedies regime if the SMP operator could inhibit or prevent this connection.

Vodafone agrees with ComReg's analysis that a single cabinet solution is probably not proportionate but that some form of co-location may be required in the eircom cabinet to allow copper connectivity in a two cabinet solution. Vodafone believes that mandating this is proportionate, reasonable and justified.

ComReg has already mandated co-location for the WPNIA and Leased Line Terminating Segment Markets and the imperatives that underlie these decisions also apply to the requirement to enable effective connection to VUA, FTTH and other regulated services.

Vodafone notes that VUA is mentioned in ComReg's reasoning for the imposition of exchange based co-location in this section of the consultation which deals with the WPNIA market, but that ComReg proposes to define VUA as being in Market 5 (WBA). This reinforces Vodafone's view that co-location access does not fall into any one market but that it is an associated facility spanning multiple markets and that such co-location should not be restricted for use on a market by market basis but that a given co-location access should be capable of being used by Access Seekers across multiple services.

Vodafone agrees that Backhaul should be mandated for WPNIA NGA products. The logic underpinning the provision of Backhaul for current generation WPNIA also applies to NGA and it is Vodafone's view that a mandated Backhaul product is necessary to give proper effect to the WPNIA NAG access remedy. Vodafone agrees that such backhaul should be priced on the basis of BU-LRAIC as this prevents eircom obtaining excess margin from leveraging its SMP position in a market that it at the top of the ladder of investment and provides the correct investment signals to potential access seekers considering climbing to the this rung of the ladder.

**Q10. 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.**

Vodafone is of the view that it is appropriate that the full suite of regulatory remedies continues to be mandated for all services falling within Market 5. Given the evidence that eircom has breached existing transparency and non-discrimination obligations in a number of markets where it has been designated as having SMP 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. This more robust approach is also justified by reason of the "greenfield" activity required by all operators, including eircom retail, in order to make use of NGA inputs in Markets 4 or 5.

Vodafone notes that at section 6.6 of the consultation ComReg makes specific reference to the fact that NGA BitStream Plus and VUA "*Both use fibre...*". As has been pointed out elsewhere in our response these services are primarily copper based products, using a technology standard (VDSL) designed for twisted pair access networks. The fact that eircom has chosen only to use cabinet based VDSL with a fibre between the cabinet and the exchange does not make their NGA offering a "fibre" service.

Eircom's proposed NGA product set has a Layer 2 handover, "wires only" for copper based services (allowing flexible CPE), QoS enabled, bandwidth control, Flexible Interconnection and Multicast and that this high level functionality appears to broadly acceptable to all industry participants at the NGA forum.

It therefore seems appropriate to mandate this service set.

Vodafone notes that this service set maps to a generic Industry standard being developed in Germany for multi-operator Market 5 NGA service offerings and would therefore appear to be potentially best in class.

Vodafone notes that the proposed eircom NGA product suite now effectively has three tiers.

- BitStream Plus – this includes a variable bandwidth backhaul element across eircom's NGN core and supports multicast.
- Bitstream Plus Local Handover – this has the same access network configuration and service functionality as BitStream Plus but does not have the variable bandwidth backhaul element but does support multicast and
- VUA - this has the same access network configuration and service functionality as the BitStream Plus Local Handover product – There is some discussion ongoing regarding support for multicast.

Vodafone would see that the fundamental difference between BitStream Plus Local Handover and VUA would be in the pricing structure. Vodafone believes that if VUA is truly to be virtual unbundling then the commercial conditions for the product must mirror the commercial conditions that an operator would achieve by actually unbundling. This would include a cashflow profile which has higher upfront element, lower recurring charges, sufficiently strong rights of access to be able to capitalise the upfront element. The pricing should be cost based emulating the financial profile that actual unbundling would achieve. These commercial conditions would almost certainly be more favourable than BitStream Plus Local Handover however they would be fully justifiable as they would be conditional on volume uptake commitments to reflect the business risk that an operator would assume in making an investment in actual unbundling. This form of pricing structure is a form of co-investment as the volume uptake commitments de-risk the underlying network investment by the VUA provider. They are consistent with ComReg's regulatory approach as it firmly positions VUA as an intermediate rung on the ladder of investment between BitStream Plus Local Handover and SLU based access. In the context of the exclusivity that in practice arises from the economics of SLU and the technical exclusivity that might be occasioned by Vectoring this approach ensures that operator controlling the sub-loop in Market 4 cannot unduly leverage its position.

**Q11. Do you agree with ComReg's conclusion on the provision of backhaul services and facilities for WBA? Please provide reasons for your response.**

Vodafone notes that the thrust of ComReg's considerations in respect of backhaul for NGA services appears to be primarily focussed on point-to-point connectivity for defined increments of bandwidth. Vodafone believes that there are two distinct forms of backhaul and that the other form is the variable bandwidth component of the proposed Bitstream Plus product. It is Vodafone's view that it is necessary to mandate both forms of backhaul in order to give proper effect to any access obligation in respect of NGA in Market 5.

Point-to-point backhaul can be effectively delivered based on the current WSEA/WEIL product combination. The variable bandwidth component is not easily disaggregated from the Bitstream Plus product but it is Vodafone's view that the handover can be based on WEIL.

eircom continues to leverage its SMP in Market 5 for current generation services by charging prices for the variable usage element of its BMB product well in excess of the determined price floors thus sheltering margin in a wholesale market in which it faces no competitive constraints as opposed to exposing this margin to retail market competition.

Vodafone believes that the price control for this element of the NGA product set must be more constrained than a simple price floor. There must be direct regulation of the price level to prevent excessive pricing by the SMP operator and the pricing should be based on the cost modelling that ComReg has carried out for the price control on the current generation Bitstream Managed Backhaul Product.

