

BEREC Report on the Public Consultation of the Draft Document “Challenges and drivers of NGA rollout and infrastructure competition”

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1 Introduction

BEREC published on its website the public consultation on the draft BEREC Report “Challenges and drivers of NGA rollout and infrastructure competition” (hereafter the consultation document) on 6 June 2016.¹ The stakeholders were invited to send their views on the consultation document until 1 July 2016. In total BEREC received 7 contributions from the following stakeholders (in alphabetic order):

- Dansk Energi
- ECTA
- ETNO
- Fastweb
- FTTH Council Europe
- Telefónica
- WIND

BEREC welcomes all contributions and thanks all stakeholders for their submissions. The contributions received from stakeholders will be published on the BEREC website unless they are confidential.

This report has the objective to provide an overview of the received contributions and to present BEREC’s view on them with regard to the need to change the consultation document (in *italic*). The report is structured as follows: First it deals with general comments (section 2). It is then structured according to the chapters of the draft report (section 3-7) and closes with a list of abbreviations (section 8).

2 General comments

This section gives an overview on the general comments received from stakeholders.

FTTH Council

The FTTH Council believes that BEREC should have taken a position concerning the treatment of technological neutrality. BEREC should recognise that the form of fixed network could have a profound effect on competition and consumer welfare. While the FTTH Council agrees that market players are best placed to make technology choices in well-functioning markets that view is reversed when markets are characterised by market failure as in Europe in the fixed physical infrastructure market. The FTTH Council does not expect BEREC to specify the actual technology it would like to see but it should, at minimum, specify the characteristics it would like to see in technology choices. The FTTH Council considers FTTH-like solutions as the only future proof solutions to growing broadband requirements.

Telefónica

Telefónica observes that the report provides a valuable overview of the existing NGA rollout in the different EU countries as well as relevant insights into the factors affecting investments. Nevertheless, it puts too much focus on trying to demonstrate that the regulation of the sector

¹ http://berec.europa.eu/eng/news_consultations/ongoing_public_consultations/3825-public-consultation-on-draft-berec-report-challenges-and-drivers-of-ngn-roll-out-and-infrastructure-competition.

has not negatively impacted the decision of operators to invest in new infrastructures and consequently ignores relevant issues such as the inadequacy of the current complex regulatory framework to provide incentives for investment and some of the unintended consequences of the regulatory policies implemented by NRAs.

WIND

WIND basically shares BEREC's views and proposes few specific comments on Annex 1. WIND underlines that the development in NGA products would be facilitated if the incumbent was constrained to maintain low prices both for the provided wholesale NGA and copper services as this would foster a wider adoption by the alternative operators not able to compete at the infrastructure level.

BEREC response: BEREC takes note of these comments but does not see a need to change the document. It is not the goal of the report to recommend (or not recommend) a particular policy towards NGA rollout (including the preference for particular technologies). The report aims at providing a basis for further discussions.

3 Section 1: Introduction

Telefónica

Telefónica misses out a reflection about the absolute relevance of NGA to achieve the targets of the DSM strategy. The importance of the NGA rollout is underestimated, as reflected in "... *that the rollout of next generation access (NGA) is a desirable goal*". The DSM strategy attributes a key role to NGA. Therefore, it is clear for Telefónica that NGA rollout is not just a "desirable" but a "must-achieve" goal.

BEREC response: To better reflect the importance of NGA rollout, the text will be changed to: "[...] a desirable and highly important goal".

4 Section 2: Analysis of the drivers of NGA rollout

4.1 Section 2.1: Infrastructure competition

Dansk Energi

Dansk Energi shares the conclusion by BEREC that infrastructure competition – mainly from cable networks and new FTTH operators – is a main driver for future investments in NGN networks in the EU. It has been proven in Denmark and other EU Member States that without infrastructure competition incumbents can and do delay necessary investments in fibre-based networks, especially in countries where competition is mainly built on the incumbent's network as service-based competition, such as in Germany, Italy and the UK.

