



Commission for
Communications Regulation

Information Notice

Next Generation Broadband in Ireland

**Promoting the timely and efficient development of high speed
broadband infrastructure and services**

Document No:	09/88
Date:	24 November, 2009

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Executive Summary

This Information Notice represents the follow-up to ComReg's Next Generation Broadband (NGB) Discussion Document¹ which issued last July.

Based on respondent's views, for which ComReg is grateful, there is clearly strong support for the development of NGB in Ireland. Respondents agreed that NGB will be of critical importance in enhancing Ireland's position as a location that supports the development of high-end ICT industries, securing inward research and development and can make a significant contribution to our overall international competitiveness through enhanced productivity growth. These views are also consistent with the Department of Communications, Energy and Natural Resources' position² that NGB is crucial for Ireland in attaining the Government's twin goals of becoming a 'Smart Economy' and a 'Knowledge Society'. Respondents also identified considerable benefits for both business users and individual consumers, including reduced travel time, opportunities for distance learning, and improved access to international markets. It was noted that NGB networks are due to start roll-out in certain areas next year, and that competition will continue to be important in driving further development. On the other hand, and in the absence of concentrated efforts by key stakeholders, it was considered unlikely that competition alone would, in the short term, provide sufficient impetus to bring about a very extensive rollout of NGB networks across the country. In seeking to address investment risks associated with a broad-based development, there is also an appetite amongst a number of stakeholders for the adoption of a collaborative industry approach. Where requested, ComReg will engage with stakeholders to explore the likely regulatory framework that could apply in such circumstances, particularly having regard to the need to satisfy competition concerns.

It is ComReg's view, supported by a number of respondents, that the deployment of NGB will undoubtedly require a multiple technologies approach to infrastructure, with both wired (fibre and cable) and wireless services co-existing in more dense urban areas where the business case is likely to be stronger. Given the demographics of rural areas, wireless services are more likely to have a stronger role to play than wired services in these areas. As has been the case with current generation broadband deployments, there will undoubtedly be geographic areas where the market, left to its own devices, is unlikely to provide NGB in a timely fashion, possibly even at all. In this context, some form of appropriate intervention by the State may be necessary to address any market failure in areas of low population density, having regard to policy goals and budgetary constraints. However, such intervention should only take place once a clear picture has emerged as to what coverage will be provided by the market itself.

ComReg is committed to continuing to play its part in facilitating NGB developments through the provision of regulatory certainty to the market. In doing so, ComReg must be mindful of the need to encourage efficient investment while at the same time not distorting competition. The key principles set out under the '*Regulatory and Market Perspectives*' section of this Information Notice will guide ComReg's approach, as will

¹ Next Generation Broadband in Ireland – promoting the timely and efficient development of high speed broadband infrastructure and services (July 2009)

² Next Generation Broadband: Gateway to a Knowledge Ireland (July 2009). See DCENR website www.dcenr.gov.ie

the publication by the European Commission next year of its guidance on regulated access to NGB networks.

The nature of the regulatory framework that could ultimately apply will be impacted by the approach to be adopted by eircom in developing NGB networks – whether on a standalone basis or as part of a broader industry collaborative approach. The onus is on eircom to ensure that its NGB plans address the needs for competitive access and, to this end, ComReg would encourage dialogue at the earliest opportunity.

ComReg will continue to work with DCENR, industry and user representatives, to facilitate timely and efficient rollout of NGB in Ireland.

