Body of European Regulators for Electronic Communications
BEREC

BoR (20) 226

BEREC response on the targeted public consultation on the evaluation of the state aid rules for the deployment of broadband networks

I. BEREC response

Targeted Public Consultation on the Evaluation of the state aid rules for the deployment of broadband networks (EN)

Introduction

[Section]

Although investment in telecommunications network deployment comes mainly from private operators, EU countries also provide public support ('state aid').

EU competition controls play an important role in ensuring this public support does not harm competition (by crowding out private investment, subsidising local monopolies or discriminating against certain technology platforms), while ensuring that public support creates modern infrastructure that reduces the digital divide where commercial operators have no incentives to invest.

The EU rules for public spending on the deployment of broadband infrastructure are:

- The 2013 Broadband Guidelines
- The relevant parts of the General Block Exemption Regulation (General Block Exemption Regulation) (2014)

Taken together, these EU rules are referred to as 'the state aid rules for the deployment of broadband infrastructure'.

In addition, public support in this sector must be in line with the objectives set out in the:

- Digital Agenda for Europe (DAE) (2010)
- Gigabit Society Communication (targets added in 2016 for telecoms network deployment by 2025, in line with expected use, market and technological developments).

Note also that investing in connectivity to achieve the 2025 objectives is a prerequisite for the new EU digital strategy, Shaping Europe's Digital Future.

Why are we consulting?

[Section]

As part of our evaluation of the state aid rules for broadband infrastructure, we're running 2 consultations in parallel:

- a general questionnaire
- this targeted consultation, which focuses on the technical detail of the Broadband Guidelines and the relevant parts of the GBER.

We would like to know your views on whether the rules:

- have stimulated telecommunications infrastructure deployment and boosted competitiveness in the sector
- respond to both technological developments and socio-economic needs
- meet the new EU strategic objectives in Shaping Europe's Digital Future.

Following the evaluation, we may make some changes (legislative or other).

A **summary of our findings** from the consultation will be published here in Q3/2021.

To help us analyse your reply:

- please **keep your answers concise**
- the 'extra comments' box is limited to 3,000 characters (unless stated otherwise), but you can include **documents** and **URLs** to relevant online content
- although you can respond 'not applicable/no relevant experience or knowledge' to any question, please **give specific answers as much as possible** (to help us gather solid evidence).

Saving and submitting

If you click '**Save as Draft'** (to break off and finalise your response later), you must save the link that you receive from the EUSurvey tool on your computer. Without it, you won't be able to access the draft again.

After submitting your finalised response, you'll be able to **download a copy**.

Questions marked with an asterisk (*) are **mandatory**.To see how we will protect your data, **read the attached privacy statement**.

Contacts

Still got questions?

For **technical problems**, please contact our CENTRAL HELPDESK.

You may also contact us via the following functional mail box: COMP-BBGL@ec.europa.eu

Who are we consulting?

[Section]

The consultation is open to any interested public or private organisation or individual.

However, we are particularly interested in feedback from bodies with expertise or experience in the broadband infrastructure sector (industry, academia, consultancy/law firms, all levels of government and any authorities managing or regulating the relevant EU state aid rules).

This questionnaire is in English and the German and French versions will be uploaded in the end of September – but you can respond in **any official EU language.**

Your details

[Section]

Language for responding

[…]

I am responding as

[…]

If other, please specify

First name

[…]

Surname

[…]

Email

[…]

Organisation name

[…]

Transparency register number

[…]

Country of origin

[…]

I agree with the personal data protection provisions

[…] Yes

What is your interest and the main reason for responding?

[…]

Please briefly explain your activities/describe your organisation/company and - if applicable - the main goods/services you provide.

[…]

What kind of services does your company provide?

[…] Wholesale
[…] Retail
[…] Both

What kind of technology does your company use?

[…] ADSL/SDSL/HDSL
[…] VDSL
[…] VDSL + Vectoring
[…] G.Fast
[…] Coax DOCSIS 1.x/2.x
[…] Coax DOCSIS 3.0
[…] Coax DOCSIS 3.1
[…] 3G
[…] 4G/LTE
[…] 5G
[…] FWA
[…] FTTH
[…] FTTB
[…] FTTC
[…] Other (please specify)

If other, please specify
[…]

Publication privacy settings

[Section]

You can choose whether your identity can be made public with your contribution.

[...] **Anonymous**: only your type of respondents and country of origin will be published. All other personal details (name, organization name and size, transparency register number) will not be published.

[...] **Public**: your personal details (name, organization name and size, transparency register number) will be published with your contribution.

The Commission will publish the responses to this public consultation. You can choose whether your contribution can be made public, or whether it will remain fully or partially confidential. In case your contribution contains confidential elements, please submit also a non-confidential version to be published.

[...] **Public**. Your contribution may be published in full. Tick this box also for the non-confidential version of your contribution.

[...] **Confidential**. Your contribution will remain confidential and will not be published.

Technical questionnaire

[Section]

This consultation relates to state aid rules for the deployment of broadband infrastructure – specifically the Broadband Guidelines and the relevant parts of the GBER (unless otherwise specified).

The targeted consultation is not exclusively aimed at NRA's or BEREC, but also at other stakeholders. Therefore, BEREC focusses on those questions where NRAs have specific experiences made with the application of state aid rules and/or which can be answered based on the experiences gained in sector regulation, in particular with regard to market analysis, wholesale access products and pricing principles. The original questionnaire can be found in the annex (part II of the document).

Section 2 – Additional measures supporting broadband rollout (paras 28 to 29, Broadband Guidelines)

6. Some state intervention falls outside the definition of state aid and so is not subject to EU state aid rules. In your country, have alternative no-aid measures been implemented to boost broadband coverage/penetration:

[X] civil engineering?
[X] regulation?
[...] ~~easing access rights?~~
[X] measures covered by the cost reduction directive?

[X] others?
[...] ~~not applicable/no relevant experience or knowledge~~

Please explain
[...]

Within the context of market analysis NRAs take into account the objective to encourage investments in broadband networks, including in very high capacity networks (VHCN) as well as the objective to promote competition.

In order to incentivise fibre roll out some NRAs made use of the possibility to allow for pricing flexibility, e.g. for FTTH/B wholesale access, in order to promote investment in new technologies. This possibility in principle is given, where retail products based on the legacy copper infrastructure exert a demonstrable price constraint on the retail prices for fibre. Under this conditions the copper-based product can function as an anchor product. Instead of a strictly cost-oriented wholesale access price for the FTTH/B product, an economic replicability test in conjunction with suitable non-discrimination obligations might be considered as sufficient to promote competition, while at the same time preserving incentives to invest. Some NRAs also made use of the possibility to include a risk premium when defining the pricing approach for wholesale access to FTTH-based services provided by the significant market power (SMP) operator.

An additional tool to foster fibre deployment are obligations to offer co-investment, which in some instances were imposed on SMP operators, but also independent of SMP (symmetric). Co-investment is a tool which can reduce each operator's costs for fibre roll out and promote competition at the same time.

In Member States (MSs) where civil infrastructure (ducts, poles) are sufficiently available, NRAs were able to enhance broadband coverage/penetration, by encouraging access to civil infrastructure. Imposing remedies, including suitable reference offers, helped to facilitate the use of such infrastructures and associated facilities (e.g. manholes, chambers).

The Broadband Cost Reduction Directive (BCRD) aims to reduce the costs of broadband roll-out. Useful information can be found in BoR (19) 23 "BEREC report on pricing for access to infrastructure and civil works according to the BCRD". In the national transposition of the BCRD, NRAs are often mandated to serve as Dispute Resolution Body (DSB) and sometimes as Single Information Point (SIP).

Even though the BCRD's application follows a case-by-case approach, NRAs were in some countries able to set fair and reasonable terms and conditions when resolving disputes. A greater clarity in the market, which terms and conditions might be acceptable, can enhance the possibility to reach agreements between the involved parties. While the application of the BCRD and the establishment of the DSBs can facilitate broadband coverage, a definite statement about the impact on the market cannot be assumed, given the case-by-case approach.

In addition to this, improving the process of granting authorisation, allocation of spectrum and additional frequencies and the establishment of Broadband Competence Offices (BCO) helped to facilitate broadband roll-out.

Section 3 – Role of the National Regulatory Authority (NRA) (paras 42-43, Broadband Guidelines)

9. To what extent have the state aid rules for the deployment of broadband infrastructure favoured the involvement of the NRA in designing aid measures?

[...] ~~Totally~~
[X] Partially
[...] ~~Neutral~~
[...] ~~Not at all~~
[...] ~~Not applicable/no relevant experience or knowledge~~

Please explain
[...]

Para. 42 of the Broadband State Aid Guidelines (BBSA GL) foresees a role for NRAs in designing pro-competitive state aid (SA) measures in support of broadband roll-out. For instance, NRAs should issue national guidelines, specifying open access conditions and prices or pricing principles, which can be applied by aid granting authorities.

The BBSA GL do not provide a compelling legal basis for the involvement of NRAs in the design, implementation or monitoring stage. According to para. 42, it lies within the MS's discretion to establish a legal basis for the involvement of NRAs. Some of the countries have already established such a legal basis for at least some of the tasks or are planning to do so . In consequence, the involvement of NRAs differs considerably between MSs as can also be seen in the BEREC report on an "Analysis of individual NRA's role around access conditions to state aid (SA) funded infrastructure" (BoR (17) 246).

In 14 countries the NRA was not responsible for issuing guidelines (however, in several of these countries with only a limited number of projects, the NRA is directly or indirectly involved in the measures).

Even though a legal basis for NRA involvement could be provided through contractual requirements compelling the beneficiary to comply with guidelines and decisions by the NRA, a clear legal basis through legislation would be preferable. In both cases, involvement from the NRA already at the design stage would be advisable.

In BEREC's view, an active involvement of NRAs in state aid is crucial, especially regarding mapping, access and pricing matters. It has to be ensured that NRAs can observe and assess access and pricing conditions in the context of SA, for instance for consistency with regard to other access regimes, but also because these different provisions may sometimes overlap to a degree in a target area. From an efficiency perspective, the NRA should also play a pivotal role in ensuring that state aid requirements related to effective wholesale access are complied with, to avoid that the competence on access regulation has to be duplicated by another public body. The involvement of NRAs is of utmost importance in particular as investment volumes in the context of SA will possibly further increase in the future due to the extension of publicly funded network deployment to grey areas.

In consequence, a legal basis should be provided in the revision of the state aid rules specifying the tasks NRAs have to be involved in. In this matter, the state aid rules based on the General block exemption Regulation (GBER) could serve as a starting point. Art. 52 para 6 GBER establishes the legal basis for the involvement of NRAs: "The national regulatory authority shall be consulted on access conditions, including pricing, and in the event of dispute between access seekers and the subsidised infrastructure operator."

Additionally, NRAs should be involved in the potential impact of state aid measures design on competition.

10. To what extent have the state aid rules for the deployment of broadband infrastructure favoured the involvement of the NRA in monitoring the implementation of aid measures?

[...] ~~Totally~~
[...] ~~Partially~~
[X] Neutral
[...] ~~Not at all~~
[...] ~~Not applicable/no relevant experience or knowledge~~

Please explain
[...]
As stated in the answer to Q.9, the BBSA GI foresee, in broad terms, a role for NRAs in designing pro-competitive state aid measures. However, a monitoring task is not explicitly foreseen in the BBSA GI nor is there any provision for a legal basis related to the NRAs involvement. An involvement in monitoring is in principle also not foreseen under the GBER (see again answer to question 9).