In the Industry NGA forum eircom has proposed a pricing regime for this bundled backhaul which appears to be structured to disadvantage those operators who will offer Over The Top voice services based on the product's Ethernet QoS functionality. Specifically eircom are proposing that each class of service be separately measured and a separate charge be applied to class. The most recent eircom proposal is simply a blending of these to give a single line item on a bill rather than 3 line items. Eircom have offered no justification for this approach. In the context of mass market NGA services Vodafone expects that the predominant driver of network dimensioning and cost will be BE traffic associated with internet access. Vodafone expects that the network impact of this traffic class will be many multiples of that associated with AF traffic. In fact Vodafone believes that for at least the medium term the AF traffic will not materially affect network dimensioning for peak usage and that its peak will not be at the same time as the peak for BE traffic. The effect of the eircom proposal therefore is to impose a charge for traffic which in effect is carried at zero cost as the network costs have already been recovered in the charging for the BE peak for which it is dimensioned. When considered in the context of eircom's apparent position on the charging of POTS based services this indicates a pattern whereby eircom is attempting to avoid investment in NGA service platforms itself, obtain pricing benefits as if it had invested and simultaneously disadvantage those who do invest.

By way of further exploration of the issue consider a 1Gbit/s WEIL used for Bitstream Plus traffic handover. Theoretically all of this could be used for AF traffic so as a minimum the eircom core network would have to be dimensioned to support this volume of traffic. Traffic offered from access seeker customers towards the handover in excess of this will be discarded. Similarly if the traffic was all BE then the maximum traffic that can be handed over is still 1Gbit/s and traffic in excess of this will be discarded. If the traffic is a mix of BE and AF then the AF has priority but the excess is still discarded and the maximum handed over is still 1Gbit/s. If the peak of BE traffic is sufficiently higher than the peak of AF and the two peaks are not correlated in time then there doesn't appear to be a cost causation justification for imposing a separate charge for the AF peak. This is further demonstration that a more robust form of price control on this element of the Bitstream Plus product is reasonable, proportionate and justified and that this should be applied in conjunction with the Access remedy for backhaul.

**Q12. 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.**

Vodafone's comments on this question are structured in the same fashion as the associated section of the consultation document.

**Obligation to negotiate in good faith**

Vodafone agrees that there is significant scope for an SMP operator to constructively prevent access or to deal with an Access Seeker in a manner which un-necessarily disadvantages the Access Seeker. Vodafone believes that the obligation to negotiate in good faith is a necessity. There is a significant asymmetry between eircom, the SMP operator, and Access Seekers. Eircom enjoys full visibility of its technical capability, its network, its IT systems and its internal operational processes. In addition eircom has full visibility and control over its development plans and timetables for network and IT innovation.

In the light of the above Vodafone believes that it is proportionate, reasonable and justified that the obligation to negotiate in good faith be further specified, without prejudice to the generality of the overall obligation, to include a specific obligation eircom be required to give written reasons where it does not meet requests for access. Vodafone also believes that there is a requirement to specify a maximum timeline for eircom to provide an initial response to such a request. This initial response should be a statement of whether eircom believes that the request falls within the scope of its access obligation.

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

Vodafone agrees with ComReg's specific proposals as regards the minimum notice period required for the closure of an MDF. However there has been a specific example in recent times where eircom has attempted to effect what amounts to partial closure of an MDF by the installation of "cabinet" RSUs. This occurred in the context of the existing obligation in Market not to withdraw facilities already granted. In the most benign scenario this was simply a lack of internal eircom communication of the obligation and its implication. This situation would have been less likely if eircom retail was using an Eol approach to its internal inputs as the impacts on wholesale inputs from such network changes would have been more apparent as the eircom Networks team would have been more cognisant of the impact of the proposed changes on its own product set. This is yet another reason why an Eol approach fits with a holistic view of the proposed remedy suite including this particular remedy.

**Access to technical interfaces and protocols and to Eircom's OSS**

Vodafone agrees with ComReg's position that future IT developments on the part of eircom should be carried out such that the design and implementation supports an Eol interface for both eircom's downstream arm(s) and potential access seekers.

However Vodafone believes that there is scope for eircom to partially avoid such a remedy by not carrying out new IT developments but by "shoe-horning" forward looking requirements into existing IT systems even where (or perhaps especially) such an approach results in sub-optimal performance for access seekers who are required to use an external interface while the vertically integrated eircom uses its existing internal interfaces. This can only be avoided by a rigorous application of a granular and specific Eol remedy.

**Conditions attached to the access obligation - Obligation to grant access in a fair, reasonable and timely manner**

Vodafone supports ComReg's view that it is appropriate to attach conditions to the access obligation to ensure that eircom grants access in a fair, reasonable and timely manner. ComReg has outlined that it proposes to mandate requirements in respect of SLAs. It is Vodafone's view that this requirement must be refined to be effective.

To date the industry experience of SLAs is that the primary eircom focus is on the service credit element of the SLA and constructing processes, procedures and definitions which are not in the first instance concerned whether the

SLA metric itself results in a fit for purpose product or service but rather the financial exposure that eircom might have for failing to meet the metric.

It is Vodafone's view that the issue of Service Levels is distinct from any financial regime that might surround the non-attainment of the required performance. Vodafone believes that in the first instance the discussions as regards service levels should deal with defining those service levels, operational and technical, which mean that the supplied product is fit for purpose. It is not that the SLA should be fit for purpose it is the access which it is associated with which must be fit for purpose. There is a separate issue then of what happens if these quality levels are not reached.