1 Next Generation Broadband in the Irish Market

Background

- 1.1 On 9 July, 2009 ComReg issued its discussion document “Next Generation Broadband in Ireland – promoting the timely and efficient development of high speed broadband infrastructure and services”³ (the “Discussion Document”). The Discussion Document offered perspectives on the range of policy, technical and regulatory issues which could support a timely and efficient move towards the increased availability of high speed Next Generation Broadband (NGB) services in the market. In doing so, the paper examined the position from a number of perspectives namely,
- What is NGB and why does it matter from wider economic, business and consumer perspectives?
 - The situation with respect to current broadband provision in Ireland, the changing patterns of consumer use and the likelihood of market led NGB network developments
 - How NGB provision and demand has occurred in a range of European and other countries, and the policy approaches and/or market led initiatives that have had an impact in this regard.
 - The range of factors which can either act to enable or inhibit NGB developments, including issues such as Government policy and the costs of NGB deployments.
 - The degree to which regulation can influence NGB development in Ireland and the initiatives being or could be taken by ComReg to support its growth in a way that supports effective competition in the market.
- 1.2 The publication of ComReg’s Discussion Document followed the issue by the Department of Communications, Energy and Natural Resources’ (DCENR) of its policy paper “Next Generation Broadband: Gateway to a Knowledge Ireland”⁴ which identified high speed broadband services as being critical in attaining the Government’s twin goals of becoming a ‘Smart Economy’ and a ‘Knowledge Society’.
- 1.3 ComReg invited interested parties to respond⁵ to a series of questions set out in the Discussion Document, with submissions having been received from the following 21 parties.

³ See ComReg Document 09/56 at <http://www.comreg.ie/fileupload/publications/ComReg0956.pdf>

⁴ See DCENR website www.dcenr.gov.ie or [Here](#)

⁵ Some respondents, rather than (or in addition to) addressing specific questions, chose to provide general responses setting out their views on issues relevant to NGB.

Respondent
ALTO (Alternative Operators in the Communications Market)
BT Communications Ireland Limited
Chambers Ireland
Communications Workers Union
Derek Cassidy
Eircom Ltd
Enet
Ericsson
Forfas
HEAnet
Hutchinson 3G Ireland
Imagine
Irelandoffline
Irish Rural Link
Magnet Networks
Open Optics
Satellite Broadband Ireland
South Eastern Regional Authority (SERA)
The Number
UPC
Vodafone

- 1.4 A copy of non-confidential⁶ responses is available on ComReg's website⁷ and a high level summary of general views is set out below. ComReg does not seek to comment on the merits (or otherwise) of individual remarks relating to ComReg's analysis, but seeks to identify those areas where there was common agreement, or indeed, any major differences of view.

Stakeholder Views

- 1.5 While recognising some NGB developments were underway, the overwhelming view of respondents is, in the absence of concentrated efforts by key stakeholders, the widespread geographic deployment of NGB within the next 3-5 years is unlikely. On the question of what constitutes adequate NGB speeds, there is broad agreement that existing access networks are not currently in a position to support high speed broadband services. Building on the content of the Discussion Document, some parties sought to further define NGB in terms of speed capabilities, but a large number of respondents cautioned against this, stating that doing so risked such an approach becoming obsolete. Instead, it was considered that the focus should be on the development of high bandwidth capacity access networks with the scalability to support an increasing range of upload and download speeds, as well as particular quality of service parameters necessary to support a range of network sensitive services.
- 1.6 A large number of respondents agreed that cross-platform competition is both desirable and necessary (a small number believing that it is already fully effective) in stimulating

⁶ Some respondents provided both confidential and non confidential responses, typically with commercially sensitive information being excluded from the non-confidential versions.

⁷ www.comreg.ie

the development of NGB networks, with fibre, cable and wireless platforms having a role, where appropriately deployed, in providing NGB services. However, while noting NGB deployment was likely to commence in some areas from mid 2010, a commonly held view was that competition may not prove sufficient in itself to bring about an extensive geographic deployment of NGB networks in the short to medium term. Respondents' stated preference was largely for the deployment of fibre and cable based NGB services in more dense population areas, with wireless NGB services being more relied upon in less population dense locations, mainly due to cost, efficiency and timeliness reasons. It was also recognised that, irrespective of the underlying technology platform, the market itself is extremely unlikely to provide for universal NGB geographic coverage and, as a consequence, some form of State intervention may well be required, in due course, to address an emerging deficit. Conversely, rather than waiting to see the outcome as to what geographic areas would be addressed by the market in the first instance, some parties stressed that a parallel strategy to address the provision of NGB in both urban and rural areas was required. A number of respondents also suggested that a co-ordinated approach providing access to the State's telecommunications assets could facilitate a more timely and efficient provision of NGB by private sector companies.