Indeed, as the aforementioned BEREC analysis (BoR (17) 246) found out, in 2017 only NRAs from six MSs (EL, FI, FR, HR, IT, PT) were in some form involved in monitoring state aid related issues, e.g. with respect to pricing or technical issues (for details see BoR (17) 246, p. 22-23). In Finland, for example, the NRA has been involved in the technical supervision of the subsidised networks, checking that the networks have been built in accordance with regulations. In the Czech Republic the NRA is generally involved in controlling and consulting on the aid measures. Also, in Sweden the NRA has done the mapping and provides market analysis regarding state aid schemes (where there is no commercial interest in deployment) for deployment partly funded by the European Regional Development Fund (ERDF) and the European Agricultural Rural Development Fund (EARDF). In Norway, the NRA is responsible for the mapping as well. In Portugal, the NRA assisted the government both on the monitoring of the wholesale tariffs for access to the subsidised fibre network projects in rural areas and on the issue of the claw-back mechanism associated to those projects.

The lack of availability of sufficient data on various aspects connected to state aid, such as demand and prices, is often a challenge for NRAs in many MSs, e.g. when being involved in dispute settlements or against the background of important consistency issues between state aid and other access regimes (e.g. sector regulation or BCRD).

11. To what extent have the NRAs been involved in:

	Totally	Partially	Not at all	Not applicable/no relevant experience or knowledge
Designing the state aid measures		**Partially**		

Monitoring		**Partially**		
Mapping target areas		**Partially**		
Public consultation		**Partially**		
Setting the list of wholesale access products and relevant specifications		**Partially**		
Setting the prices and/or a pricing methodology for wholesale access products		**Partially**		

Please explain
[...]
The aforementioned BEREC analysis (BoR (17) 246; see Q.9) gives an overview on how NRAs are involved in the context of SA. As this analysis contains data from three years ago, some changes might have occurred in the meantime. Nevertheless the analysis still offers valuable insights:

- Most NRAs have at least an advisory role concerning both access conditions and pricing/pricing methodologies by issuing guidelines or by giving advice to the responsible authorities (e.g. the ministry preparing a program or the aid granting authority). In some MSs NRAs also have the powers to directly set prices. E.g. ComReg has recently issued draft prices for access by the subsidised broadband provider to the incumbents civil engineering infrastructure (CEI).
- However, the involvement varies in the different MSs. In some countries it is limited to the control of draft contracts on open access and to dispute resolution. In other countries, the NRAs are involved into the preparation of the (centralized) tender, which sets the conditions for open access. Other NRAs are involved into most of the stages of the state aid process, accompanying (e.g. Portugal) or being responsible (e.g. Finland) for the whole project. With respect to pricing, some countries already approve wholesale access prices before or during the tender (e.g. Italy, Poland, Portugal and Romania), other countries only indicate pricing principles that the operator shall use, along the lines of the GBER or the relevant national umbrella schemes (e.g. Spain and Germany). In these countries, a pricing decision of the NRA would only be taken in case of a dispute.
- In conclusion, the fact-finding identifies two groups of countries:
    - First, countries with a larger number of state aid projects under umbrella schemes or the GBER that are usually implemented on regional or local level. In some of these countries, NRAs or other competent bodies have issued guidelines on wholesale access conditions and pricing methods or principles, e.g. with the aim to issue guidance to aid granting bodies and to increase transparency for the operators.
    - Second, countries with a limited number of integrated projects that encompass a large area or number of communities/districts. In these countries, it is commonly unnecessary to issue guidelines as foreseen in the BBSA GL because all the conditions on access and pricing methods are included in the tender/project in advance. In many of these cases, the government body at national level is a central organization/authority and NRAs are

typically involved in the preparation and/or implementation of these projects, e.g. taking the role of an advisory body to the competent body at national level.

- Besides the competencies regarding access conditions and pricing, some NRAs fulfil various other tasks in state aid cases (e.g. defining target areas or monitoring, see Q.10). These can involve either a direct responsibility or an advisory role (for details see BoR (17) 246, p. 22-23).

12. Have you experienced any (legal or practical) problems with the involvement of the NRA in designing, implementing and/or monitoring state aid broadband measures?

[X] Yes
[...] ~~No~~
[...] ~~Not applicable/no relevant experience or knowledge~~

Please explain
[...]
The lack of a compulsory legal basis for the role of the NRAs – since it was not established under the current BBSA GL nor in the national legal frameworks of most MSs – can lead to practical issues regarding NRAs' insufficient knowledge of state aid cases, particularly with respect to access and pricing conditions. For example, some NRAs have no data about the prevailing wholesale prices in state aid projects or it has proven difficult to get access to this data. In consequence, it has also been observed that the there is a lack of knowledge of the practical and commercial implications of effective wholesale access, notably with beneficiaries which are not already being regulated under the electronic communication framework. In BEREC's view, this issues needs to be addressed in the proposed revision of the state aid rules, also against the background of important consistency issues between state aid regulations and other access regimes (e.g. sector regulation or BCRD) and the involvement of NRAs in dispute settlements under state aid regulations.

Many NRAs have neither the means nor the legal mandate to implement or monitor the state aid schemes once they have been submitted. Such mandate could be provided for, either in legislation or contractually through provisions in binding conditions in the tender and the contract. The involvement of NRAs in designing the state aid schemes might be enhanced when they have a significant involvement in conducting the geographic surveys of network deployments (and further related tasks and procedures) provided for in Article 22 EECC. However, on the other hand, the application of this article can be mandated to Other Competent Authorities (OCAs), and therefore leave no or only limited room for the NRA to be involved. Nevertheless, the guidance provided for in BEREC Guidelines related to Article 22, concerning the designing and implementing procedures (mapping, classification of delimited areas, procedures of invitations to declare deployment projects, etc.), are not meant to replace the guidance provided for in state aid regulations.

Therefore, if the Commission considers it appropriate to both, enhance NRAs role and recommend the use of results obtained from applying Art. 22 of EECC provisions, the Commission should also consider that BEREC explicitly indicates that *"(10) The procedures according to Article 22 paragraphs 2-4 EECC must not be confused with state aid procedures, as Article 22 and state aid proceedings are instruments with different objectives. However, the information gained as result of the invitation procedure according to Article 22 paragraph 3 EECC could be useful within a state aid context"* [Cf. Draft of BEREC "Guidelines on

geographical surveys of network deployments Article 22 (2), (3) and (4)" (BoR (20) 168, published for an ongoing public consultation)].

Section 4 - Next Generation Access (NGA) network and Next generation network (NGN) definitions (paras 55 to 60, Broadband Guidelines)

Type of networks classified as NGA in terms of infrastructure: The state aid rules for the deployment of broadband infrastructure define NGA networks as access networks which rely wholly or partly on optical elements and which are capable of delivering broadband access services with enhanced characteristics, compared to existing basic broadband networks. This means

(i) fibre-based access networks (FTTx);
(ii) advanced upgraded cable networks;
(iii) (iii) certain advanced wireless access networks capable of delivering reliable high speeds per subscriber.

13. Is the distinction between basic broadband and NGA networks still relevant?

[...] ~~Totally~~
[...] ~~Partially~~
[...] ~~Neutral~~
[X] Not at all
[...] ~~Not applicable/no relevant experience or knowledge~~

Please explain
[...]
The BBSA GL refer to the Europe 2020 Strategy, the Digital Agenda for Europe (DAE) targets and that the DAE objectives cannot be reached without the support of public funds. The BBSA GL foresee that every aid measure has to comply with the "contribution to the achievement of objectives of common interest" and, according to para. 36, the Commission will assess this condition as further specified in the DAE.

The DAE targets can be summarised as follows. Basic broadband coverage should be reached by 2013 for 100% of EU citizens. Fast broadband coverage at 30 Mbps or more for 100% of EU citizens should be reached by 2020. Finally, at least 50 % European households should have subscription to ultra-fast broadband above 100 Mbps.

In 2016, the DAE targets have been updated by the Commission in its Gigabit Society Communication (GSC) which sets the following targets for telecommunications network deployment by 2025 in line with expected use, market and technological developments (section 3, p. 5-8). All households should have access to internet connectivity of at least 100 Mbps download, upgradable to 1 Gbps. All main socio-economic drivers such as schools, transport hubs and main providers of public services as well as digitally intensive enterprises should have access to internet connectivity with download and upload speeds of 1 Gbps. And finally, uninterrupted 5G coverage for all urban areas and major terrestrial transport paths should be ensured.

Therefore, the GSC targets internet connectivity of at least 100 Mbps download for all households by 2025 supersede the DAE targets basic broadband (less than fast broadband) and fast broadband (30 Mbps or more) for 100% EU citizen in 2020. From this follows that the revised state aid rules for the deployment

of broadband infrastructure, basic broadband networks are not any longer relevant and, therefore, also not the distinction between basic broadband and NGA networks (on the definition for VHCN and its implications on state aid rules see answer to Q.27).

It also needs to be noted, that, according to the BBSA GL (paragraph 56), basic broadband networks include ADSL (up to ADSL2+) networks, DOCSIS 2.0 networks and 3G mobile networks and present day operators typically do not any longer upgrade or expand their networks with such networks.

14. Is this definition of an NGA network still valid, especially in view of the Gigabit and 5G connectivity objectives proposed by the Commission in the Gigabit Communication?

[...] ~~Totally~~
[X] Partially
[...] ~~Neutral~~
[...] ~~Not at all~~
[...] ~~Not applicable/no relevant experience or knowledge~~

Please explain
[...]
@@@Remark: The text below is longer than 3000 characters. It will be uploaded in a separate Word document.@@@

The GSC target internet connectivity of at least 100 Mbps download is with regard to the speed the same as the DAE target ultrafast internet connections above 100 Mbps, which can be provided by NGA networks. However, whether a NGA network is indeed capable of providing internet connectivity of at least 100 Mbps depends on many parameters (as e.g. NGA architecture, i.e. the extent to which fibre is rolled out - FTTN/C/B/H, the access technology deployed on the copper or coax access network, the length and quality of the copper loop, the number of subscribers who share the same coax access network). Therefore, some but not all NGA networks will be capable to contribute to the achievement of the GSC 100 Mbps target. In addition, this GSC target also requires that the network is upgradable to 1 Gbps which also may not be fulfilled by all NGA networks.

With regard to the part of the target which refers to “upgradable to 1 Gbps” it needs to be noted that it is not clear what is still considered to be an upgrade. For example, the deployment of a more advanced access technology (e.g. G.fast instead of VDSL2 vectoring or DOCSIS 3.1 instead of DOCSIS 3.0) may be considered an upgrade as largely the active equipment is changed. In the case of enhancing a network from FTTC to FTTB/H, fibre needs to be rolled out significantly closer to the end-user, however. This requires major investments and can be considered to be an extension of the network, instead of an upgrade. Moreover, if the roll out of fibre to the cabinet (and from the cabinet to the building) would be considered as “upgrade”, any legacy copper network would be regarded as being upgradeable to 1 Gbps and the notion of “upgrade” would become meaningless. Therefore it should be clarified that the roll out of fibre closer to the end-user is an extension of the network and normally not an upgrade. Also in wireless networks, the roll-out of a new generation of mobile-technology might require not only the replacement of active equipment, but also significant investments in backhaul capacities and new base stations and then should not be considered an upgrade.