ECTA

ECTA strongly agrees that mobile broadband is mostly considered as a complement to fixed broadband access (p. 12). There is a strong evidence from both end-users' and operators' perspective that highly performant fixed and mobile services and networks are typically being

used and deployed as complements of each other, i.e. end-users typically subscribe to both and numerous operators invest in parallel in both.

BEREC response: BEREC takes note of these comments but does not see a need to change the document.

ETNO

ETNO consider that infrastructure competition from cable operators has been favoured by regulation in the sense that such operators are mostly unregulated. Consequently, they would not support the constraints and costs of regulated operators and have not had to rely on access to incumbents' networks to offer broadband access. ETNO considers the absence of regulation an important factor explaining cable operators' ability to gain important market shares in NGA markets.

BEREC response: BEREC takes note of this comment but does not see a need to change the document. In BEREC's view, the significant NGA coverage of cable networks can mainly be explained by the fact the TV networks could be upgraded to high bandwidth broadband networks at relatively low costs, in particular with no or low civil infrastructure works (p. 10). BEREC does not believe that the absence of regulation was or is a main factor. In most countries in Europe, cable operators are not considered having SMP. In such cases the regulatory framework provides no legal basis for regulatory intervention. Possible concepts for regulatory treatment of so called "tight oligopolies" which could potentially affect cable operators in some European countries are not part of this report but are addressed in more detail in BoR (15) 74 (the Draft BEREC Report on oligopoly analysis and regulation).²

ETNO has found that, to a certain extent, in several countries and across specific user groups at least, mobile broadband is a growing competitive constraint to fixed broadband access.

BEREC response: BEREC does not contend that there might be a number of countries where infrastructure competition from mobile plays a role; the example given here is Austria. There might be other examples demonstrating such tendencies. Yet, the report aims to describe more general trends and thus has pointed out that "in most MS, users consider mobile broadband a complement, not a substitute for fixed broadband access" (p. 12). Therefore, BEREC takes note of this comment but does not see a need to change the document.

Telefónica

Telefónica is of the view that the role of regulation to influence the degree of infrastructure competition is much more relevant than recognized in the report. The current regulatory framework was designed to spur competition in existing networks but does not provide the right incentives to create new ones. Burdensome access conditions and cost-oriented prices are extremely harmful for investments. They are conducive to market structures where:

- Incumbent operators are encouraged to delay investments since they do not see a competitive advantage of undertaking them,
- Alternative network operators prefer to wait and rely on the incumbent's wholesale services rather than undertaking risky investments,

² http://berec.europa.eu/eng/document_register/subject_matter/berec/reports/5042-draft-berec-report-on-oligopoly-analysis-and-regulation.

- High competition of multiple fixed operators over one access network leads to very low user prices, which is good in principle, but lacks of a future proof business model for the society as revenues cannot afford high CAPEX when a continued investment in networks is needed.

BEREC response: The effects of access pricing are elaborated later in the document (p. 30 and p. 40). Therefore, BEREC takes note of this comment but does not see a need to change the document.

Telefónica points out that the most relevant NGA investors in independent structures are cable operators (which are mostly not regulated). Additionally, the emergence of FTTP alternative networks in some countries, as in the case of Spain, can also be attributed to a simple and focused regulatory approach, based on the regulation of ducts and in-building wiring.

BEREC response: As mentioned above, in BEREC's view, the significant NGA coverage of cable networks can mainly be explained by the fact the cable networks could be upgraded to high bandwidth broadband networks at relatively low costs, in particular with no or low civil infrastructure works (p. 10). BEREC does not believe that the absence of regulation was or is a main factor.

In Spain, the regulation of ducts is possible because high-quality ducts are available. As pointed out in section 2.1 of the main document, this is not the case for most EU Member States. Obviously, the lack of (quality) ducts inevitably leads to a different regulatory approach in those countries. Telefónica in its opinion later on fully agrees with the differences related to network factors, particularly with the relevance of high quality ducts.³ Therefore, BEREC takes note of this comment but does not see a need to change the document.

4.2 Section 2.2: Demand side factors

Telefónica

Telefónica misses a deeper analysis of the impact of IPTV services as a relevant driver for NGA adoption as IPTV results in more broadband consumption and relevant changes in the profiles of consumption.