- 1.7 All but a few respondents indicated support for a collaborative industry approach in seeking to address NGB investment risks, subject to satisfying competition concerns. In this context, it was seen as being particularly important to continue to develop the appropriate policy and regulatory framework, with the roles of the Department of Communications, Energy and Natural Resources (DCENR) and ComReg being significant for bringing stakeholders together.
- 1.8 The comparisons of international NGB initiatives set out in the Discussion Document were viewed as being particularly useful in informing the debate. However, some parties urging caution on the appropriateness to Ireland of some of the measures outlined, particularly having regard to the European Union's State Aid rules.
- 1.9 A large number of respondents also agreed that the range of NGB enablers and inhibitors described (such as competition, market certainty, risk sharing etc.) were relevant, although some were viewed as having a greater impact than others. The key stakeholders identified as being in a position to influence these issues included the DCENR, industry (including its representative organisations), ComReg and consumers.
- 1.10 The majority of respondents agreed that regulation has a role in supporting competition and efficient investment. There were wide ranging views as to the role of wholesale pricing in stimulating NGB with some respondents stating that any regulatory approach on wholesale pricing needs both to encourage competition and incentivise NGB investment. Caution was also urged in using wholesale pricing as a regulatory incentive, particularly as little is known about costs of NGB investments which can create difficulties in setting efficient incentives. Responses were varied on the question as to whether there is a case for allowing a differentiated regulated rate of return for Eircom in relation to potentially more risky NGB investments. Some stated there was no case, while others indicated their support provided there was functional separation and true open access for wholesale customers. It was also noted that the degree to which NGB investment was risky would require careful examination. Some respondents also highlighted that it would be difficult to distinguish between existing and new assets when seeking to apply any differentiated rate of return.

Regulatory and Market Perspectives

- 1.11 ComReg is grateful for respondents' views to the issues and analysis set out in the Discussion Document. It is clear the market (industry and its stakeholders) is at a significant crossroads in seeking to address the development path towards NGB networks and services. In the light of the economic contraction, Ireland continues to face significant challenges, and the electronic communications industry, while not as severely impacted as other sectors, is not impervious to these realities. These general economic conditions, particularly the impact on the availability of financial capital and uncertainty of demand, are likely to have an impact on the timing and scale of large investment intensive projects such as NGB development.
- 1.12 The financially constrained position of eircom is also likely to affect its decisions on when and what extent to invest significantly in NGB. However, since the issue of the Discussion Document in July, we have seen developments regarding the proposed takeover of eircom by Singapore Technologies Telemedia. More details regarding eircom's NGB investment plans and strategy are likely to await clarification on its future ownership position.
- 1.13 ComReg's view is that many technologies, whether wired or wireless, have the potential to play a role in seeking to address the provision of widespread coverage of NGB. While ComReg's regulatory approach will be applied in a technology neutral manner, some technologies will likely be more suited than others for particular geographic areas and, in this regard, the business case for wireline NGB will be more sustainable in dense urban areas (complemented by wireless solutions) with wireless solutions being more appropriate for less dense areas. On the issue of NGB speeds, ComReg agrees with respondents' views that to focus on a particular NGB speed risks any such 'definition' becoming obsolete. ComReg also recognises that a number of technologies, such as LLU and WiMax, may have useful roles to play in providing faster speed services than are currently generally available. ComReg's view is that absent an indication as to minimum speed thresholds, there exists the potential for a lack of clarity in discussing what constitutes NGB and how it differs from current broadband service provision. In this context, the Discussion Document suggested that that 25Mbps presents a useful differentiator to classify minimum NGB services. ComReg also considers that NGB networks (and their supporting technologies) should be adequately future proofed and scalable in order to provide the basis for an evolving provision of higher speed bandwidth products to meet consumer needs. In this regard, ComReg notes the DCENR's view⁸ that *"By 2012, Ireland's broadband speeds will equal or exceed those in comparator EU regions..... We will have a range of broadband speeds capable of meeting the demands of the Smart Economy"*.
- 1.14 As has been the case with current generation broadband deployments, there will undoubtedly be geographic areas where the market, left to its own devices, is unlikely to provide NGB in a timely fashion, possibly even not at all. In this context, some form of appropriate intervention by the State may be necessary, having regard to policy goals and budgetary constraints. It is, however, ComReg's view that such intervention should only take place once a clear picture as to what coverage will be provided by the market itself has emerged. This position is consistent with the DCENR's position of seeking to encourage private sector investment in NGB through targeted Government action. Signals to the contrary risk crowding out or delaying private sector led developments