The GCS does not any longer use the term "NGA network" but instead the term "VHCN". For example the GSC sets out a vision for a European Gigabit society, where availability and take-up of VHCN enable the widespread use of products, services and applications in the Digital Single Market. The term VHCN is already defined in Art. 2(2), Rec. 13 of the European Electronic Communications Code (EECC) and the "BEREC Guidelines on VHCNs" (BoR (20) 165). Therefore, in order to be consistent and to avoid confusion, it is important that the revised BBSA GL do not define the term VHCN differently if that term is used.

The GSC target 100 Mbps download, upgradeable to 1 Gbps can be achieved with certain NGA networks (see above). It needs to be noted, that this target can in particular be achieved with fixed VHCNs which are capable to deliver even significant higher data rates (see also the answer to Q.27).

15. At this stage of technological and market development, do you think that:

a. other types of telecom networks should have been included in the definition of NGA networks?

[...] ~~Yes~~
[X] No
[...] ~~Not applicable/no relevant experience or knowledge~~

Please explain
[...]
The types of networks included in the definition of NGA networks are not limited with regard to possible future developments. Fibre-based access networks (FTTX) include FTTH which means the maximum fibre roll out possible, advanced upgraded cable networks include the most advanced cable networks (e.g. DOCSIS 3.1 full duplex, DOCSIS 4.0) and certain advanced wireless access networks are also not limited with regard the degree of advancement and include the most advanced wireless access networks (e.g. 5G). Also the term NGA network in principle is open to different levels of reliability and possibly other QoS parameters beyond download speed.

b. some types of telecom networks should have been left out of the definition of NGA networks?

[X] Yes
[...] ~~No~~
[...] ~~Not applicable/no relevant experience or knowledge~~

Please explain
[...]
As already mentioned in the answer to Q.14, whether a NGA network is capable of providing internet connectivity of at least 100 Mbps and, therefore, is capable of contributing to the GSC target internet connectivity of at least 100 Mbps download for all households by 2025 depends not only on the type of network but on many parameters. Therefore, not all types of telecom networks included in the definition of NGA networks in the BBSA GL (para. 58) will be capable of providing all connected end-users internet connectivity of at least 100 Mbps download. Conversely, not all NGA networks might be regarded as being upgradeable to 1 Gbps download.

For this reason, it would be necessary to define the types of networks in more detail and restrict the use of the term "NGA network" to only a subset of NGA networks which can provide at least 100 Mbps to all

connected end-users. Similarly, Art. 76 EECC in principle refers to VHCN, but at the same time clarifies that only VHCN are encompassed in this regulation, where the fibre is deployed up to the end-user premises or to the base station. The definition of the term VHCN itself is not changed. Alternatively, the revised state aid rules should refer not any longer to NGA networks but instead to networks which are capable of providing internet connectivity of at least 100 Mbps download to all connected end-users. Additional definitions for the type of speed and requirements related to reliability and other QoS parameters could be required (see answer to Q. 16, Q. 17 and Q.27) as well.

16. The Broadband Guidelines state that, to be considered NGA, advanced fixed wireless access networks must provide the relevant speeds reliably. Do you think this requirement:

	Yes	No	Not applicable/no relevant experience or knowledge
Is relevant	**Yes**		
Is clear		**No**	
Can be applied in a consistent way		**No**	

Please explain
[...]
In order to be equivalent to a fixed NGA network, fixed wireless access networks need to provide the speed with a similar reliability. Therefore, the requirement that the speed needs to be provided reliably is still relevant. For example, the type of spectrum used has an impact on reliability since higher reliability is possible in case of the use of licensed spectrum compared to the use of unlicensed spectrum.

The BBSA GL require that the fixed wireless access network needs to provide the speed reliably without defining the reliability explicitly in more detail. Therefore, it would increase clarity if the revised Broadband Guidelines would make it explicit that fixed wireless access networks need to provide the speed with a similar reliability as fixed NGA networks. This clarification should enable that this requirement can be applied in a consistent way. The "BEREC Guidelines on the Implementation of the Open Internet Regulation" (BoR (20) 112) could be a relevant document in this regard.

In addition, it is difficult to evaluate if a fixed wireless access network provides relevant speed, especially when evaluating planned deployment of FWA. Hence, it is important that the contractual obligations in the tender are sufficiently strong to secure a relevant service to end users.

The Broadband Guidelines describe NGA networks as having the following characteristics:

(i) capable of delivering services reliably at a very high speed per subscriber through optical (or equivalent technology) backhaul sufficiently close to user premises to guarantee the actual delivery of the very high speed;
(ii) capable of supporting a variety of advanced digital services including converged all-IP services;
(iii) having substantially higher upload speeds than basic broadband networks.

By referring to the Digital Agenda for Europe targets, NGA networks are generally considered able to provide at least 30 Mbps download speed and ultrafast networks at least 100 Mbps download speed.

17. Is the concept of download speed clear?

[...] ~~Yes~~
[X] No
[...] ~~Not applicable/no relevant experience or knowledge~~

Please explain
[...]
The speed of internet access depends significantly on the type of speed considered. For example, during peak-time the speed is usually significantly lower compared to the speed available at the other time of a day or to the maximum speed possible. The DAE targets and also the GSC targets do not define the type of speed to which the speed targets refer to. Therefore, the concept of the download speed is not clear.

Another aspect is the point from where the download speed is measured or analysed. The EC should clarify if network features could be characterised regardless conditions located outside the subsidised deployment. It is possible that the new deployment can provide 100 Mbit/s or higher binary rates without any problem but the bottleneck – that prevents offering high speed – is at a certain point without any relation with the network deployed with the state aid scheme (internet peering, backbone). In order to determine the download speed, it should be clarified that only the subsidised network should be considered (not including other interconnected networks).

18. Does it take into consideration all relevant aspects?

[...] ~~Yes~~
[X] No

If not, which aspects?
Please note, the electronic questionnaire allows only to select one answer category (not more than one)
[...] ~~peak-time speed~~
[...] ~~normally available speed~~
[...] ~~maximum speed~~
[...] ~~minimum committed speed~~
[**X**] **other aspects (please give details below)**

Please explain
[...]
All types of speeds listed above are relevant to take into consideration, when deciding on which type of speed the target should be based. The GSC doesn't define which type of speed should be considered and neither did the DAE and the current BBSA GL. Therefore the concept of download speed currently does not take into account all relevant aspects (see. Q.17).

The Open Internet Regulation (Regulation (EU) 2015/2120, Art. 4(1)(d)) and the BEREC Guidelines on the open internet (BoR (20) 112) distinguish in case of fixed networks between minimum speed, normally available speed, maximum speed and advertised speed. The European Electronic Communications Code (Art. 2(2), Rec. 13) and the BEREC Guidelines on VHCNs (BoR (20) 165) refer to speed under usual peak-

time conditions. Therefore, many different types of speed are already defined and it seems advisable that the revised Broadband Guidelines use one of these already existing speed types.

As mentioned above, it is unclear to what type of speeds the DAE targets and the Gigabit Society Communication targets refer to. From an end-user perspective, the speed type "under usual peak-time conditions" would be most appropriate because this would ensure that the speed according to the speed targets is also available during peak-time.

Alternatively, the speed parameter "normally available speed" may also be considered as appropriate. Network operators already have the obligation to provide information on the speed of the internet access service according to the Open Internet Regulation and the aforementioned BEREC Guidelines on the open internet.

19. Do you think the concept of 'substantially higher upload speed':

	Yes	No	Not applicable/no relevant experience or knowledge
Is clear?		**No**	
Should have been further clarified (e.g. clear thresholds)?	**Yes**		

Please explain
[...]
The term 'substantially higher upload speed' defines the upload speed with the words 'substantially higher' which is solely qualitative and, therefore, the definition of the two aspects 'substantially' and 'higher' is not fully clear. Higher upload speeds and basic broadband networks are not fully clear since the BBSA GL and the DAE define the term basic broadband networks without defining the upload speeds of such networks. The concept of 'substantially higher upload speeds' is not fully clear, since different views are possible with regard to the meaning of substantially.

Since the concept of 'substantially higher upload speed' is not fully clear, it should have been further clarified. However, as in the revised state aid rules the distinction between basic broadband networks and NGA networks may not be any longer relevant (see answer to Q.13), it might be necessary also to reconsider to which type of networks the concept of 'substantially higher upload speed should be compared.

20. The Broadband Guidelines refer to the concept of 'reliability' in defining NGA networks: to be considered NGA, networks must be able to deliver the relevant speeds reliably (cf. para 58, Broadband Guidelines). Do you think that concept:

	Yes	No	Not applicable/no relevant experience or knowledge
Is relevant?	**Yes**		
Is clear?		**No**	
Can be applied in a consistent way		**No**	

Please explain

[...]

For end-users it is relevant whether the internet access service provides the speeds reliably, therefore, this concept is relevant, in particular in view of the COVID-19 pandemic and the increase of the home office. It is clear solely from a very general perspective but when it needs to be decided whether speed is delivered reliably then it is not sufficiently clear.

Even more, reliability can be affected by and is related to errors/faults of the equipment, or even weather conditions mainly for wireless systems, but also by end-users usage-patterns when shared resources and media are used.

Since the concept is not clear, it can also not be applied in a consistent way.

21. Were the technical parameters sufficient when classifying the networks/technologies?

~~[...] Yes~~

[X] No

Please explain

[...]

The criteria for reliability of advanced wireless access networks should be further clarified. The criteria could be clarified, for example, by defining what type of broadband access (quality) the network should be able to provide.

22. The Broadband Guidelines state that the impact of nomadic users needs to be considered when assessing the actual possibility for a mobile network to provide NGA services.

	Totally	Partially	Neutral	Not at all	Not applicable/no relevant experience or knowledge
Is the reference to nomadic users valid for assessing mobile networks?	**Yes**				
Should further guidance have been given?			**Yes**		

Please explain

[...]

The BBSA GL (para. 57, footnote 71) state that "Next generation wireless access based on tailored mobile broadband technology must also ensure the required quality of service level to users at a fixed location while serving any other nomadic subscribers in the area of interest."

Mobile access networks are based on a shared medium (the air) and the frequency resources are shared between several end-users. The mobile users and the users of a wireless services at a fixed location have an impact on how many end-users share the same frequency resources and, therefore, on the speed

available for each end-user. The speed available for end-users at a fixed location depends on the number of mobile users who use the same frequency resources. Therefore, mobile users are relevant when assessing the possibility for a mobile network to provide NGA services.

It needs to be noted, that the term "nomadic user" is usually used for user of a service at a fixed location where the user has the possibility to use the service at different fixed locations. For example, the user can log in the service (e.g. VoIP) at one fixed location, later log out and travel to a different location and log in at this different location. This nomadic use is different in terms of mobility e.g. in mobile networks the user can move through the coverage area and has access to the service. Wireless services at a fixed location which allow for nomadic use, seem to be deployed rarely and therefore seem not to be very relevant. For mobile networks offering mobile services the concept of nomadic use seems to be irrelevant because of the aforementioned reasons.

23. Is the definition of an NGN:

	Yes	No	Not applicable/no relevant experience or knowledge
Clear?		**No**	
Relevant? Especially in view of the Gigabit and 5G connectivity objectives proposed by the Commission for 2025	**Yes**		

Please explain

[...]

The term 'NGN' in the BBSA GL is defined as the network between the access network and the core network. It seems to be clear where the access network ends and the backhaul network begins.

It seems not fully clear where the backhaul network ends and the core network begins, however. From this results that it is not fully clear to what extent state aid for NGN would also subsidise core networks.

The most relevant segment of a network for achieving the GSC targets is still the access network up to the ODF location. However, providing Gigabit connectivity to end-users increases the bandwidth needed in the backhaul network significantly. Therefore the concept of NGN is relevant for the revised state aid rules.