Vodafone therefore is of the view that the obligation must be refined and modified from the approach adopted to date. The obligation should be constructed so that as part of the process for meeting any request for access the eircom must agree the service levels associated with this access and that these service levels are sufficient to ensure that the access provided is fit for purpose. In the first instance the measure of fitness for purpose is that it meets Access Seeker requirements. If eircom considers that it cannot meet the access seeker requirements then it must justify any shortfall. The fact that the access seeker requirements exceed eircom's current level of performance or the quality of its self supply should not in itself be a justification for failing to provide the requested service levels. These service levels should form part of the product description as they are intrinsic to it, in that they describe the performance of the product.

Separately and after the service levels are defined there should be a requirement to agree a Service Credit regime which deals with situations where the service levels are not met and this should be documented separately in an "SLA" document. Not every service level would necessarily attract a service credit.

Vodafone believes that this disaggregation of the definition of service levels from the definition of service credit levels is necessary to give proper effect to any access obligation as it ensures that regulated access provided by eircom is fit for purpose.

**Q13. 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 WPNIA market (Market 4)? Please provide reasons for your response.**

Eircom has a substantial but declining retail market share in the retail broadband market. This set of market conditions means that eircom retail is likely to be a net loser of customers for the foreseeable future. Eircom has also been designated as having SMP in several wholesale markets and one retail market. This market strength potentially allows eircom to leverage its position to protect its retail base by making it difficult to migrate customers from eircom's self supplied wholesale input to a regulated eircom supplied wholesale input. Similarly scope exists for eircom to protect its wholesale revenues by making it difficult to move individual customers from wholesale inputs which are lower on the ladder of investment to those higher up. To protect the market against this potential activity Vodafone believes that it is proportionate, reasonable and justified to mandate a fully functioning migrations process in Market 4 and Market 5.

Vodafone notes that a process of this type must include co-ordination of associated switching activity such as GNP to be properly effective and that the wording of the Migrations remedy should reflect this.

**Q32. Which option do you consider may be appropriate regarding potential co-investment in the context of NGA? Please provide reasons for your response.**

Vodafone notes in ComReg's preliminary view that there is reference to the "Fibre loop". As outlined by Vodafone in several other responses, the main delivery for eircom's proposed NGA is copper based VDSL, not fibre based FTTH therefore except in a very small number of instances, the "fibre loop" is not valid.

~~X~~We believe that co-investment can work and that it can be an important feature of the market. However, we do not believe that one can take the type of prescriptive view of co-investment as set out in ComReg's consultation.

In general 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

Indirect investment can take place where an operator agrees to become an anchor tenant for a new product or service delivered on a new network. Such agreements are usually coupled with volume commitments or agreements to migrate existing customer bases to the new service. This could be an option for indirect investment in the VUA product.

What is important for indirect investment is that the pricing model for VUA is constructed in such a way so that the same return structures for direct investment can be achieved using the VUA input. VUA after all is a product constructed to allow operators to mimic unbundled services.

The options outlined in ComReg's paper all appear to relate to direct investment. Vodafone believes that in reality such deals are complex and subject to negotiation. Given the complexity of such deals it is impossible to say if any deal that was concluded would fall directly into one of the four categories outlined in ComReg's consultation. Any deal struck would use different forms of capital (capex) and operational (Opex) expenditure, commitments would be required, possible migrations of existing bases and possible new build. Vodafone notes that it may also be possible that a co-investment model could emerge that does not include eircom or copper at all.

Therefore, while Vodafone agrees that the outcomes proposed by ComReg are possible they are somewhat prescriptive and do not describe the full set of co-investment options that may emerge.



**Q39. 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.**

It is difficult to accurately assess know the overall impact on helpdesk facilities. However, ✕ This could greatly increase if services such as IPTV, Home security etc are also provided.

As outlined in our response to question 38, there are a number of unknown items that are likely to have a very material impact on helpdesk costs. These items will mainly be driven by the services provided to end subscribers. As the vast majority of NGA based product will be sold as bundles of services, many complexities can arise.

This has the potential to have an impact on call centres in the following ways:

- 1) Increasing call duration
- 2) Increasing call complexity, which may in turn require a more skilled agent to answer
- 3) Increasing call propensity, call volumes increase as more customers may potentially seek help

As ComReg rightly point out, the overall quality of the installation process, and the precise scope of services delivered to the end customer will have a direct impact on the 3 points listed above.

One driver of a significant increase in calls is the fact that every customer will need an engineer visit to install the VDSL NTU or the Fibre ONT. Vodafone anticipate a substantial call volume will be required to allow customers make the necessary installation appointments.

There is also the question of potential bulk migrations and how this is handled. Bulk migrations would require multiple instances of installation and any large scale bulk migration may also require a project management resource, which will add additional cost.

**Q44. 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.**

Vodafone agree in principle that the two costs (backhaul and IP connectivity) outlined by ComReg for the end to end Bitstream product are valid but they are not the only costs involved.

In our response to Question 35, Vodafone outlined how additional charges can come about as traffic profiles change. This is not just in terms of the “per MB” charge for usage or the actual backhaul circuit charge but the additional cost that arises due to the fact that, 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.

We have also 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. This gives rise to an interesting question – 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.

Another question arises for policing traffic and possible legal requirements. It has happened in other markets that ISPs are obliged to block traffic to and from certain websites. In order to do this, policy enforcing equipment is required and this also incurs a cost.

Notwithstanding our comments above relating to how an ISP would run OTT services on an end-to-end network, network monitoring is another component that incurs a significant cost, in particular when it comes to sensitive real time traffic such as VOIP traffic or IPTV traffic. For such services to operate correctly a set of tools is required to ensure that QoS, CoS and bandwidth limits are assigned and monitored to each traffic type. Such monitoring also needs active management and alerting.