BEREC response: The report mentions IPTV in the analysis of the demand-side factors. However, as the aim of the report is to provide a more generic overview, a deeper analysis of one single factor is not appropriate. Therefore, BEREC does not see a need to amend the document.

4.3 Section 2.3: Supply side factors

ETNO

ETNO does not agree with the conclusion drawn on p. 22 according to which the “*correlation between prices and NGA rollout is rather weak*”.

BEREC response: BEREC has looked at data to determine the relationship between retail prices and NGA rollout (i.e. NGA coverage). That there is no clear-cut relationship between

³ See p. 6 of the Telefónica opinion.

retail prices and NGA rollout is hence rather an observation than a conclusion. The report also gives first indications why the data might not show the expected correlation of high prices and increased NGA rollout (p.22). The document does not doubt that ceteris paribus a higher willingness to pay could allow operators to enforce higher retail prices, yet a number of other factors, in particular fierce competition, determine retail prices as well. Therefore, BEREC takes note of this comment but does not see a need to change the document.

Telefónica

Telefónica misses references to the need to apply geographical segmentation as basic tool to address the factors such as a different population density and urbanization.

BEREC response: In the part referred to by Telefónica, the report lists different exogenous factors that influence NGA rollout. Regulatory options are dealt with in chapter 3. Generally, the report focuses on the analysis of developments in NGA up until now. It however refers to the potential need of geographically differentiated remedies with an increasing arrival of NGA networks (p. 29): “Since the NGA footprint may not be uniform within a country, geographically differentiated remedies may have to be considered when applying SMP regulation”. Therefore, BEREC takes note of this comment but does not see a need to change the document.

Telefónica misses the mentioning of the relevance of bundling and convergence.

BEREC response: The report addresses the importance of bundles in its analysis of demand side factors, p. 14: “The demand for multiple play bundles is strong in some countries and drives NGA rollout due to higher bandwidth needs, especially for IPTV (e. g. in ES, PT and RO).” Bundles are again mentioned as one of the driving demand side factors in relation to retail prices p. 21. Therefore, BEREC takes note of this comment but does not see a need to change the document.

Telefónica fully agrees with the differences related to network factors, particularly with the relevance of availability of high quality ducts.

BEREC takes note of this comment but does not see a need to change the document.

Telefonica mentions that perhaps the role of mobile operators in low density areas is underestimated.

BEREC response: In the report, BEREC considers NGA rollout. As mobile technologies are not included in the EC’s definition of NGA technologies applied throughout the document, mobile operators are not part of a detailed analysis (see also Section 4.1). Therefore, BEREC takes note of this comment but does not see a need to change the document.

4.4 Section 2.4: Conclusions on the factors driving NGA rollout

Telefónica

Telefónica believes that Spain should also be included in the lines “infrastructure competition – FTTP” (Table 1 on p. 27). Spain is a country where infrastructure competition based on FTTP is very strong and fibre coverage has reached a very high level (see reference below).

Telefónica believes that Spain should also be included in the lines “demand side factors – bundles” as in Spain, the vast majority of the fixed broadband market is based on bundles.

BEREC response: Spain will be included in the list on Table 1 (p. 27) as an example of infrastructure competition from FTTP and as an example of bundles as an important demand side factor driving NGA rollout. Accordingly, Spain will be added as an example for the importance of bundling for NGA rollout in the first paragraph on p. 14 in the brackets, changing the sentence to “The demand for multiple play bundles is strong in some countries and drives NGA rollout due to higher bandwidth needs, especially for IPTV (e. g. in ES, PT and RO).”

Telefónica believes that although the role of regulation is specifically considered in chapter 3, regulation should also be included among the most important factors driving NGA rollout. A fair long-term return on investments should be regarded as a pre-requisite to attract investments required to build new NGA. Regulation should not count as an additional element of risk in the business case.

BEREC response: BEREC takes note of this comment but does not see a need to change the document. Regulation is recognised as an important factor in section 3. Section 2 of the report deals with factors being largely exogenous to regulation.