In a FTTH based access network with the optical distribution frame and OLT (optical line terminal) located at the local exchange office, the upstream transport from this location to the next network level is also referred to as backhaul. And this backhaul and its upgrade could also be of utmost importance to achieve GSC objectives, especially when it enables to reach rural and remote areas. Therefore, the concept of backhaul and NGN is still very relevant not only in case of backhaul referring to NGA and fibre roll out closer to the end user but also as part of the aggregation network or backhaul to connect a town or rural areas.

24. Should further guidance on the NGN definition have been given?

[X] Yes

[...] ~~Not applicable/no relevant experience or knowledge~~

Please explain
[...]
The BBSA GL define NGN as a backhaul network. As mentioned in the answer to Q.23, it seems not fully clear where the backhaul network ends and the core network begins.

Therefore, the use of the term "backhaul" and its delineation from "core" and further guidance with regard to the limit aspects would make the definition of backhaul clearer. Such guidance would need to leave room to be further specified on national level to take sufficient account of national network structures.

Section 5 - Distinction between white, grey and black areas for NGA and NGN networks (paras 73 to 78, Broadband Guidelines and article 52(3), GBER)

27. Would additional network categories (apart from basic broadband and NGA) facilitate the design and assessment of a state aid measure?

[X] Totally
~~[...] Partially~~
~~[...] Neutral~~
~~[...] Not at all~~
~~[...] Not applicable/no relevant experience or knowledge~~

Please explain
[...]
@@@Remark: The text below is longer than 3000 characters. It will be uploaded in a separate Word document.@@@

The 2013 Broadband Guidelines refer to the DAE targets and in 2016 the DAE targets have been updated by the Gigabit Society Communication (GSC) targets (s. answers to question 13). Therefore, for the revised state aid rules for the deployment of broadband infrastructure the GSC targets are relevant. The GSC (section 3, p. 5-8) sets the following targets for telecommunications network deployment by 2025 in line with expected use, market and technological developments:

(i) All households should have access to internet connectivity of at least 100 Mbps download, upgradable to 1 Gbps;
(ii) All main socio-economic drivers such as schools, transport hubs and main providers of public services as well as digitally intensive enterprises should have access to internet connectivity with download and upload speeds of 1 Gbps; and
(iii) Uninterrupted 5G coverage for all urban areas and major terrestrial transport paths should be ensured.

For the achievement of targets (i) and (ii) two different types of networks are necessary. For the achievement of target (i) networks which provide internet access services of at least 100 Mbps download and which are upgradable to 1 Gbps and for the achievement of target (ii) networks which provide internet

access services of 1 Gbps symmetric. Therefore, for the revised Broadband Guidelines these two network categories are relevant.

It may be difficult to define both network categories in terms of (access) technology they are based on since whether a network is capable to provide an internet access service with a certain speed does not only depend on the technology deployed in the access network but also on several other factors e.g. the access network architecture (i.e. the extent to which fibre is rolled out e.g. FTTN/C/B/H), the length and quality of the copper loop, the number of subscribers who share the same coax access network. For the determination whether a network contributes to the fulfillment of target (i) or target (ii), it is also not necessary to consider the technology deployed in the access network but it is sufficient to consider whether the network is capable to provide internet access services with at least 100 Mbps download, upgradable to 1 Gbps or 1 Gbps symmetric. Therefore, it may be most appropriate to define both network categories in terms of the speed of the internet access service they are capable to deliver and to distinguish between the network category (i) networks which provide internet access services of at least 100 Mbps download, upgradable to 1 Gbps and network category (ii) networks which provide internet access services of 1 Gbps symmetric.

In principle, it would be possible to use names for both network categories e.g. the commonly used term "NGA network" and the term "VHCN" to which the GSC refers to. Then network category (i) would be networks based on NGA which provide internet access services of at least 100 Mbps download, upgradable to 1 Gbps and network category (ii) VHCNs which provide internet access services of 1 Gbps symmetric. Therefore, network category (i) would comprise certain (but not all) NGA networks as well as any fixed VHCN[1] (whether wireless VHCNs are included depends e.g. on the interpretation of "upgradable to 1 Gbps") and network category (ii) would comprise certain (but not all) VHCNs.[2] The latter should not be an issue. For example, also a particular relevant provision in the EECC with regard to VHCNs, Art. 76, refers to certain VHCNs and not to all VHCNs.

It needs to be noted, that the term "VHCN" is already defined in the European Electronic Communications Code (Directive (EU) 2018/1972, Art. 2(2), Rec. 13) and the BEREC Guidelines on VHCNs (BoR (20) 165, paragraph 18). In order to be consistent and to avoid confusion, it is important that the revised Broadband Guidelines do not define this term differently. Any additional requirement, e.g. the capability to provide internet access services of 1 Gbps symmetric in order to achieve target (ii) should be made clear when reference to an established definition is made.

With regard to the term "NGA networks", it is important to note that the 2010 NGA Recommendation is currently under revision and if the term "NGA networks" would not any longer be used in the revised

[1] One theoretical exception would be networks based on FTTB which would not provide internet access services of at least 100 Mbps download (e.g. deploy in the building only ADSL not VDSL2), which in practice is probably never the case.

[2] VHCNs which do not provide 1 Gbps symmetric would not be included. It needs to be mentioned, that fixed VHCNs according to criterion 3 (not criterion 1) of the BEREC Guidelines on VHCNs (para. 18) have to meet also a certain QoS with regard to other QoS parameters than data rate (e.g. round-trip IP packet delay, IP packet delay variation, IP packet error ratio). Therefore, in this case the requirements of network category (ii) are to some extent higher than the requirements of target (ii) of the Gigabit Society Communication.

Access Recommendation then it may also not be appropriate to use this term in the revised Broadband Guidelines.

The following further aspect is relevant and needs to be considered. The Gigabit Society Communication targets (i) and (ii) and the corresponding network categories (i) and (ii) (see above) refer to the speed of internet access services and not to a certain segment of a network. Therefore, they are not (explicitly) focused on the access network and do not (explicitly) exclude other segments of a network e.g. backhaul network. However, for the provision of internet access services with high speeds the access network may be the most relevant network segment from the perspective of investments and state aid. Although, it is also necessary to increase the bandwidth in the backhaul network (see answers to question 23).

Finally, with regard the Gigabit Society Communication target (i), it needs to be noted that the term "upgradable to 1 Gbps" is unclear (see answers to question 14).

Section 6 – Mapping (para 78(a), Broadband Guidelines, article 52(3), GBER)

39. To what extent do the provisions of the state aid rules for the deployment of broadband infrastructure regarding the conducting of a mapping exercise allow the efficient identification of those areas most in need of state aid support?

[...] ~~Totally~~
[**X**] Partially
[...] ~~Neutral~~
[...] ~~Not at all~~
[...] ~~Not applicable/no relevant experience or knowledge~~

Please explain
[...]
@@@Remark: The text below is longer than 3000 characters. It will be uploaded in a separate Word document.@@@

The provisions of BBSA GLs regarding the conducting of a mapping exercise are in principle sufficient to address the need of an efficient identification of potential intervention areas. Para 78(a) in particular provides some high-level indications on the requirements for mapping and analysis of coverage (e.g. nationwide database, identification of precise geographical areas, etc.). However, a full-scale instruction set is absent and the NRA's opinion on the matter was considered optional.

In contrast to the BBSA GLs, Art. 22 (1) EECC and BEREC core GLs on Geographic Surveys (GS) (BoR (20) 42)) set out a detailed set of tasks and indicators, giving more guidance and assigning a more precise framework to NRAs and/or other competent authorities (OCAs) in conducting GS of MSs' broadband networks' reach and performances. Art. 22 (1), (5) EECC and the BEREC core GLs on GS require that the authorities take into account the conducted GS for the allocation of public funds for the deployment of ECN , for the design of national BB plans and for the identification of market failure areas.

Therefore, the BBSA GL's mapping exercise can rely on the GS outcomes, to the extent that is provided for in Art. 22 (1, (5) EECC and BoR (20) 42. Relying on GS results should also allow for a good level of

granularity of information and data resolution that both permits an efficient identification of areas in need of SA, and prevents duplication of privately deployed infrastructure and therefore crowding out private investments or scaring of private investors.

Furthermore, while EECC Art. 22(1) at least foresees the need to cooperate with the NRA where the GS is carried out by an OCA when it is relevant for the NRA's task, NRAs involvement in the mapping exercise for SA allocations is considered optional in the BBSA GLs. Therefore, the BBSA GLs should assign a more dedicated role to NRAs in both identifying and classifying public intervention areas, as NRAs are able to draw from their experience in market regulation and their knowledge of national, regional and local market circumstances.

Also, BEREC draws the Commission's attention to the fact that SA measures are based on a geographical differentiation which might also inform the market definition according to Art. 64 EECC in sector regulation where relevant. By its nature, it produces a mapping and constitutes, more precisely, a classification of the MS territory.

To summarise, the provisions of BBSA GLs on mapping were in principle sufficient for a good identification of SA targeted areas, although some MSs faced some challenges. Yet, transposition of Art. 22 EECC and adoption of BEREC core GLs on GS will allow for more efficient identification of those areas in most need of SAs. BEREC is of the opinion that possible revision of BBSA GLs should be consistent with Art. 22 EECC, and BEREC core GL, and explicitly assign a more dedicated role to NRAs in conducting this exercise, to enhance their involvement in MSs they are not in charge of this task.

40. Should more guidance have been provided on how to carry out the mapping exercise?

[**X**] Yes
[...] ~~No~~
[...] ~~Not applicable/no relevant experience or knowledge~~

Please explain
[...]
@@@Remark: The text below is longer than 3000 characters. It will be uploaded in a separate Word document.@@@

Since the adoption of the BBSA GLs, MSs have designed their public funding deployment strategies in different ways. Therefore, the feedback concerning whether the guidance provided was sufficient, differs among the MSs.

Moreover, as specified in the answer to Q.39, the mapping exercise was not necessarily problematic, and the challenges faced by MSs when realising this task can be addressed by relying on the guidance given by BEREC core GLs on GS in accordance with Art. 22 (1), (5) EECC. Given that these GLs are adopted, BEREC points to the possibility to rely on the outcome of their application by NRAs and/or OCAs to identify potential public intervention areas while designing and implementing SA measures and proceedings.

In addition, the framework provided by Article 22 (1) EECC is generally in line with SMP wholesale regulation. In particular the use of the same (physical address) database for the incumbent and for the

Other Licensed Operators (OLOs) may be advisable where such data is suitable for both purposes, designation of SMP and mapping of areas which might be subject to public funding.

However, a possible revision of the BBSA GLs (consistently with Art. 22 (1) EECC on GS and associated core GLs) should not constrain the choices of MSs concerning the way they should use the GS for the intervention areas' identification process. First, as indicated in BoR (20) 168, the process of designating areas and public consultations provided for in Art. 22 (2) to 22 (4) EECC are independent from the designation of SA proceedings, and thus from identifying SA targeted areas. Secondly, MSs have different geographic and network architecture specificities due to their sociodemographic and economic characteristics and due to differences in strategies of both BB deployments and SA rules implementation.