⁸ See DCENR's policy paper (DCENR) of its policy paper "Next Generation Broadband: Gateway to a Knowledge Ireland" (July 2009), available at www.dcenr.gov.ie

which could ultimately serve to undermine the timing and coverage of NGB deployments.

- 1.15 It may also be the case that NGB investment risk will differ according to where and how NGB is deployed. For example, NGB deployment in more dense urban areas is likely to have a different risk profile than that which attaches to deployments into more rural areas. Additionally, a FTTH strategy may have a different risk profile than a FTTC/N network topology. Irrespective of which network topology or technology is deployed to deliver NGB, it is ComReg's view that the option(s) chosen should not preclude the possibility of further enhancing the capabilities of a NGB network through an efficient incremental investment approach. Equally so, NGB investment strategies examining choices between FTTC and FTTH scenarios need to weigh up the relative business cases, not only in light of the levels of capital investment required, but also having regard to the differences in associated operational costs. While a FTTH scenario will likely have greater upfront capital requirements than a FTTC deployment, so too will it have greater operational efficiencies which reduce the level of ongoing operational expenditures.
- 1.16 ComReg notes that there appears to be an appetite amongst a number of stakeholders for a collaborative industry approach in seeking to address risks associated with NGB investments. In the alternative, individual operators may seek to build and maintain their own NGB networks. Irrespective of what approach emerges, ComReg is committed to continuing to play its role in facilitating NGB developments in Ireland and, in doing so, will provide regulatory certainty to the market having regard to the overall legislative framework within which it must operate and, indeed, the competitive dynamic that exists (or develops further).
- 1.17 Should alternative industry collaborative approaches to sharing investment risks associated with NGB developments emerge (such as, for example, joint investment) ComReg will play an active role⁹ in seeking to provide regulatory certainty. ComReg notes that IBEC's Telecommunications and Internet Federation (TIF) is exploring investment options for NGB in Ireland, including collaborative approaches, and looks forward to the completion of this work. Where requested, ComReg will engage with stakeholders to explore how any collaborative approaches can satisfy competition considerations and the likely regulatory framework that could apply.
- 1.18 In terms of facilitating access to networks, the regulatory approach adopted by ComReg to date has appropriately focused on existing network operators, such as eircom, who have been designated as having Significant Market Power (SMP) in certain wholesale markets. In doing so, ComReg has sought to open up access to bottlenecks in eircom's existing legacy copper network with a view to encouraging entry by alternative operators into the market. For as yet unbuilt NGB networks, an opportunity presents itself for eircom (or indeed any operator) to design and operate its NGB network in such a way that eliminates bottlenecks at the outset and is not detrimental to future competition. This could be achieved through the commercially driven provision of effective open and non-discriminatory access to third parties which facilitates the development of sustainable competition at the retail level. In such circumstances, the regulatory regime that would apply could be materially different to that which currently exists and could, for example, allow for greater freedom to set wholesale prices, possibly subject to an appropriate *ex ante* margin squeeze test supported by any

⁹ Depending on the nature of the collaborative approach, the Competition Authority may also have a role.

necessary transparency requirements.