5 Section 3: NGA rollout and regulation

Dansk Energi

Dansk Energi is of the opinion that ex-ante regulation should be gradually scaled back in geographical areas where the incumbent operators meet infrastructure competition by all-fibre networks (FTTH) and/or upgraded cable networks but that safeguards against anti-competitive practices of the SMP-operator such as predatory pricing should be maintained.

BEREC response: The report mentions examples where regulation on market 3a is limited to passive infrastructure access (sometimes in particular areas) due to the deployment of parallel fibre networks (e.g. p. 37). In general, regulation always has to be proportionate and geographic differences have to be taken into account (p. 29). Since the report aims at describing regulatory approaches in particular scenarios but not at recommending a certain best practice, BEREC does not see a need to change the document.

Dansk Energi expresses the concern that a higher degree of symmetrical regulation on passive fibre infrastructure may easily lead to a disproportionate regulatory decisions and burdens on new fibre entrants removing their incentives for long-term investments in NGA infrastructure.

BEREC response: As pointed out in the report, symmetric obligations played an important role in facilitating NGA rollout in some countries (in particular where several operators are rolling out FTTH networks) (e.g. p. 33-34). It is not the goal of the report to judge on possible effects of a “higher degree” of symmetrical regulation. BEREC therefore does not see a need to change the document.

ECTA

ECTA broadly supports the draft BEREC Report and agrees with many of its findings. In particular, ECTA strongly supports BEREC's conclusion that: "*Migration to NGA networks has not fundamentally changed the bottleneck characteristics of broadband access networks [...]*" (p. 29). ECTA also strongly agrees with the conclusion that mobile broadband is mostly considered a complement to fixed broadband access (p. 12). ECTA further commends BEREC for the consideration of symmetric obligation as a complementary tool to SMP regulation.

BEREC response: BEREC takes note of these comments but does not see a need to change the document.

ECTA expresses the opinion that virtual access products are not substitutes to physical access products, the availability of which should be prioritised as pre-requisite for competitive network investments. In this context it should be clarified, whilst maintaining the principle of technology neutrality, that dominant operators have a special responsibility not to aggravate competitive conditions via technological choices that could undermine the feasibility of physical access.

BEREC response: As described in the report (e.g. p. 35-36) there are cases where active wholesale access products have been imposed as a de facto substitute for physical unbundling. Since the report aims at describing regulatory approaches in particular scenarios but not at recommending a certain best practice, BEREC does not see a need to change the document.

ECTA supports promoting appropriate and efficient infrastructure based competition, which in ECTA's view encompasses not only end-to-end infrastructure competition but also infrastructure competition up to the economically viable level of duplication, complemented by access to the non-duplicable network elements.

BEREC response: As stated in the report, "NRAs aim to promote competition at the deepest level possible of the value chain." (p. 31). BEREC therefore does not see a need to change the document.

ECTA commends BEREC for the recognition of the fact that "*FTTP rollout has often been initiated or mainly driven by alternative operators*" (p. 38) and for recognising that while alternative operators may in some cases be able to invest in their own infrastructure in other cases they may lack the economies of scale to do so and/or civil engineering/passive access may not be available. Mandating access to suitable and best quality active remedies then constitutes a key competition enabler (p. 30).

BEREC response: BEREC takes note of this comment but does not see a need to change the document.

ECTA expresses the opinion that the need for bitstream access in particular cases should be made clearer in the report.

BEREC response: Since the report aims at describing regulatory approaches in particular scenarios but not at recommending a certain best practice, BEREC does not see a need to change the document.

ECTA submits that ex ante regulation is key to allow alternative network operators to invest and thus a key enabler of infrastructure based competition. This should be very clearly stated in the report.

BEREC response: The report clearly points out the importance of access regulation for alternative operators to gain economic size and invest in their own infrastructure rollout (e.g. p. 33). BEREC therefore does not see a need to change the document.

ECTA contests the idea that in Portugal the NRA deliberately decided to apply forbearance with regard to NGA-based active access regimes. ECTA also contests the conclusion that FTTP had been incentivised in some countries or areas where rollout of FTTP could be reasonably expected by limiting access remedies to ducts and in-house cabling (Spain, Portugal).