**Q. 46 Do you agree with the proposed approach for determining the cost stack for NGA Bitstream? Please provide reasons for your response.**

As with Question 44, Vodafone agrees with the costs outlined by ComReg but believe that additional costs exist that Comreg must take account of in determining the cost stack.

In the consultation ComReg outlined the two options available for operators when it comes to NGA i.e. VUA and NGA Bitstream (end-to-end Bitstream is already dealt with). However, what is not clear is which of these two inputs will be used by eircom for the self-supply of NGA services. It is also unclear as to whether eircom will gain advantages over OAOs depending on the option taken, for example, resilient backhaul by default?

In our response to Question 35, Vodafone outlined how additional charges can come about as traffic profiles change. This is not just in terms of the "per MB" charge for usage or the actual backhaul circuit charge but the additional cost that arises due to the fact that, as usage increases, that 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.

We also outlined our concerns regarding eircom's self-supply of resilient services to their own footprint. These costs should also be factored in as they provide a real advantage to eircom and a substantial cost to access seekers. We also outlined our concerns regarding charging for Multicast services and while we note that eircom have proposed an alternative scheme to that originally proposed for charging for different traffic queues, the new scheme has the same risks. We also draw ComReg's attention to our reply to Question 43 on multicast charging and prices and the potential for abuse that could arise.

Overall ,Vodafone have very 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.

The fact that Multicast traffic will be contained in the same backhaul circuit 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 believe that, when coupled with the concerns highlighted in our response to Questions 35 & 43, operators could be facing extremely expensive data backhaul charges in total.

ComReg need to be mindful of this potential and need to ensure that the cost stack takes all of these additional elements into account

Vodafone considers that a cost orientated scheme that treats all traffic the same from a charging point of view but that levied a small fixed additional port charge for "multicast enablement" or "CoS enablement" would be far more transparent and far easier to model, and it would also ensure equal treatment of all operators, including eircom retail.

Vodafone noted 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. This is because usage patterns can change very quickly when a new service is deployed as was seen with the launch of Netflix in Ireland. Netflix in the US is said to now account for almost 1/3<sup>rd</sup> of peak internet traffic<sup>1</sup>. Given the risks to increasing backhaul costs, as outlined to Vodafone earlier in this response, coupled with a sudden change in usage could lead to a large degree of over recovery on the part of eircom and inflated prices to other operators.

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<sup>1</sup> <http://edition.cnn.com/2011/10/27/tech/web/netflix-internet-bandwith-mashable/index.html>

Finally Vodafone believe that there is merit to the Multicast service to be a service in it's own right and sold as a separate product, independent of any other service. Vodafone is aware that at least two other operators have also shown support for such a development.

Non-confidential

**Q47. What are your views regarding the parameters for determining the relevant costs for a Multicast service. Please provide reasons for your response.**

Vodafone believe that Multicast should be offered as a standalone service and treated accordingly as outlined in our answer to question 46.

With regards to Multicast backhaul careful attention needs to be paid to how this is treated to avoid a situation where over-recovery occurs. There are two elements at play here

- 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.

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 (95<sup>th</sup> percentile billing per MB).

With regards the questions ComReg asked in relation to TV service delivered over IP using Multicast, we suggest the following:

**Q.1 The number of standard and high definition channels?**

✕

**Q.2 The bandwidth required for a standard definition channel?**

This is typically 2-4Mbps depending on the encoding used

**Q.3 The bandwidth required for a high definition channel?**

This is typically 5-8Mbps depending on the encoding used

**Q.4 The number of channels sent to the DSLAM and the number of channels sent to aggregation node?**

This is hard to gauge as the number of channels actually viewed would largely depend on the quality of the content. For example, 4 sports channels would have higher viewership than 4 shopping channels. The most viewed channels in Ireland are the UK & Irish terrestrial channels and sports channels.

Apart from Multicast, eircom are also proposing a separate traffic queue for CoS traffic which could mainly be used for VoIP. This will also have to be considered if the tiered approach is adopted and deployed. Again Vodafone believe that a single port enablement charge is more appropriate and far more transparent.

**Q48. 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.**

Vodafone has always believed that pricing for the VUA product should be cost orientated and this has been well documented in our original NGA submission and indeed throughout our response to this consultation.

We would recommend that our previous submission on this subject is read in conjunction with this response.

In our other various responses in this consultation, Vodafone outlined our views on how Multicast could be treated given that the highly probable use of Multicast would be in the provision of TV services. These can be broadly summarised as follows:-

- 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 on TV services, other costs of providing TV services need to be taken into account and these are significant.

We believe the above approach would easily address the issue facing ComReg when determining the costs for VUA when multicast is included.

Vodafone 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. We have outlined our views on this throughout the consultation response.

Vodafone would also draw ComReg's attention to our 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.

**Q50. 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.**

Vodafone again would state that we believe VUA should be cost-oriented and any change to the cost stack should be reflected in the ultimate wholesale price charged.

In this context, Vodafone has provided an alternative solution on how multicast could be treated in an NGA Bitstream context.

Our proposed solution would be both transparent and simple and would be equal for all operators. The solution would also be cost-oriented.

In our other various responses in this consultation, Vodafone outlined our views on how Multicast could be treated given that the highly probable use of Multicast would be in the provision of TV services. These can be broadly summarised as follows:-

- 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 on TV services, other costs of providing TV services need to be taken into account and these are significant.

We believe the above approach would easily address the issue facing ComReg when determining the costs for VUA when multicast is included.