Although BEREC core GLs on GS provide that GS shall include a survey of the current geographic reach of BB networks for the surveys required for the application of SA, they point out that EECC does not pursue an objective of compliance between the mapping of GS and SA rules. As a matter of fact, NRAs/OCAs can use GS outcome to assist the SA process, but may also need to collect complementary information in line with the SA GLs. BEREC understands the need for data requests to be streamlined, so that the same information is not requested by different bodies or to deliver for different functions and recommends that each data proposed is collected once and is not subject to several requests, unless properly justified. However, this statement has no bearing on the institution or institutions managing the data sets as these tasks may be performed by one or more than one institution. It is for MSs to decide on the best institutional design for the collection and management of data.

To summarise, although BEREC considers that the guidance provided was sufficient to carry out the mapping exercise for state aid the feedback is not the same among the MSs. Consistency with Art. 22 EECC should be considered (see also answers to Q.12 and Q.39), as well as the following answers to section 6. In addition, BEREC is of the opinion that NRAs role in the mapping exercise should be encouraged in line with the paragraph above..

41. Have you had problems identifying other appropriate criteria to carry out a mapping exercise?

[...] ~~Yes~~
[...] ~~No~~
[**X**] Not applicable/no relevant experience or knowledge

Please explain
[...]
Some NRAs report that their countries' authorities faced some difficulties in defining some mapping concepts that were essential to carry out their SA proceeding, such as homes passed, building units, households.

Traditionally, the adoption of common criteria in measuring broadband penetration is a lengthy and complicated process, in particular methodologies may vary and/or evolve over time. Hence, a common

approach among MSs, as long as it does not lead to disproportionate efforts of NRAs/OCAs, can reduce the costs of facing some initial challenges of the mapping exercise. The BEREC core GLs on GS address this difficulty by giving definitions of these mapping concepts, and that will be of high benefit for the future implementation of the mapping exercise.

Some NRAs report that their countries' authorities faced an additional challenge regarding a certain lack of clarity with respect to a number of aspects which are important for the SA mapping exercise. The definition of NGA/NGN is sometimes perceived as not fully clear, as exact definitions of speed and other parameters are absent (see also Section 4 and Q.27). In its report on the public consultation regarding the project of its core GLS on GS, BEREC points out that it is not appropriate to introduce in its core GLs on GS an NGA definition which would be relevant in the SA context (for the BEREC report, see BoR (20) 41).

Some NRAs also reported their countries' authorities mandated with state aid granting tasks difficulties to determine in practice the appropriate granularity for the SA mapping exercise (e.g. address level or household level), especially that stakeholders (MSs and/or undertakings) do not always have adequate addressing resources at their disposal (e.g. a central up-to-date addresses database).

In summary, while some NRAs have faced some challenges in conducting the mapping exercise for SA purposes, especially linked to some initial scoping steps, the need for more guidance to identify appropriate criteria for this task is not considered necessary by BEREC. Moreover, the before mentioned difficulties are addressed in BEREC core GLs on GS, which have been already adopted and are going to be applied by MSs to some point henceforth. Furthermore, since MSs already adopted their BBSA strategies and have their own specificities, further specific guidance may bring NRAs and/or OCAs to bear disproportionate and costly efforts to conciliate their tasks with a uniform level of compliance.

42. Should the same criteria have been used for identifying both existing and planned infrastructure?

[...] ~~Yes~~
[**X**] **No**
[...] ~~Not applicable/no relevant experience or knowledge~~

Please explain
[...]
By definition, information level, certainty and precision of data are different between existing and planned infrastructure. Therefore, even MSs that used physical address data, for both, existing and planned infrastructure, use statistical proxies in several cases. Additionally, some NRAs report that their respective countries' authorities faced some difficulties in the appropriate approach for data collection and verification for forecasts in the context of SAs.

If the Commission considers it appropriate to revise the mapping exercise guidance for SA rules implementation to reach consistency with Art. 22 (1) EECC, the Commission is invited to take into

consideration, on the one hand, that GS concern BB coverage and performances and not necessarily the presence of infrastructure, and on the other hand, the fact that forecasts (GS of planned networks) are optional.

Firstly, this means that GS may not be sufficient to identify existing and planned infrastructures, and thus MSs may need to collect complementary information for the SA proceedings.

Secondly, the optionality of forecasts implies that NRAs/OCAs who choose not to launch a geographic survey of planned networks, should not be constrained regarding their choice in the implementation of BBSA rules, especially that the mapping choice can be influenced by the costs of such forecasts or by a lack of information. Moreover, BEREC core GLs on GS provides appropriate guidance on the conducting of forecasts for BBSA proceedings which can be used for mapping purposes in the state aid context.

Whether or not MSs choose to launch forecasts according to Art. 22 (1) EECC, when they need forecast information exclusively for SA proceedings, they can choose to only conduct them in targeted areas. Also, in terms of frequency, although BEREC GLs on GS recommend to launch yearly the forecast process, MSs can choose to conduct forecasts only for the sake of SA needs, without any constraints with respect to the time periods.

Furthermore, the BEREC GLs on GS provide guidance for the forecasting exercise and this guidance is meant to assist NRAs/OCAs in this task. Yet, the same GLs point out that for SA needs, MSs can assess that the Public Consultation (PC) mechanism launched on targeted areas is sufficient to collect the needed and appropriate forecast information.

43. The state aid rules for the deployment of broadband infrastructure require mapping to be carried out at address level. Do you think the mapping granularity should have been adjusted proportionally to the timeframe for deploying the network? That is, less detail for longer timeframes (e.g. address-level detail for the very near future and grid-level for longer periods)?

[...] ~~Yes~~
[...] ~~No~~
[**X**] Not applicable/no relevant experience or knowledge

Please explain
[...]
Adjusting the mapping granularity proportionally to the timeframe for deploying the network is reasonable, since the timeframe may influence (by increasing or decreasing) the visibility of the planned deployments. Therefore, while some NRAs do not face any problems in converting their survey's results from address-levelled mapping data to building-level data, other NRAs faced considerable problems in practice with respect to data on the operator's planning activities.

Therefore, BEREC draws the Commission's attention to the fact that while the survey is based on the physical address, the intervention level is, on the one hand, heterogeneous (depending among other criteria, on the size of the intervention area) and, on the other hand, less detailed than the address level. Actually, the planning activities of undertakings often use different samples that rarely go beyond the identification of roads and/or neighbourhoods.

Constraints when collecting forecast data on planned networks at the address level may be due to its unavailability among undertakings that are asked to provide it. For instance, during the Public Consultation on the BEREC project of core GLs on the GS, some responding operators reported their incapacity to provide address level information on a 3-years framework, and explained that the availability of such data did generally not exceed 6 months. Hence, the BEREC core GLs on GS provide that such forecast data only have to be delivered to the extent that the information is available and can be provided with reasonable effort. Also, BEREC stated in its report on the public consultation (BoR (20) 41) that "*since high resolution forecast data is usually available only for a short to medium period, BEREC does not see a need to define a maximum or minimum forecasting period.*"

Thus, in the context of SAs, BEREC is of the view that room for discretion should be given with respect to the granularity when considering planning information, depending on the duration of the time frame and the available data. BEREC is also of the view that the duration of validity of such data should be recognised by each MS in these terms and accordingly to the other parameters to be taken into account that are highlighted in its present response to Section 6 of the present questionnaire.

44. Have you had problems identifying the appropriate granularity for mapping?

[...] ~~Yes~~
[...] ~~No~~
[**X**] **Not applicable/no relevant experience or knowledge**

Please explain
[...]
While not all NRAs have identified problems with respect to the granularity of the mapping, some NRAs reported having faced some challenges as mentioned in the previous questions.

For instance, AGCOM points out that the nature of FWA-LTE needs to be ascertained in terms of actual coverage, especially since data provided by the operators often requires scrutiny and validation. Moreover, CTU considers that its biggest issue is determining the appropriate size of targeted areas.

Traficom notes that identifying the appropriate granularity for mapping has caused challenges in finding the balance between adequate information and necessary information. Also, some companies may not want to provide their investment plans if there is a risk that their business secrets will be revealed. This concern of the undertaking might also be influenced by the requirements on the granularity of data.

RTR reports that no common basic set of address data is available of sufficient quality neither for the operator nor for the authorities, and that data is collected on the basis of a common grid of 100mx100m.

Although some countries can face some challenges in defining the right level of granularity for the mapping exercise, this is not structurally problematic. For the existing networks' granularity, NRAs/OCAs can rely on the BEREC core GLs on GS and the conducting of their mappings in application of Art. 22 (1) and (5) EECC. If afterwards, complementary data needs to be mapped in the context of SAs, the appropriate granularity level should be assessed by the MSs depending on the effort attached and data availability.

In summary, for the planned networks' granularity, BEREC is of the view that discretion should be given to the authorities in the MSs to decide for the appropriate granularity for the mapping in the context of SAs, depending on both their local characteristics (available data, geographic specificities, etc., see Q.43) and the pursued objective of the mapping (identification of areas eligible for SA, network deployment schedule, etc.).

45. Have the mapping requirements adequately clarified the distinction between fixed networks and:

	Yes	No	Not applicable/no relevant experience or knowledge
Mobile networks?	X		
Wireless networks?		X	

Please explain
[...]
Independently from the mapping exercise, QoS-related questions may arise for the coverage and/or the definition of wireless networks.

AGCOM for instance considers that more clarity is needed to determine the coverage of wireless networks in relation to the QoS. This question might be of increasing importance given 5G (and partially also 4G) roll out.

RTR points out that the end-user QoS maybe also differ between to indoor coverage and outdoor coverage. Information on speed related to what the customer can expect to get, might also be linked to this consideration, but often such data is not available.

It also is important whether or not networks based on fixed-wireless access (FWA) are considered to be a fixed network. In this respect BEREC draws the Commission's attention to the "BEREC Guidelines on Open Internet, BoR (20) 112, that might be useful to inform on the distinction of fixed network from networks which are not considered to be fixed.

46. Should the state aid rules for the deployment of broadband infrastructure have defined mobile and fixed networks as belonging to different markets?

[...] ~~Yes~~
[...] ~~No~~
[**X**] Not applicable/no relevant experience or knowledge

Please explain
[...]
Although mobile infrastructures can be used to provide a geographical service, some MS did not consider them, in relation to the expected QoS and in line with European recommendations, for the determination of areas of intervention.

Some exceptions may arise among NRAs experiences, such as qualifying fixed LTE as FWN, and thus fixed networks due to the character of the service provided (fixed technology/network provided at the fixed location).

It also needs to be noted, that market definitions carried out under SMP regulation pursuant to Article 64 EECC might inform on the substitutability of fixed wireless access services with fixed services. However, the granularity of such a market analysis might differ considerably and will not necessarily inform on the sufficiency of wireless access solutions under local conditions. Given the different purpose of an SMP-analysis, this might also be true, where such a market analysis is geographically differentiated. In consequence definitions for state aid purposes and SMP regulation should not automatically be regarded as interchangeable. It has to be noted that market definitions are carried out under the framework for sector regulation provided for in the EECC (and under the Directive 2002/21/EC (Framework Directive), before it was replaced by the EECC) and answer the question which services are considered to be a substitute, taking into account the market situation observed and analysed.

47. Currently, the state aid rules for the broadband infrastructure deployment do not contain any time limitation for the validity of the mapping. Is this problematic?

[...] ~~Yes~~
[...] ~~No~~
[**X**] Not applicable/no relevant experience or knowledge

Please explain
[...]
Some NRAs face scheduling issues between the release of the yearly survey maps and the public consultations on intervention and overlap issues on network information. Hence, in some cases the mapping exercise is carried out yearly by the NRAs (or OCAs), and the public consultation for the public funding allocations is often carried out in close proximity.