BEREC response: BEREC wants to point out in this context that the report is based on country cases studies submitted by the NRAs who should best know which regulatory decisions have been taken and why.

ECTA contests the conservative view put forward in the draft report on PON unbundling (p. 34) and multi-operator vectoring (pp. 35, 36).

BEREC response: The report recognises the ongoing developments with regard to wavelength unbundling (p. 34) and multi-operator vectoring (p. 37). Since it is not the goal of the report to recommend a certain best practice, BEREC does not see a need to change the document.

ECTA commends BEREC for the recognition that active remedies, and in particular those products whose price is tiered by speed, give alternative network operators less room for differentiation and innovation than unbundling products. ECTA refutes any alleged substitutability between physical access and any form of active or 'virtual' access. If a L2 WAP with local or quasi-local PoH is positioned as the closest alternative (with which ECTA disagrees as it considers physical access and 'virtual access' as complements of one-another), then the maximum speed technically possible should always be offered and the wholesale price should not be bandwidth-dependent.

BEREC response: BEREC takes note of this comment but does not see a need to change the document. BEREC refers to the draft Common Position on Layer 2 Wholesale Access Products⁴ in this context.

ETNO

ETNO does not share BEREC's view that "(full coverage by) FTTP is the desired goal in the long run" (p. 31). Broadband targets have to be set based on speed and quality and reflecting the willingness to pay of final customers and not based on the availability of specific technologies.

BEREC response: While BEREC believes that the rollout of FTTP is a desirable goal, "full coverage" might indeed be too strong. There may be particular cases (just as today) where

⁴ http://berec.europa.eu/eng/document_register/subject_matter/berec/public_consultations/6080-draft-berec-report-on-common-characteristics-of-layer-2-wholesale-access-products-in-the-european-union.

mobile or satellite solutions are more appropriate. “full coverage” will therefore be replaced by “a wide coverage”.

ETNO is of the opinion that the draft report tends to underestimate the impact of regulation on NGA deployment. While the various national outcomes depend on a series of factors, regulation has a key influence by designing entry layers and the prices for those layers.

BEREC response: The report recognises the important role of regulation in determining investment incentives and make-or-buy decisions (e.g. p. 29-31). However, in BEREC’s view, it is also important to point out that regulation is only one factor among many and that the influence of regulation therefore should not be overstated (p. 28). As pointed out in the report, NGA rollout is driven by many factors and NRAs have to take these (exogenous) factors into account when making their decisions. It would therefore be incorrect to conclude that regulation (or the absence of regulation) can achieve particular results with regard to NGA rollout independent of other circumstances. Therefore, BEREC does not see a need to change the document.

ETNO fully supports the argument made in several parts of the document that regulatory decisions should be mainly taken at the local (country) level. ETNO also agrees with the draft report when it states that “long-term investment decisions for the rollout of new high-capacity networks need consistent and reliable conditions set out by the regulators, fostering competition that best unleashes the full potential of market-driven infrastructure rollout” (p. 29).

BEREC response: BEREC takes note of these comments but does not see a need to change the document.

ETNO mentions that, while the draft report states that it does not aim to provide policy recommendations, at p. 29 it seems to be implying that symmetric access regulation should be imposed in the presence of competition between infrastructures. With this regard, ETNO expresses its concerns against the extension of the scope of regulatory intervention to situations characterised by the absence of single/joint SMP, as BEREC has proposed with the concept of “tight oligopolies”.

BEREC response: As pointed out in the report, symmetric obligations played an important role in facilitating NGA rollout in some countries (in particular where several operators are rolling out FTTH networks) (e.g. p. 33-34). It is not the goal of the report to recommend a certain best practice with regard to symmetric regulation or the treatment of oligopolies. As mentioned before, possible concepts for regulatory treatment of so called “tight oligopolies” which could potentially affect cable operators in some European countries are not part of this report but are addressed in more detail in BoR (15) 74. BEREC therefore does not see a need to change the document.