- 1.19 ComReg has, through its review of the Wholesale Physical Network Infrastructure Access (WPNIA) market, set out its preliminary view on the range of regulatory obligations which are to be imposed on eircom. Insofar as NGB is concerned, ComReg has been specific in terms of the principles but not the detail of the obligations to be applied. The rationale for this approach is that ComReg is mindful of the need to provide clarity as to what will be regulated, but to be flexible as to how it is to be regulated in order that it can take account of what emerges. ComReg's approach will have regard not only to the nature of eircom's proposed approach in providing open and non-discriminatory access to its NGB network, but also to the European Commission's Recommendation on NGB, once finalised next year.
- 1.20 It is, of course, open to eircom (or indeed any operator) to make detailed proposals to ComReg in relation to how it intends that the access considerations identified above can be addressed and ComReg would encourage dialogue at the earliest of stages in order to ensure that the implementation of any NGB development plans does not result in avoidable regulatory consequences. In the alternative scenario where bottlenecks are not addressed in a way that addresses competition concerns, ComReg will have no option but to justifiably place a greater reliance on the imposition of detailed and proportionate access, pricing and other remedies.
- 1.21 ComReg is also supportive of efficient investment in networks, irrespective of the technology deployed and has, and will continue, to provide appropriate incentives in this regard, balanced with the need to promote the development of competition. To this end and in a regulated wholesale pricing scenario¹⁰, ComReg has already decided that a Weighted Average Cost of Capital (WACC) of 10.21% is an appropriate return for eircom on capital/investment in the production of retail and wholesale regulated services. ComReg is open to assessing whether the existing WACC is appropriate to reflect the level of any additional and identifiable systemic risk associated with NGB investment by eircom (where a cost based price control is appropriate). In this regard, it is up to eircom to provide clear and compelling evidence of the existence of risk differentials between new and legacy investments, the latter of which have already been accounted for in the existing WACC. Any examination of the WACC would, of course, need to be mindful of the need to encourage investment while at the same time not distorting competition through inappropriate price signals.
- 1.22 ComReg is aware of the importance of radio spectrum in the provision of NGB services and has continued to progress its various NGB spectrum initiatives. In relation to the future use of the 900 MHz and 1800 MHz spectrum bands, ComReg has recently published the non-confidential minutes¹¹ of the series of bilateral meetings that ComReg held with parties who submitted written responses to one or both of ComReg's previous Consultations on this issue. ComReg plans on issuing its Response to this Consultation on this band very shortly. In relation to the 2300-2400 MHz band and the separate issue of the digital dividend¹², ComReg has recently issued Response to Consultations¹³ which set out the next steps on each of these bands. Finally, in the

¹⁰ Note that the use of the WACC as a tool for incentivising investment only arises in circumstances where the wholesale pricing of the entity is regulated.

¹¹ [ComReg Document 09/73](#)

¹² The "digital dividend" is the benefit that may be derived when analogue broadcasting signals are switched off in favour of digital, and radio spectrum is thereby released.

¹³ ComReg Document 09/76 and ComReg Document 09/81

3400-3800 MHz band, the competitive licensing process associated with the release of additional spectrum has been completed and, to date, over 39 licences have been issued under this competition. These licences can support the provision of broadband services and it is notable that one operator, Imagine Communications Group, has recently launched¹⁴ a WiMAX network in certain areas of Ireland utilising licences issued in this frequency band.

1.23 Finally, ComReg re-affirms its commitment to the key principles that will guide its regulatory approach in dealing with issues affecting NGB development. These include:

Principle 1: ComReg will provide a clear and predictable regulatory environment within which service providers contemplating NGB investments can operate.

Principle 2: ComReg will adopt a technology neutral approach in considering NGB regulatory issues.

Principle 3: ComReg will promote effective and sustainable competition at both the network and service levels through the application of appropriate regulatory remedies (where necessary) that take into account collaborative industry or individual approaches that eliminate bottlenecks.

Principle 4: ComReg will recognise uncertainty faced by service providers in making efficient NGB investments and will take appropriate account of identifiable risks in applying the regulatory framework.

1.24 The European Commission is expected to publish its final Recommendation¹⁵ early next year, providing guidance for National Regulatory Authorities on appropriate regulatory responses for dealing with the roll-out of NGB. This will act as a further impetus for ComReg's future work in seeking to develop and bring further clarity to the appropriate regulatory framework governing NGB in Ireland. In doing so, ComReg will continue to work with DCENR, industry and user representatives, to facilitate timely and efficient rollout of NGB in Ireland.

¹⁴ www.imagine.ie

¹⁵ Draft Commission recommendation on regulated access to Next Generation Access networks, 12 June 2009. See document [Here](#)