Art. 22 (1) EECC requires for the GS surveys of existing networks, which shall be updated at least every three years, to be relied on for the mapping surveys in the context of SAs. It has to be noted, however, that the BEREC GLs on GS recommend to conduct the compulsory mapping of existing infrastructures every year. While Art. 22 (1) EECC does not provide for any frequency for forecasts (which are optional), BERECs core GLs yet recommend a yearly frequency. In this context, the validity duration of the mapping is the compulsory 3-years-period for the existing networks.

In the SAs context, NRAs/OCAs may need complementary information and can thus collect it. In these cases, for both planned and existing networks, the current BBSA GLs and the guidance framework associated with Art. 22 EECC does not contain any time limitation for the validity of the mapping. This is not problematic, since the complementary data on existing (and/or planned) networks, as well as the forecast data, can be collected solely for the sake of SA proceedings (see. answers to question 42 and 43). Leaving this choice to the discretion of the NRAs (and/or OCAs) is appropriate, since this can avoid the involvement of unnecessary efforts of both NRAs/OCAs and data providers.

48. The state aid rules for the deployment of broadband infrastructure require mapping to be carried out on the basis of homes passed by a particular network infrastructure, rather than the actual number of homes or customers connected as subscribers. Is the concept of 'homes passed' sufficiently clear?

[...] ~~Yes~~
[...] ~~No~~
[**X**] Not applicable/no relevant experience or knowledge

Please explain
[...]

In general, NRAs managed to carry out their projects and mapping related to SA rules implementation with the current guidance.

However, some NRAs are in favour of a clarification of the definition of 'homes passed', as is done in the BEREC core Guidelines on GS (BoR (20) 42), see answer to Question 41).

Section 9 – Competitive selection procedure (para 78(c), Broadband Guidelines, article 52(4), GBER)

71. What has been the impact of granting aid to operators benefiting from significant market power (SMP operators), as regards market development and competition? Please discuss whether these impacts have been alleviated by open access conditions.

[…]

Since comprehensive data on the impact of SMP operators benefitting from state aid is not available, BEREC cannot concisely assess the impact of granting aid to SMP operators regarding market development and competition. In consequence, there is only room for some general considerations.

In some MS SMP operators use the aid to upgrade their existing networks. If this is the case publicly funded deployment will not result in an additional infrastructure compared to the situation before the state aid intervention. In contrast, if the aid is awarded to alternative operators, it is plausible to assume that they deploy a parallel network to the existing SMP infrastructure, possibly making use of existing civil infrastructure of the SMP operator (as is strongly encouraged in para. 78(f) BBSA GL). In both cases, the aid results in the installation of one new network delivering substantially higher bandwidths (compared to a situation without state aid) which might create the opportunity for excessive pricing (in the case of a deployment by an alternative operator this might be the case if the demand cannot be met by the existing SMP infrastructure anymore and therefore substitutability between the services offered by the SMP operator and the alternative operator is imperfect or not given).

As already foreseen in the current state aid rules, it is therefore of utmost importance to guarantee a wide set of wholesale access products to prevent undertakings from adopting anticompetitive behavior. In the case of SMP operators carrying out the state aid project, the main wholesale access products are likely to be the same as these mandated under SMP regulation. Indeed, as the aforementioned BEREC analysis (BoR (17) 246) found out, in several MSs the SMP operator is bound to SMP prices also in state aid cases (e.g. Austria, Croatia, Denmark, Germany, Italy, Latvia, Norway and the United Kingdom).

At the service level, granting of state aid to SMP operators might increase the likelihood that (national) service providers already requiring wholesale access in non-funded regions under sector regulation are also present in funded areas since the respective offers and procedures are familiar. Because consistency with respect to wholesale products is important for (national) service providers, it is beneficial to synchronise state aid access and SMP access rules at least to a certain degree, in order to foster service competition. It could also be important that NRAs provide Guidelines or requirements to adhere to standardised operational processes and IT solutions related to wholesale access.

Otherwise no specific effects where networks deployed by the SMP operator supported with state aid have been included in the SMP operator's portfolio are known to BEREC. In particular, often the same services and conditions apply to state aid funded and non-funded parts of the SMP operator's network.

Section 10 – Technological neutrality (para 78(e), Broadband Guidelines, article 52(4), GBER)

86. The state aid rules for the deployment of broadband infrastructure require that the principle of technological neutrality be respected at the level of the competitive selection process and at the level of the granting of wholesale access. Is the technological neutrality principle clear?

[...] Yes

[X] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]
Tenders for public funding typically foresee an aim, e.g. in terms of minimum download-speed, which the network deployment of the undertaking granted aid has to reach. The principle of technological neutrality secures that any technology suitable to achieve the given aim may participate in the tender. Other functional aspects which may be important are often not considered (QoS, reliability).

The guidelines seem to indicate that once a network speed goal is set, any technology that supports that speed is adequate (technological neutrality), so the costs may often be the decisive factor when granting authority evaluate tenders (most economically advantageous offer). Once the speed and coverage, as a second criterion, are met, the costs often are regarded by the granting authority as the critical parameter to value in these decisions. Wholesale access are kept as secondary consideration, as long as a minimum level of access is guaranteed.

Currently, no technology is comparable to fibre networks, however, sometimes other cheaper technologies with less prospect in the future are deployed due to the combination of the "technological neutrality criteria" and the "most economically advantageous offer". Therefore, establishing other additional requirements may serve to obtain more points in the tender. Nevertheless these requirements will likely not be decisive, since the costs are the most important criteria to base the decision on. Combining this economic criteria with technological neutrality sometimes results in lower quality networks getting state aid. Hence it is not clear how to consider technological neutrality in relation to wholesale access.

There are also other situations where technologies which might be more efficient in some circumstances to achieve these aims might be excluded, e.g. because of limitations in terms of access products. In the past this was observed with regards the deployment of FTTC-Vectoring in some MSs. FTTC-Vectoring doesn't allow for physical unbundling by access seekers, if these want to make use of the increased data-rates enabled by Vectoring. In such cases bitstream access, including VULA-type-services, have been allowed. While this imposed a limitation on the access seekers possibilities to make use of their access, VDSL-Vectoring often enabled the deployment of networks with a greatly increased performance at comparably low investment, where the copper subloop was suitable for this technology.

91. Wholesale access must be offered on open and non-discriminatory terms in line with the principle of technological neutrality. Has the application of the technological neutrality principle to wholesale access obligations caused any problems?

[X] Yes
[...] ~~No~~
[...] ~~Not applicable/no relevant experience or knowledge~~

Please explain
[...]

The characteristics of wholesale access depend on the media, technology and network architecture deployed in the publicly funded network. There are some wholesale services that some technologies cannot support. For example, physical unbundling is possible in case of FTTH based on point-to-point fibre, however, not in case of FTTH based on PON (only the last segment between end-user and splitter), HFC networks and networks based on (fixed) wireless access. Another example is the main characteristic of active wholesale access, the data rate that can be offered to end-users, which depends on whether the wholesale access is based on copper, coax or (fixed) wireless as well as on access technology deployed (e.g. G.fast, VDSL2 vectoring in case of copper access, DOCSIS 4.0, DOCSIS 3.1 full duplex, DOCSIS 3.1 in case of coax and 5G or 4G in case of (fixed) wireless access). A further example is wholesale wireless access which depends on how the infrastructure is shared between operators (see BoR (19) 110) and differs from wholesale wired access. Therefore, wholesale access obligations depend on media, technology and network architecture and an unrestricted application of the principle of technological neutrality seems not possible.

In the past in some MSs where VDSL-Vectoring was introduced under the SMP regime in sector regulation, it was observed that the obligatory need for passive unbundling under state aid rules prevented the role-out of networks with comparable speeds in publicly funded areas. This led to situations where for instance one part of a region or municipality was covered with privately financed VDSL-Vectoring networks and hence retail services with corresponding performance, while in the publicly funded area only lower speeds were available. The allowance for Vectoring-deployment and consequently the limitations of access products for the use of services with high bandwidths to bitstream access services, including VULA, remedied this gap between funded and non-funded areas (however it has to be noted that in the meantime the GSC targets surpass the capabilities of FTTC-Vectoring deployments; in order to promote these connectivity targets such considerations might mostly apply to X.PON-VULA now). While passive unbundling normally should be mandatory, this example shows that sometimes derogations from this rule can be acceptable in order to promote the efficient and timely deployment of advanced technologies.

92. Under the current rules, more pro-competitive technological approaches may receive additional points in the award criteria - for example technologies which allow for physical unbundling compared to technologies which allow only bitstream access. How do you think the application of this possibility has worked in practice?

[…]

The benefits of a more pro-competitive technological approach have not received enough value in comparison to other parameters. At least in some MSs in the cases observed, it has not come to fruition. Often granting authorities evaluating a project have difficulties to objectively assess criteria like wholesale access services and therefore don’t apply a high weight for such criteria in the tender. Therefore, there may be a tendency for granting bodies to rate the lower amount investment and funding higher, because to these authorities it seems to be clearer and easier to value. In consequence it might be beneficial to specify the criteria that would help to value the pro-competitive technologies in the revised state aid rules.

93. Certain types of network architecture (e.g. FTTH/Point to Point networks) are considered more pro-competitive, as they allow full unbundling (as compared for instance to FTTH/Point to multipoint infrastructure). However, they are generally regarded as more costly technologies.

How do you consider this trade-off between greater competition and higher cost of providing and managing networks?
[…] ~~The benefits of the more pro-competitive architecture always outweighs the higher costs~~
[…] ~~In most cases the benefits outweigh the costs~~
[…] ~~In most cases the costs outweigh the benefits~~
[…] ~~In all cases the cost outweigh the benefits~~
[X] Not relevant/don't know

Please explain
[...]
In principle physical unbundling allows for the highest degree of control for the access seeker and therefore is best suited to promote service competition on the retail level.

It should also be considered that the main driver of costs for fixed network deployment often are costs for civil engineering, including costs for digging. A point-to-point network often needs the same amount of digging as a point to multipoint infrastructure. Hence the additional costs for a Point-to-Point network (P2P) may often not be substantially higher or even can be comparable to a Point-to-multi-Point (P2MP) network in particular where digging is required. Therefore the potentially positive impact on competition of full unbundling has to be considered.

However, for scarcely populated areas with low demand, often not all of the wholesale access products offered are going to be used. In such areas, retail services might already be replicable by access seekers with bitstream services offered by the beneficiary, while requiring less infrastructure investment on behalf of the access seeker. Where demand for physical unbundling is not expected, it should be considered that the benefit of a P2P-FTTH networks might not fully come to fruition.

95. Have the state aid rules for the broadband infrastructure deployment sufficiently allowed for virtual access (VULA)?

[...] ~~Yes~~
[X] No
[...] ~~Not applicable/no relevant experience or knowledge~~

Please explain
[...]
Recital 71 GBER in principle seems to exclude VULA when stating that physical unbundling should be required for the purposes of benefiting from the current block exemption regulation. On the other hand, the page note number 118 of the BBSA GL allows offering VULA when deploying GPON. Hence, it is not

fully clear which rule is applicable in this case, because apparently both regulations provide different guidance. In practice in some MSs where technologies unsuitable for physical unbundling are widely deployed (e.g. because of Vectoring, P2MP fibre), the reliance on VULA-services was permitted by the European Commission (see State Aid SA.38348 –NGA Germany). In BEREC's view the revised state aid rules should be aligned and set out consistent principles and conditions under which the requirement for physical unbundling might be lifted. In BEREC's point of view, there are already enough experiences in ex ante regulation that merit the development of this criterion for the revised state rules. It has to be noted that this should be without any prejudice which types of services actually have to be offered in view of "reasonable demand".