ETNO supports BEREC’s conclusion that “geographically differentiated remedies may have to be considered” – in ETNO’s opinion much more strongly than has so far been the case – “since the NGA footprint may not be uniform within a country” (p. 29). Moreover, ETNO is of the opinion that where the incumbent does not own the NGA network, SMP regulation on the incumbent has to be automatically removed. This would require a more dynamic approach than market analysis procedures.

BEREC response: BEREC takes note of these comments. Since it is not the goal of the report to recommend a certain best practice, BEREC does not see a need to change the document. Appropriate regulation always has to be determined on a case-by-case basis.

ETNO believes that, with regard to pricing in an NGA environment, the obligation of cost orientation has particularly adverse effects on incentives to undertake risky investments in high-speed connectivity and is no longer proportionate in today's much more dynamic market environment. ETNO believes that the revised rules should limit price regulation to a test of economic replicability by NRAs. BEREC's report should mention the positive effects of NGA wholesale price flexibility on the promotion of NGA investments, as envisaged by the European Commission in the Recommendation 2013/466/EU on consistent non-discrimination obligations and costing methodologies.

BEREC response: The links between wholesale access pricing and investment incentives are discussed in the report (p. 29-31). The appropriate form of access pricing depends on the particular situation in a country. Also the Recommendation 2013/466/EU describes particular circumstances under which cost orientation could not be appropriate (and instead an economic replicability test should be used). A statement as general as suggested by ETNO would therefore not be appropriate.

ETNO considers that it would be highly desirable that the report underlines that regulation should be neutral, and should not have an influence on business and technology decisions, by setting incentives or disincentives.

BEREC response: It is not the goal of the report to recommend a certain best practice. With regard to regulatory approaches, the document mentions already that "In line with the principle of technological neutrality, NRAs generally do not regulate to favour a particular type of technology." (p. 37). Therefore, BEREC does not see a need to change the document.

ETNO points out that while it is true that in a number of countries mentioned on p. 33 of the report as positive examples of the application of the ladder of investment (FR, PT, ES), access seekers have gained scale due to copper LLU, the key factor behind the positive outcome in terms of fibre deployment has been the absence of a regulated ladder of investment over fibre.

BEREC response: In BEREC's view, the causality is reverse. As mentioned in the document "The availability of a high quality duct network and the prospects of several operators investing in FTTP enabled countries such as CH ES, FR and PT to apply forbearance with regard to NGA-based active access remedies (e.g. FTTH unbundling and active wholesale products)." (p. 33). It cannot be concluded in general that the absence of NGA-based wholesale access products increases investment incentives. In particular in cases where rollout-costs are high (no ducts), access products like fibre unbundling or active wholesale access products are needed to promote competition.

ETNO is of the opinion that in the discussion of scenario 1 the draft report misses a reference to the co-investment and risk-sharing agreements reached in these countries on a commercial basis.

*BEREC response: To reflect this, the following sentence will be added at the end of the 4th paragraph of p. 33: **"Access to ducts also led to co-investment and risk-sharing agreements between operators in some cases."***

Fastweb

Fastweb is of the opinion that BEREC's analysis on the difficulty of developing "multi-operator vectoring" (hereinafter "MOV") is too conservative and not reflecting the Italian situation. In Fastweb's experience, there are no such difficulties as MOV enables the use of physical unbundling in FTTC/B networks.

BEREC response: The Italian situation is recognised and described on p. 36-37 of the report. The goal of the report is to describe regulatory scenarios and not to recommend a best practice.

FTTH Council Europe

The FTTH Council Europe is of the opinion that the results with regard to FTTH rollout achieved in countries such as France, Portugal, Sweden and Spain can be replicated across the EU if BEREC identifies the drivers and ensures that they are available on an EU-wide basis.

BEREC response: It is the goal of the report to identify drivers and challenges for NGA rollout (including FTTP/FTTH rollout) and indeed several important factors have been identified in the countries mentioned by the FTTH Council Europe. Unfortunately, some of these factors cannot be "made available" (and in particular not by BEREC) on an EU-wide level. Examples are a far reaching and high quality duct network of the incumbent operator (in FR, PT, ES) or a high willingness to pay for a fibre connection (driven by "e-culture") in SE. Other factors or approaches identified for particular countries might be applicable or transferable to other countries. The report provides a basis for further discussions.