Vodafone believe that the mechanism proposed by eircom for complex traffic queues has potential to drive very real and substantial costs of OAOs and allow potential abuse by eircom in the case of self supply.

Our 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")

The scheme outlined by Vodafone 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 current solution proposed by eircom could lead to very substantial over-recovery. For example a single multicast stream may carry 200 channels to FTTH customers but FTTH will only account for a very small proportion of the NGA rollout. Given that Multicast traffic is constant, regardless of the number of customers actually using the service, the OAO will incur the full cost of a constant multicast stream for 200 channels. This simply may never make economic sense for the OAO but would be a direct cost for the OAO and a direct revenue stream for eircom.

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.

Vodafone would again urge ComReg to consider the implications of Backhaul charging as we have previously outlined as user demanded traffic increases over time.

**Q51. 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.**

#### **Treatment of fault costs for NGA**

In respect of the treatment of costs for NGA faults (paragraphs 11.488 to 11.490 of the consultation inclusive) Vodafone believes that the correct approach is to make a distinction between POTS based FTTC, Standalone FTTC and FTTH.

For POTS based FTTC Vodafone notes that the majority of "hard" faults will be captured by the narrowband portion of the product and the cost of dealing with these is recovered from the WLR revenue. The LFI for the Broadband portion of FTTC will therefore be "soft" faults relating to copper performance degradation in the higher frequency portion of the CLFMP. This LFI should be lower than the LFI for current generation broadband as the copper loop length is shorter and the portion of the network between the cabinet and the exchange is fibre based and not subject to the same "soft" degradation effects as copper based services.

For Standalone FTTC cost recovery for fault handling must be from the Standalone revenue. The LFI should be an aggregation of the "hard" and "soft" LFIs in areas where the Standalone service is available. This LFI should be lower than the overall network LFI as Broadband will not be available on long loop lines which will be subject to higher fault levels.

For FTTH it is unlikely that there will be "soft" faults due to the degradation of the physical access layer as fibre will not be subject to the same issues as copper plant. The LFI attributable to the fibre access layer may therefore be approximated by the incidence of "hard" breaks in the copper access network in those areas where FTTH is to be deployed. There will be a finite probability of faults in the ONT but this should be capable of being defined based on manufacturer information on MTBF.

In all cases the LFI used for reckoning the repair costs should not be the actual LFI currently achieved by eircom but rather the LFI that an efficient operator would achieve on a properly maintained network with appropriate replacement investment. Vodafone believes that this "efficient" LFI would be less than the actual LFI. Vodafone notes that the underlying pricing of the copper physical access network (i.e. LLU pricing) would include provision for network replacement and renewal. Eircom cannot object if the quality standard it is held up to reflects a presumption that it has actually operated its network in line with these cost provisions.

#### **Modification of LLU price to include repair costs**

Vodafone agrees that the current LLU price control should be modified to incorporate the cost of fault clearance. This would allow for more transparent pricing of the services. 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. Vodafone believes that this LFI will be lower than the actual LFI. One methodology for estimating the LFI to be used would be to look at the actual LFI in these exchange areas and to reduce it by a percentage equal to the percentage by which eircom fails to meet its network wide fault index obligations under USO.

This approach means that Access Seekers do not have to pay for inefficiencies and eircom has a positive incentive to reach and exceed the LFI used in the calculation.



**Q52. Do you agree with the proposed outputs from the NGA Margin Squeeze Model? Please provide reasons for your response.**

It is impossible for any operator other than eircom to give a reasoned response to this question, as only eircom and ComReg have any visibility of the specific inputs to the model and it is therefore not possible to validate whether the outputs of the model are correct.

In general terms Vodafone would reiterate 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. On this basis it is Vodafone's view that any output from a model which set a price other than a cost oriented price would be incorrect. Notwithstanding this 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. As Vodafone has outlined in its answer to Question 10 it believes that the 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. This pricing should also reflect a lower risk premium for eircom.

In terms of the model Vodafone notes 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 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 notes that in a recent presentation to Industry 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. As Vodafone has set out previously 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.

Q54. Do you believe that the draft text of the proposed Decision Instrument is from a legal, technical and practical perspective, sufficiently detailed, clear and precise with regards to the specifics proposed? Please explain your response and provide details of any specific amendments you believe are required.

#### Draft WPNIA Decision Instrument

Vodafone wishes to make the following detailed comments on the proposed text of the Decision Instrument. These comments on the text should be read in conjunction with our submission on the main body of the consultation where we have commented on the principles and implementation of remedies.

These comments follow the structure of the proposed Decision Instrument

#### Section 2 Definitions

**“Dark Fibre”** The definition of dark fibre as proposed would appear to be capable of being construed as limiting this to the installed base of optical fibre and only in the access network at the effective date of the decision instrument. Vodafone believes that in order to give proper effect to the intent of the remedy this definition should be broadened to comprehend any unlit fibre in the eircom network which can meet the Access Seeker requirements and which is either at the time of the request that crystallised the access obligation or is installed by eircom subsequently.

**“Duct (access)”** As set out in the main body of its response Vodafone believes that the duct access remedy model proposed by ComReg does not properly deal with the competition issue identified and therefore this supporting definition is similarly flawed and must be redrafted to reflect a more robust access remedy.

**“Margin Squeeze”** Vodafone has set out that the appropriate form of price control for VUA is a cost oriented price control and therefore we believe that this definition is flawed.