Section 11 – Use of existing infrastructure (para 78(g), Broadband Guidelines)

Under the current rules, any operator who owns or controls infrastructure (regardless of whether it is actually used) in the target areas and wishes to participate in a competitive selection process for state aid to extend coverage in those target areas, must meet certain conditions.

100. What are the factors enabling or preventing the use of existing infrastructure?

[…]

The lack of transparency is the main factor preventing the use of existing infrastructure. This means that data about availability, prices, conditions of use and where it has been deployed in the network (a good map) are essential for enabling this use. Although the BBSA GL oblige the operators that participate in the tender for the aid to provide all relevant information to other bidders at a point in time which would allow the latter to include such infrastructure in their bid (recital 78.f), this provision is not easy to implement. It would be very important that the national infrastructure database is complete.

Sometimes the costs and the absence of established procedures to provide quick access to the infrastructure renders it easier to deploy new infrastructure by the beneficiary, instead of asking for access to existing infrastructure.

It has to be noted that the BCRD already contains a set of factors aiming to promote an efficient access to existing infrastructure. The obligation to provide information on the existing infrastructure in a timely manner is an important factor for accessing these infrastructures, especially as the access seeker's business plan and the provision of services often depend on a timely delivery of such information. Furthermore there is the obligation to give reasonable access to physical infrastructure, established in the BCRD which is also strongly encouraged in the BBSA GL (para. 78(f)). In some MSs publicly funded networks are required to submit information to the single information point and conversely the single information point is often used to provide information for the mapping of target areas. In BEREC's view a closer alignment of the requirements under the state aid rules with the single information point could be considered.

Another important factor is the pricing for the existing infrastructure. In particular, where the access seeker and the owner of the existing infrastructure are competitors an incentive to demand excessive prices often is present, as could also be observed in the application of the BCRD in dispute resolutions.

Furthermore capacity considerations are important to facilitate the use of existing infrastructure (see also the answer to Q. 115).

Section 12 – Wholesale access (paras 78(g) and 80(a), Broadband Guidelines, article 52(5), GBER)

Effective wholesale access for third parties to a subsidised broadband infrastructure is an indispensable component of any state measure supporting broadband. The subsidised network must therefore offer access under fair and non-discriminatory conditions to all operators who request it, and give them the possibility of effective and full unbundling.
Moreover, third-party operators must have access to passive and not only active network infrastructure. Thus the publicly supported network must ensure full open access, for all access products, including access to ducts, dark fibre, street cabinets, and bitstream and unbundled access to fibre, including full and effective unbundling for NGA deployments.

105. Have the open wholesale access requirements been sufficient to ensure:

[...] ~~competition at retail level?~~
[...] ~~infrastructure competition?~~
[...] ~~competition on prices?~~
[X] other?

Please explain
[...]
The wholesale access requirements in the BBSA GL have established an appropriate general framework in order to ensure competition along the value chain and concerning prices. In this regard, it can be observed that open wholesale access has facilitated competition at the retail level because some operators have accessed the subsidised networks in order to offer their services in the funded areas. However, BEREC is unable to extensively evaluate the degree of the competition achieved due the lack of valid data. In this context, it is also worth mentioning that competition effects might take some time to unfold, i.e. the respective data will first be available after state aid funded networks have been operated for some time. In many MSs however, the network deployment with the support of state aid still seems at an early stage.

The experiences BEREC can draw on only allows for the brief assessment that there is demand for wholesale access in state aid cases, however this demand currently seems to be limited. One of the main reasons is probably that funded (usually rural, sparsely populated) areas are less attractive for access seekers due to questionable profitability perspectives. The design of the target areas and clear wholesale access requirements at an early stage could alleviate such challenges to a degree. As an exemption, the finnish NRA (Traficom) reports that leasing out wholesale products is already a significant part of the subsidised operator's income, even in rural areas where the funded infrastructure is mainly located. This NRA therefore concludes that leasing out the products is profitable for the operators which enables efficient access to the subsidised infrastructure. Possibly the low demand for wholesale access currently observed in most MSs might also rise in the future if publicly funded network deployment will extend to grey areas which will likely offer more attractive economic conditions for third-party operators.

In general, BEREC considers transparency about wholesale access and conditions to be one of the key determinants with respect to ensuring competition. Therefore, it is important to disclose relevant information regarding wholesale access on a central platform that market participants have access to at

any time. This platform should also contain information on prices which can serve as references for negotiations between network operator and access seeker, thus might foster voluntary commercial wholesale agreements and therefore avoid lengthy dispute settlement procedures.

106. How have the open access requirements worked in practice? Have you encountered difficulties or disputes in relation to them?

[…]

While general conclusions cannot be derived, some MSs reported particular difficulties.

In Spain, for instance, the few disputes between operators – beneficiaries and access seekers – were about prices, specifically related to discrimination and lack of transparency. The operators reported that better prices were offered to competitors and that prices and access conditions were not published by beneficiaries. In Germany access seekers had difficulties to agree with access providers on the parameters of bitstream products. In this respect it has to be noted that sometimes access seekers already have retail products in other, neighbouring areas in place, which cannot be replicated if the bitstream services offered are not suitable to replicate the same retail products, e.g. in terms of downstream and/or upstream bandwidth in Mbps.

Moreover, difficulties with respect to state aid application were observed in relation to the BCRD in Germany. Even though the use of existing infrastructure according to para. 78(f) BBSA GL is a different legal provision compared to access to existing physical infrastructure pursuant to Art. 3 BCRD, sometimes both legal provisions interact. Experiences considering open access can be illustrated looking at the interface between BCRD and state aid by the following cases of the DSB:

- In the first case (case BK11-18/011) the physical infrastructure was part of a plan for a local access network based on broadband coverage by the municipality which is at the same time the owner of the infrastructure. The development of this access network was self-financed by the municipality. The municipality rejected the request of a telecommunication enterprise concerning the access to physical infrastructure referring to a lack of capacity. Notwithstanding that the request of the access seeker was rejected by the DSB because of the lack of capacity, the DSB concluded by legal notice to point at the possibility of an open access duty of the municipality according to the BBSA GL. In this case this notice was necessary because the planning of the municipal network was directly connected with the construction of a backbone network of the administrative district, which was built with state aid funding. In this regard, the operator may have, under some circumstances, the duty to offer not only for the backbone but also for the municipal access network an open access.
- In two current cases (case BK11-20/003, BK11-20/005) the owner of the infrastructure (both of them a municipality) are offering “open access requirements” to the access seekers as a viable access alternative. In both cases, access seekers do not consider this offer to be viable, particularly in terms of pricing, and therefore do not see proper “open access” as guaranteed.

107. What are the factors enabling or preventing efficient access to the subsidised infrastructure?

[…]

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The regulatory framework of electronic communications, in each MS, should contain the main set of factors enabling an efficient access to the subsidised infrastructure. Efficient access should be based on the same principles established in sector regulation and application of the BCRD.

The obligation to give effective access to physical infrastructure is usually framed by the transposition of SMP regulation, the BCRD and/or other symmetrical regulatory provisions. Then, there are the associated obligations to the access obligation itself, such as transparency, non-discrimination, and quality of service.

For access to be effective a situation must be avoided in which the wholesale prices does not allow access seekers to replicate retail services. Therefore pricing obligations for effective and efficient access should be imposed on subsidised infrastructure.

Often the state aid beneficiary is the only operator having a new network in a specific geographic area and may adopt anti-competitive behavior. A strict regulation appears necessary for this reason. In case the state aid beneficiary is a wholesale-only operator, some remedies may be lighter than for vertically integrated operators.

Non-discriminatory access obligations can prevent a wholesale-only operator, economically more interested in giving access to passive and active products rather than to the civil engineering infrastructure, from refusing or hamper access. This situation can also apply to vertically integrated operators, which in addition may have incentives not to give an efficient access to other wholesale passive and active products.

Difficulties in accessing infrastructure may be due to lack of information. Unawareness of the existing infrastructures may prevent efficient access and raises the necessary time needed to get to the retail markets. Such a situation would not serve the interest of end-users in the subsidised areas, especially because these areas are very unattractive for private investors. In this regard, transparency about the location of the infrastructures deployment, of the type of wholesale access products and about the prices is considered as important (see Question 100).

Non-discrimination remedies of access obligation should be consistent with the EC's recommendations, for both vertically integrated and wholesale-only operators. EoI (Equivalence of Input) is the strictest principle of non-discrimination. In particular, when the SMP operator or its affiliated company is a wholesale access provider to subsided infrastructure, the EoI principle prevents from discriminatory practices between access seekers, *i.e.* depending on whether the access seeker is the SMP operators' company and/or its entities, or a third-party undertaking. Where EoI is not proportionate, the principle of EoO (Equivalence of Output) should be applied.

The design of target areas to secure sufficient economies of scale for access seekers could be important to enable efficient access. Such economy of scale could be achieved even across different subsidised geographical areas.

108. Is it right that the aid beneficiary must provide all access products, passive and active, to compensate for the advantage they get from public funds?

[X] Yes
[...] ~~No~~
[...] ~~Not applicable/no relevant experience or knowledge~~

Please explain
[...]
@@@Remark: The text below is longer than 3000 characters. It will be uploaded in a separate Word document.@@@

The requirement to provide all access products is right as a principle and should be maintained. Providing effective access to third party operators enables the deployment of competing broadband networks and thus the promotion of a competition level similar to what is already achieved in comparable areas. Access products imposed under existing frameworks, i.e. sector regulation and BCRD, should be taken into account when designing state aid access in order to secure consistency.

BBSA GL 80(a) requires that the subsidised network must provide to all access seekers effective and full unbundling and thus insists on the importance of not only providing active but also passive access. This requirement should be kept to encourage wholesale access products that allow for more independence of access seekers.

However, full and effective unbundling is not always possible, depending on the network topology (P2P or P2MP) and technology (G.fast). In such cases, MSs should require, as provided for in the BBSA GLs, a VULA as close as possible to physical unbundling. Also where FWA is deployed physical unbundling will not be possible.

Moreover, BBSA GL 80 (a) points out, for e.g. “in areas with low population density” or for “small local companies”, the imposition of all types of access products might imply a disproportionality between the cost of the investments and the benefits in competition. Therefore, access providers may be allowed to offer only a limited set of wholesale access products considering proportionality as profitability and demand can be low in these areas. In this case only access products should be required for which reasonable demand is present or will emerge.

Hence, BEREC is of the view that:

1. access requirements in subsidised areas should keep being assessed in terms of proportionality between investments and benefits in terms of competition;

2. in case the result of a proportionality analysis only foresees a limited range of products, unforeseen access products can be required depending on reasonable demand.

Concerning reasonable demand, BEREC considers that it should be assessed accordingly to the criterion stated in the BBSA GLs 80 (a), i.e. when the access seeker provides a justification of such a demand (i) and when no comparable product is offered in the area by another undertaking at a price equivalent to those practised in dense areas (ii). Moreover, as stated in its opinion in 2012 (BoR 12 (91)), BEREC considers that additional conditions may be considered by MSs: the SA decision of the MS should allow the product to be subject to such a demand (i), the costs incurred on the network operator should be fairly recovered (ii) and the access product should be proved substantially beneficial for competition, without provoking a distortion in adjacent markets (iii).

Finally, in areas where the beneficiary is a wholesale-only operator that does not operate active equipment in its network, a requirement to offer active access products might be disproportionate.