Telefónica

In Telefónica's point of view, the role of regulation in shaping the market is strongly underestimated in the report. In particular, Telefónica believes that overregulation could be particularly counterproductive for the investments of both, the incumbents and the ANOs. In its view, special attention should be given to the negative consequences of price regulation, particularly when based on cost orientation.

BEREC response: The report recognises the important role of regulation (including price regulation) in determining investment incentives and make-or-buy decisions (e.g. p. 29-31). However, in BEREC's view, it is also important to point out that regulation is only one factor among many and that the influence of regulation therefore should not be overstated (p. 28). In BEREC's view it cannot be concluded in general that price regulation (including cost oriented prices) has negative effects on investments.

Telefónica believes that in the case of Spain the key reason why other operators invested in their own fibre access networks is precisely that an investment ladder in fibre did not exist under the 2009 regulation. No complex regulated wholesale access products were mandated along the value chain to cater for any business model.

BEREC response: In BEREC's view, the causality is reverse. As mentioned in the document, "The availability of a high quality duct network and the prospects of several operators investing in FTTP enabled countries such as CH ES, FR and PT to apply forbearance with regard to NGA-based active access remedies (e.g. FTTH unbundling and active wholesale products)." (p. 33). It cannot be concluded in general that the absence of NGA-based wholesale access

products increases investment incentives. In particular in cases where rollout-costs are high (no ducts) access products like fibre unbundling or active wholesale access products are needed to promote competition.

6 Section 4: Conclusions

ECTA

ECTA expresses the opinion that BEREC's key conclusions - that (i) the differences in terms of NGA rollout and coverage of different access technologies in EU Member States are to a large extent explained by factors which are largely exogenous to NRAs and regulation; and that (ii) the ability of SMP regulation to promote NGA rollout or particular types of NGA rollout should not be overstated – provide solid support to ECTA's view that incumbents' pleas for deregulation, in order to supposedly incentivise NGA deployment, should be outright rejected. According to ECTA, BEREC's report constitutes one more piece of evidence that deregulation does not constitute the trigger for NGA investment/rollout.

BEREC response: BEREC takes note of this comment but does not see a need to change the document. BEREC also wants to point out in this context that regulation always has to be based on a detailed case-by-case analysis and has to be proportionate.

ECTA is of the opinion that the following should be stated in the report: While there is no robust evidence to sustain that deregulation would per se promote NGA rollout by the incumbents, ex ante regulation is key to allow alternative network operators to invest and thus a key enabler of infrastructure based competition. In particular - and as BEREC acknowledges - effective and high quality access to ducts and in-building wiring has been and is key to allow alternative network operators to invest and rollout fibre networks (p. 33)

BEREC response: BEREC is of the opinion that it is already stated sufficiently strong in the document (e.g. pp. 31-32 and 37-38) that NRAs are applying regulation in order to promote investments by incumbents and alternative operators as well as effective competition. Access to passive infrastructure, in particular duct access (where ducts are available), is already mentioned as an important factor enabling alternative operators to invest in own access infrastructure (e.g. p. 33-34).

Telefónica

According to Telefónica, it is important to bear in mind that current rules applicable to telecommunications have been effective in achieving competition for services but have been less successful in supporting a European transition to ubiquitous and high-performing broadband networks. Too much micro-management and focus on price declines have depressed investment confidence and led to over-fragmented competition. The current rules should be replaced by a new investment-friendly regulatory framework. Ex-ante regulation, if needed, should be concerned on the lasting/enduring bottlenecks (or Key Network Inputs), if any, of the networks.

BEREC response: BEREC takes note of these comments. Since it is not the goal of the report to recommend a particular policy towards NGA rollout, BEREC does not see a need to change the document.