**“Service Level Agreements”** Vodafone believes that this definition could be construed as incorrectly positioning the service levels associated with a particular wholesale product as being agreed and documented in a process distinct from the product definition. The SLAs need not be legally binding contracts in themselves. In fact it is better that the service levels are contained in other binding documents such as the product description as this properly positions these performance levels as setting out the envelope of the intrinsic technical, operational and performance definition of the product. Vodafone therefore proposes that the wording be modified slightly as follows:

*“Service Level Agreements (SLAs)” are the agreed service and performance levels relating to the product/service being offered. These are to be agreed between eircom and Access Seekers. In all cases SLAs should define as a minimum the set of service and performance levels required to allow the Access Seeker use the Wholesale input to directly or indirectly deliver a retail offering that meets its own business requirements. Requests for a particular level of service or performance shall be considered an access request and the general criteria for assessing access requests shall apply. The service and performance levels shall be legally binding and shall be documented within the ARO document set.*

**“Virtual Unbundled Access” or “VUA”** The proposed wording of this definition ties the description of VUA to a proposal by eircom. This proposal has changed since the time that the consultation was issued and may change further going forward. In addition just because something is proposed by eircom does not mean that it is acceptable to Access Seekers. Vodafone is therefore of the view that the definition of VUA should be a standalone, self contained definition that sets out the high level characteristics of VUA. This can be achieved by deleting the first sentence of ComReg’s proposed definition.

#### Section 4 SMP Obligations in relation to current generation WPNIA

As set out previously It is Vodafone's view that the current SLU remedy should not be removed but rather should be modified to take account of the reality of exclusivity dynamics both economic and technical. Even where ComReg is not minded to deal with the issue of exclusivity at this point Vodafone believes that any curtailment of the current SLU obligation faces the risk of causing market harm by gifting eircom an effective monopoly in Market 5 NGA services. Even in the context of ComReg's Option A there is significant scope for regulatory gaming by eircom as it would force any prospective competitor into a protracted Access request process while in parallel eircom's self supply of SLU into its Market 5 rollout continues unabated.

Vodafone wholly disagrees with the proposed removal of the SLU obligation set out in Option B. However should ComReg proceed with this approach Vodafone notes that Section 4.6 is moot as there will be no SLU product in NGA Footprint Areas.

## **Section 6 Obligations to Provide Access**

As set out in its response to the main body of the Consultation Vodafone believes that ComReg's proposals in respect of Civil Engineering Infrastructure and Dark Fibre do not give proper effect to the intent of this remedy. Vodafone believes that Standard terms and conditions should be transparently available as should pricing for these facilities.

## **7 Conditions Attached to the Access Obligations**

### **Paragraph 7.3**

As set out in the main body of its response Vodafone also believes that there is a requirement to specify a maximum timeline for eircom to provide an initial response to such a request. This initial response should be a statement of whether eircom believes that the request falls within the scope of its access obligation. This simple and straightforward amendment will close off scope for regulatory gaming whereby eircom either delays providing a response or avoids clarifying that in principle whether it has an obligation to provide the requested access. This clarity would allow an Access Seeker promptly raise a regulatory dispute where the grounds relate to the interpretation of the obligation. It is low burden on eircom but ensures that remedies can be effectively relied on by Access Seekers.

## **8 Obligation of Non-Discrimination**

### **Paragraph 8.4**

As set out in our response to the main body of the consultation we believe that access to Civil Engineering Infrastructure for NGA services can and should be provided on an EoI basis. This requirement should be clarified in the Decision Instrument.

Vodafone notes that the test to be applied as to whether the appropriate standard of supply is EoI or EoO is an assessment of whether EoI would be "unduly burdensome". Without some further definition or clarification this phrase is so ambiguous as to seriously undermine the effectiveness of an EoI standard.

When eircom provides a service to an Access Seeker it must develop processes and interfaces to interact with Access Seekers to deliver and maintain such wholesale services in the relevant market. These interfaces and process will be extant and could be used by any entity consuming the wholesale input, including eircom's own downstream arm. Therefore the incremental impact on eircom of EoI is the activity required for eircom's downstream arm to start using the external interfaces used by Access Seekers. An Access Seeker wishing to use eircom wholesale inputs must develop interfaces and process both externally to deal with eircom and internally to make use of the external inputs. By way of example, if UPC wished to make use of eircom wholesale inputs in areas where it did not have its own network then it would be faced with aligning its existing internal processes and systems with a new set of externally defined inputs another example would be SKY's recently announced entry to the fixed market which would require it to build such systems and processes from scratch.

Vodafone cannot envisage a situation where the threshold for assessing “undue burden” would not use as a minimum comparator the maximum activity that an Access Seeker might face in making use of the wholesale input supplied by eircom. In the light of the above examples it is hard to conceive a situation where the burden on eircom of using the external interface to avail of the wholesale input could be any more than that faced by an Access Seeker. To assess undue burden on any other basis allows eircom as an SMP operator to directly leverage its vertical integration. This also totally undermines any price control based on a margin squeeze model as it would mean that eircom’s internal costs would be lower than its external prices and even if the test correctly model an Access Seeker’s costs it would always allow eircom make a real margin in excess of the Access Seeker for any given retail price point.

Even where eircom is allowed to use EoO any cost advantage it obtains from a cheaper form of self supply must be reflected in the external price it charges for the wholesale input in the same market. This would involve some pooling and sharing of costs across the totality of its supply into the market.

#### **Paragraph 8.5**

Vodafone believes that there is a potential gap in the wording of this section. Specifically there does not seem to be provision within this requirement which would allow ComReg assess in advance whether the appropriate equivalence standard for a given input is EoO or EoI. This has the potential that eircom develops an EoO input and then contests with ComReg afterwards whether it is appropriate. ComReg is then faced with issuing a direction not to place the EoO in the market in order to ensure compliance. If ComReg is ultimately vindicated the Wholesale input cannot be launched until the EoI version is available. It would be far better and give clarity and certainty to all parties if there was a requirement for eircom to obtain prior approval from ComReg before embarking on any development on an EoO basis. This approval process should have provision for obtaining comment and inputs from OAOs prior to an approval being given.