7 Section Annex

7.1 Annex 1: Literature Review

WIND

WIND finds some of the statements in the reviewed literature to be unclear, redundant or non-consistent. Also, it finds that some of the contributions mentioned do not reflect the Italian situation.

BEREC response: BEREC takes note of these comments. Since the review is given as a general overview on (theoretical and empirical) economic literature relevant to the report, it cannot reflect the typical situations of each country. Besides, the opinions and empirical findings had not been issued by BEREC. Therefore, BEREC does not see a need to change the document.

7.2 Annex 2: NGA country case stories

ETNO

ETNO comments on a number of the NGA country case stories, namely on the stories provided by the NRAs from Croatia, France, Germany, Italy, the Netherlands and Poland.

BEREC response: The NGA country case stories were provided by and represent the views of the individual NRAs. Those views do not necessarily coincide with the views of the operators. The NGA country case stories, provided by the individual NRAs, were amended where this was considered to add value, after having consulted the NRAs concerned. That being said, the following changes have been made based on the comments from ETNO:

Croatia

*Since the reasoning of the incumbent operator HT to stop its fibre deployment in 2010 is not fully transparent to HAKOM, in order to avoid any confusion, the sentence “**Since the utilization of fibre infrastructure was very low, HT stopped with the deployment in 2010**” (p. 53, second paragraph from below) will be erased.*

France

*BEREC will add to the first sentence of the second paragraph (“The investment by alternative operators allowed for significant price and service innovation to the benefits of French consumers”). on p 66 of the document such that it changes to “**The investment by alternative operators – in addition to the investments made by the incumbent operator to deploy ADSL on the whole French territory – allowed for significant price and service innovation to the benefits of French consumers.**”*

Germany

*The sentence “only around 30,000 households can be reached” will be replaced by the sentence “**while FTTB/H-coverage of Deutsche Telekom amounts to around 500,000, only 30,000 households have subscribed to such lines as of mid-2015.**”*

The Netherlands

*The information on voluntary agreements made by KPN with market parties regarding VULA has been added to the story by changing the sentence “ACM allowed incumbent KPN to upgrade its DSL access network by imposing VULA instead of SLU.” to **“ACM allowed incumbent KPN to upgrade its DSL access network by imposing VULA instead of SLU, after KPN had also concluded voluntary agreements with DSL access seekers.”***

*To avoid any confusion about the benefits of VULA, a part of the last, sentence has been erased, changing the last sentence on p. 101 to **“This will cause a more balanced playing field for the incumbent vis-à-vis cable operators.”***

Poland

*The sentence “The programme will apply the NGA definition in the NGA Recommendation and will build on the premise of technological neutrality, where the requirement of 'guaranteed' 30 Mbps speed will refer to 'functional' best effort speed, thus allowing for grants to advanced mobile solutions” describing the Polish State Aid programme (p. 101) will be changed to **“the programme will apply the NGA definition based on the GBER Regulation and will build on the premise of technological neutrality.”***

8 Abbreviations

ADSL	Asymmetric Digital Subscriber Line
DSL	Digital Subscriber Line
DSM	Digital Single Market
EU	European Union
FTTB	Fibre to the Building
FTTC	Fibre to the Curb
FTTH	Fibre to the Home
FTTP	Fibre to the Premises
IPTV	Internet Protocol Television
L2 WAP	Layer 2 Wholesale Access Product
LLU	Local Loop Unbundling
NGA	Next Generation Access
SMP	Significant Market Power
VULA	Virtual Unbundled Local Access

Country Codes

AT	Austria	EL	Greece	NO	Norway
BE	Belgium	HU	Hungary	PL	Poland
BG	Bulgaria	IS	Iceland	PT	Portugal

HR	Croatia	IE	Ireland	RO	Romania
CY	Cyprus	IT	Italy	SK	Slovakia
CZ	Czech Republic	LV	Latvia	SI	Slovenia
DK	Denmark	LI	Liechtenstein	ES	Spain
EE	Estonia	LT	Lithuania	SE	Sweden
FI	Finland	LU	Luxembourg	CH	Switzerland
FR	France	MT	Malta	UK	United Kingdom
DE	Germany	NL	Netherlands		