#### **Paragraph 8.6**

In respect of this obligation Vodafone agrees that it is important that from a regulatory supervision point of view that eircom should have to demonstrate its compliance for “legacy” NGA products within a defined period. While it might be implicit in this requirement that the effective date for compliance with the EoI requirement for pre-existing NGA is six months after the date of the decision this is not explicitly set out. For clarity Vodafone suggests that the effective date for EoI compliance for pre-existing NGA services is explicitly defined and separately the proposed requirement to demonstrate compliance be maintained.

In terms of the period for bringing pre-existing services into compliance with the EoI requirement Vodafone notes that the six months proposed is aligned with the notice period that Access Seeker will have for new NGA services. If six months is sufficient for an Access Seeker to build all of the necessary processes, interfaces and systems to make use of a new wholesale NGA input it is reasonable that eircom should be able to achieve in the same timeline the similar scope of work required for it to use its own NGA service on an EoI basis.

Vodafone notes that the practical effect of this obligation is that if eircom cannot demonstrate compliance with the EoI requirement must continue to provide the external wholesale service to Access Seekers but must discontinue its EoO self supply or else it will be in breach of section 8.4 of the proposed Decision Instrument.

### **9 Obligation of Transparency**

#### **Paragraph 9.3**

Vodafone notes that the prior notification period for the non-price elements of new NGA WPNIA services is proposed to be 6 months. Services in Market 4 by their nature require a significant amount of infrastructure investment before they can be availed of. There is a lead time for 1) the development of the Access Seeker business case and obtaining financial approval for the development of services using the new services as an input, 2) the procurement of the electronic equipment which would connect to any such new WPNIA input, 3) the planning and construction of any Access Seeker infrastructure required to connect to this new input. In the light of these considerations the proposed

six months is less than the minimum lead time that an Access Seeker would require before they could actually make use of this input.

#### **Paragraph 9.4**

This section sets out that the prior notification period for the price elements of new NGA Services would be two months. No Access Seeker will be in a position to construct business cases for the investment approval required to avail of these services until this pricing is available. No detailed planning or development can take place without this approval as this activity would form part of an Access Seekers capital expenditure program. If ComReg is of the view that the appropriate prior notification period for non-price elements is six months then the notification period for price elements must be at least the same as this. If it is shorter it renders the longer period for the non-price elements pointless. Without the pricing it is impossible to get approval which would allow the other information to be acted on.

#### **Paragraph 9.5**

Section 9.5 effectively sets out a requirement for a statement of difference. However Vodafone believes that as formulated it is entirely inadequate. The proposed remedy requires that eircom set out where there are differences between its self supply and the externally supplied services set out in the ARO. If the EoI standard for Discrimination is met then there will be no differences. For those elements which are EoO these will have been previously justified to ComReg and there is little benefit from setting these out. Vodafone believes that the correct formulation would be for eircom to set out the differences between its self supply in the overall Market and what is supplied to Access Seekers. For example eircom self supplies Duct Access between the cabinet and exchange for the purposes of its self supply of SLU. This is not a service offered in the ARO and based on the proposed wording would not have to be set out in the statement. If the benchmark was the totality of its self supply in the market then this difference would be highlighted and give proper effect to the intent of this remedy.

### **11 Obligations Relating to Price Control and Cost Accounting**

#### **Paragraph 11.11**

Vodafone believes that this provision would prohibit eircom from causing a Market 4 margin/price squeeze where there is an NGA Market 4 input to a retail bundle. However ComReg has not consulted on the margin/price squeeze assessment of retail bundles which incorporate an NGA service element. In fact ComReg's previous consultations on retail bundles explicitly excluded treatment of NGA services. Certainty on this is required as a matter of urgency and ComReg should set out its plans in this regard.

Q55. Do you believe that the draft text of the proposed Decision Instrument is from a legal, technical and practical perspective, sufficiently detailed, clear and precise with regards to the specifics proposed? Please explain your response and provide details of any specific amendments you believe are required.

#### Draft WBA Decision Instrument

Vodafone wishes to make the following detailed comments on the proposed text of the Decision Instrument. These comments on the text should be read in conjunction with our submission on the main body of the consultation where we have commented on the principles and implementation of remedies.

These comments follow the structure of the proposed Decision Instrument.

#### Section 2 Definitions

**“Associated Facility”** As set out in its response to the main body of the Consultation Vodafone believes that the in premises activity beyond the NTU is an associated facility for Market 5 NGA services. Eircom has consistently put forward its view that this activity is unregulated. Therefore to avoid an entirely foreseeable regulatory dispute ComReg having consulted on the issue should unambiguously set out its position on this matter and reflect it in the definition.

**“Backhaul”** As set out in its response to the main body of the Consultation Vodafone believes that the variable bandwidth component of the proposed Bitstream Plus product is also a form of backhaul and this should be reflected in the definition.

**“Service Level Agreements”** Vodafone believes that this definition could be construed as incorrectly positioning the service levels associated with a particular wholesale product as being agreed and documented in a process distinct from the product definition. The SLAs need not be legally binding contracts in themselves. In fact it is better that the service levels are contained in other binding documents such as the product description as this properly positions these performance levels as setting out the envelope of the intrinsic technical, operational and performance definition of the product. Vodafone therefore proposes that the wording be modified slightly as follows:

*“Service Level Agreements (SLAs)” are the agreed service and performance levels relating to the product/service being offered. These are to be agreed between eircom and Access Seekers. In all cases SLAs should define as a minimum the set of service and performance levels required to allow the Access Seeker use the Wholesale input to directly or indirectly deliver a retail offering that meets its own business requirements. Requests for a particular level of service or performance shall be considered an access request and the general criteria for assessing access requests shall apply. The service and performance levels shall be legally binding and shall be documented within the ARO document set.*

**“Virtual Unbundled Access” or “VUA”** The proposed wording of this definition ties the description of VUA to a proposal by eircom. This proposal has changed since the time that the consultation was issued and may change further going forward. In addition just because something is proposed by eircom does not mean that it is acceptable to Access Seekers. Vodafone is therefore of the view that the definition of VUA should be a standalone, self contained definition that sets out the high level characteristics of VUA. This can be achieved by deleting the first sentence of ComReg’s proposed definition.

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whether eircom believes that the request falls within the scope of its access obligation. This simple and straightforward amendment will close off scope for regulatory gaming whereby eircom either delays providing a response or avoids clarifying that in principle whether it has an obligation to provide the requested access. This clarity would allow an Access Seeker promptly raise a regulatory dispute where the grounds relate to the interpretation of the obligation. It is low burden on eircom but ensures that remedies can be effectively relied on by Access Seekers.

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Vodafone cannot envisage a situation where the threshold for assessing "undue burden" would not use as a minimum comparator the maximum activity that an Access Seeker might face in making use of the wholesale input supplied by eircom. In the light of the above examples it is hard to conceive a situation where the burden on eircom of using the external interface to avail of the wholesale input could be any more than that faced by an Access Seeker. To assess undue burden on any other basis allows eircom as an SMP operator to directly leverage its vertical integration. This also totally undermines any price control based on a margin squeeze model as it would mean that eircom's internal costs would be lower than its external prices and even if the test correctly model an Access Seeker's costs it would always allow eircom make a real margin in excess of the Access Seeker for any given retail price point.

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In terms of the period for bringing pre-existing services into compliance with the EoI requirement Vodafone notes that the six months proposed is aligned with the notice period that Access Seeker will have for new NGA services. If six months is sufficient for an Access Seeker to build all of the necessary processes, interfaces and systems to make use of a new wholesale NGA input it is reasonable that eircom should be able to achieve in the same timeline the similar scope of work required for it to use its own NGA service on an EoI basis.

Vodafone notes that the practical effect of this obligation is that if eircom cannot demonstrate compliance with the EoI requirement must continue to provide the external wholesale service to Access Seekers but must discontinue its EoI self supply or else it will be in breach of section 8.4 of the proposed Decision Instrument.

## 9 Obligation of Transparency

### Paragraph 9.3

Vodafone notes that the prior notification period for the non-price elements of new NGA WBA services is proposed to be 6 months. New services in Market 5 by are likely to require a significant effort before they can be incorporated into a retail service. There is a lead time for 1) the development of the Access Seeker business case and obtaining financial approval for the development of services using the new NGA WBA services as an input, 2) As NGA WBA services are currently proposed to be at Layer 2, the procurement of the Access Seeker platforms required to make use of this Layer 2 input to provide end user services (e.g. video content servers), 3) the planning and implementation of any Access Seeker infrastructure and systems required to make use of this new input. In the light of these considerations the proposed six months is less than the minimum lead time that an Access Seeker would require before they could actually make use of this input.

### Paragraph 9.4

This section sets out that the prior notification period for the price elements of new NGA WBA Services would be two months. No Access Seeker will be in a position to construct business cases for the investment approval required to avail of these services until this pricing is available. No detailed planning or IT or process development can take place without this approval as this activity would form part of an Access Seekers capital expenditure program. If ComReg is of the view that the appropriate prior notification period for non-price elements is six months then the notification period for price elements must be at least the same as this. If it is shorter it renders the longer period for the non-price elements pointless. Without the pricing it is impossible to get approval which would allow the other information to be acted on.

### Paragraph 9.5

Section 9.5 effective sets out a requirement for a statement of difference. However Vodafone believes that as formulated it is entirely inadequate. The proposed remedy requires that eircom set out where there are differences between its self supply and the externally supplied services set out in the WBARO. If the EoI standard for Discrimination is met then there will be no differences. For those elements which are EoI these will have been previously justified to ComReg and there is little benefit from setting these out. Vodafone believes that the correct formulation would be for eircom to set out the differences between its self supply in the overall Market and what is supplied to Access Seekers. If the benchmark was the totality of its self supply in the market then this difference would be highlighted and give proper effect to the intent of this remedy.



## 11 Obligations Relating to Price Control and Cost Accounting

### General

In its response to the main body of the Consultation Vodafone has set out its views on the proposed series of Margin Squeeze tests. It has also set out its view on materiality thresholds. Vodafone does not believe that the proposed wording of the Decision Instrument reflects these positions and therefore it is not fit for purpose.

At Paragraphs 11.6.(iv) and 11.6.(v) the proposed wording references some unknown ComReg decision and therefore it is not possible to comment on these. If what is referenced is the eventual output from the current parallel consultation process on price regulation of retail bundles then this consultation explicitly excluded the application of the proposed controls to NGA services. Having constructed the proposed measures and canvassed inputs on the basis that NGA was excluded it is Vodafone's view that applying these non-NGA remedies to NGA services on the basis proposed falls far short of ComReg's own obligations under the Framework to conduct effective consultations on proposed measures.

Non-Confidential

Submissions to Consultation Document No. 12/27

ComReg 12/97