109. Has the obligation to provide all access products - in particular physical unbundling of the local loop - prevented the deployment of certain network topologies or solutions?

[...] ~~Yes~~
[...] ~~No~~
[X] Not applicable/no relevant experience or knowledge

Please explain
[...]
Physical unbundling is possible in case of FTTH based on PointtoPoint fibre, however, not in case of FTTH based on XPON (only the last segment between end-user and splitter), HFC networks and networks based on (fixed) wireless access. From this follows, that the obligation to provide access based on physical unbundling would limit the network types and topologies significantly. In case of NGA (and legacy) networks, physical unbundling of the remaining copper loop is in principle also possible. However, vectoring (VDSL2 vectoring, G.fast) enables higher data rates but requires that the vectoring system controls all copper lines in a cable (binder). Therefore, in case vectoring is deployed on the copper lines physical unbundling would also not possible.

For this reasons, state aid funded network deployments have been permitted to offer VULA services in some MSs. Even though in principle the absence of passive unbundling comes along with limitations for the access seeker, in such situation which were observed in some MSs this helped to facilitate a faster deployment of NGA at lower costs enhancing the service availability for end-users and also enabled access seekers to benefit from increased bandwidth when offering their own retail products.

110. Has this obligation had an impact on the cost and level of aid required to deploy the subsidised network?

[...] ~~Yes~~
[...] ~~No~~
[X] Not applicable/no relevant experience or knowledge

Please explain
[...]
BEREC or NRAs are not able to provide comprehensive data on this question. However, it has been noticed that imposing the full set of access obligations, by forcing the subsidised operator to offer every type of product might inflict costs and hence, may impact the level of aid required. On the other hand it needs to be considered that the wide range of access obligations serve the purpose to enhance competition. It should be prevented that a funded operator is able to adopt anti-competitive behavior after deploying the network.

When considering the costs inflicted by the imposition of access products as starting point a balance between costs and benefits might be pursued considering to impose as minimum requirement the same range of products which are imposed to operators subject to market regulation (i.e. in other areas) and to establish whether or not it is proportionate to impose additional access products. For instance, it seems justified not to impose any access obligation related to products for which no demand exists (see answer to Q.108). In addition, access to civil engineering infrastructure should be imposed, even where not such a remedy for SMP-operators is in place.

E.g. in Italy physical unbundling is currently provided by the funded operator (which is a wholesale only operator) on a FTTH multi GPON solution. The Italian wholesale-only operator offers this kind of services also in the black areas (as a private investor). The provision of such services in the subsidised areas seems not to have a relevant impact on the effectiveness of the state aid investment, because the amount of aid approved was lower than the starting price in the auction.

111. Should the availability of a virtual access solution have been considered a sufficient replacement for physical unbundling of the local loop? If so, under which conditions?

[...] ~~Yes~~
[...] ~~No~~
[X] Not applicable/no relevant experience or knowledge

Please explain
[...]
In principle, only actual passive access is capable of offering the conditions for unrestricted competition in terms of creating innovative services. Only passive access allows access seekers to have complete control over their relationship with their end-users as well.

In some circumstances where the roll-out of an infrastructure allowing passive access would be too costly or technically not possible (e.g. in some very rural areas or where suitable sub loops allowed for the fast deployment of FTTC-Vectoring), NRA should be able to require virtual access solutions, seen as the best alternative. In such a situation, access conditions should be as close as possible to the ones offered under passive access.

For instance, where XPON is the technology in use, VULA may be allowed because the costs might be lower and a reasonable control is still provided for, similar to physical unbundling. Depending on the national circumstances, such active or virtual obligations might already be imposed on the SMP-operator

following a market analysis, as well. If the option to allow for network deployments which can – technically or economically feasible – only be accessed using VULA-services, such networks might not become available in funded areas, while being rolled out in non-funded areas. This could lead to the undesired outcome that service availability for end-users in funded areas remains below the service availability for end-users in non-funded areas. Thus, in principle the imposition of VULA may not be excluded. But VULA should not be regarded as a means to circumvent physical unbundling where the imposition of VULA is not required to promote efficient access and network deployment.

112. Under the state aid rules for the broadband infrastructure deployment, effective wholesale access to active infrastructure should be granted for at least 7 years, notwithstanding any other regulatory obligations. Is this 7-year period sufficient to ensure active access – and so competition – in the areas concerned, without discouraging private investment?

[...] ~~Yes~~
[X] No
[...] ~~Not applicable/no relevant experience or knowledge~~

Please explain
[...]

In principle, limiting the access obligation to active infrastructure to a period of 7 years bears the risk of impairing competition (and therefore of harming end-user interests) after the period has expired. Hence, it might be considered to require wholesale access to active infrastructure for a longer period. It is BEREC's understanding that the current BBSA GL regard the 7-years period as minimum which may be extended, as 78(g) states that effective access has at least to be offered for this period of time. The requirement for access provision in principle might be necessary as long as there is reasonable demand for the respective wholesale products and as long as the area cannot be considered competitive. In this regard, it has to be borne in mind that – generally speaking – funded areas are usually not attractive for parallel network deployments due to their difficult profitability perspectives and the development of infrastructure based competition therefore often is unlikely, unless e.g. the use of duct access facilitates such a deployment.

An extension of the 7-year period can also be necessary depending on the business model of the funded company. For instance some funded municipal networks either don't offer retail-services or even confine themselves to deploy the actual passive infrastructure. In such instances access seekers are contracted to operate the network or to offer retail services. The period of time in such cases often is considerably longer than 7 years. Obviously the access products should in principle be offered at least for the same period of time in order to avoid distortions.

BEREC points out that the option to designate an operator as having SMP after the 7-year period will not generally be sufficient to promote competition. A SMP analysis is normally carried out only every five years under the provision of the EECC, which might lead to a regulatory loophole. The SMP analysis also is a complex and cumbersome process and geographical market differentiation is normally not applied at

the level of granularity which would be required to address state aid areas. A resource intensive and burdensome micro-analysis that could lead to a fragmentation of markets should to be avoided (as is also recognised in the explanatory note to the 2014 Market Recommendation). The imposition of access obligations on a state aided venture could also draw on provisions in place regarding wholesale-only operators, e.g. in the EECC.

Having regard to these considerations, BEREC is of the view, that the 7-year period should also in future be regarded as a minimum period during which access obligations should be imposed (see also BoR (11) 42 pag. 9) and the new state rules should make this sufficiently clear.

113. Under the state aid rules for the broadband infrastructure deployment, effective wholesale access to new passive infrastructure (such as ducts, poles, dark fibre, cabinets) should be granted an unlimited period (i.e. for the lifetime of that passive infrastructure). Is this period sufficient to ensure for passive access?

[X] Yes
[...] ~~No~~
[...] ~~Not applicable/no relevant experience or knowledge~~

Please explain
[...]
Passive infrastructure is used to deploy fibre, wireless network access equipment and other hardware elements that must be there as long as operators are providing an electronic communications network and providing electronic communications services. Economically it doesn't make any sense to deploy and remove network elements that are used to for access and support the deployments of different service providers. The introduction of a limited time period would therefore lead to situations where (recently) deployed fibre needs to be dismantled again. This clearly needs to be avoided. Therefore, BEREC is of the view that the unlimited period of time to grants access to passive infrastructure should be retained.

114. Under the state aid rules for the broadband infrastructure deployment, effective wholesale access must also be ensured under the same conditions to all existing infrastructure used in deploying the publicly supported network.

	Yes	No	Not applicable/no relevant experience or knowledge
Is this requirement clear?		**No**	
Is this requirement appropriate?	**Yes**		
Should further guidance have been provided?	**Yes**		

Please explain

[...]
In principle, the requirement is appropriate to allow third-party operators to compete effectively with the subsidised operator particularly on an infrastructure level. Otherwise, subsidised operators using their existing infrastructure would e.g. have the opportunity to limit the access to retail services. Given the fact that "the aid beneficiary is using not just its own resources but taxpayers' money" (see para. 78 (g) of the BBSA GL), BEREC is of the view that this requirement does not impose an unfair burden to the subsidised operator provided that the scope of this obligation is defined adequately.

However, the current state aide rules do not clearly define which part of the existing network is subject to the open access requirement. For instance it is unclear to which geographic extend the existing network should be subject to access obligation. This lack of clarity led to disputes in some MSs in the past.

BEREC recognises that the application might strongly depend on the specific case respectively on the targeted/tender area which makes further guidance difficult. Nonetheless, the proposed revision of the state aid rules should aim at a clearer definition by e.g. identifying and describing representative cases and their implications on the open access requirements for existing infrastructure. It also should be noted that in case access is granted to infrastructure outside the target area, a map of the extension, including interconnection points and backhaul, should be compulsory.

115. Under the state aid rules for the broadband infrastructure deployment, to guarantee effective wholesale access, it is necessary to ensure that the passive infrastructure has sufficient capacity to support several access seekers (generally at least 3).

	Yes	No	Not applicable/no relevant experience or knowledge
Is this requirement clear?		**No**	
Is this requirement appropriate?	**Yes**		
Should further guidance have been provided?		**No**	

Please explain
[...]
BEREC regards it as important to maintain the principle of ensuring effective wholesale access to subsidised networks, which is recognised in the BBSA GL. Only under this condition effective competition on the retail market can be promoted and anti-competitive behavior of the funded company can be avoided.

It entails that the subsidised network must offer access under fair and non-discriminatory conditions to all operators who request access and must provide them with the possibility of effective and full unbundling. As stated in the BBSA GL, it includes giving access to passive and not only active products and also the right to use ducts and poles, dark fibre and street cabinets.

In order for access to physical infrastructure to be effective, it is necessary that the infrastructure has sufficient capacity to support several access seekers. Depending on national markets, this means for

instance that street cabinets, ducts and poles should be able to host equipment for at least three access seekers.

Even though the guidance provided does not go beyond a general concept of sufficiency and therefore is in principle not fully clear, this didn't prove to be problematic. MSs have been able to develop suitable concepts in light of the national circumstances to this end. In Germany for instance, the provision provides a planning in the access segment of 4 fibre-lines for each residential unit and in addition 2 fibre-lines for one building ("Materialkonzept des Bundes" or 4+2-concept). The dimensioning of the duct capacities depend on this requirement. In cases of the DSB this concept is applied for capacity analysis (case (BK11-18/011)). In other MSs suitable capacity concepts have also been developed.

It's also clear that the existence of free duct capacity implies an extremely important source of potential competition: Any monopoly pricing of bitstream or retail services would imply that another operator will deploy their own infrastructure and therefore imposes a constraint on the pricing-behavior of the funded operator. Appropriate wholesale pricing for ducts would also be important in this regard.

116. Wholesale-only investment models must include all access products, both passive and active. Should wholesale-only operators be required to provide only a limited number of mandatory access products?

[…]

For the imposition of providing all access products (passive and active), see answer to Question 108. This should apply, from the outcome on the market's competitiveness and efficiency point of view, in principle independent of the network operator and his business model, except where such a business model would go in hand with certain, objective restrictions (e.g. wholesale-only operators which don't actively operate their network).

The efficiency of designing the regulatory framework should be assessed regardless of the undertakings' business models (vertically integrated vs. wholesale only).

A specificity of wholesale-only operators is that the incentive for not granting access declines in comparison to vertically integrated operators. Moreover, for this business model, the operator might be more willing to grant access to a wider range of access services to enable a maximum number of operators to seek access to its own infrastructure. At the same time, even if it is disposed to increase the range of wholesale access products, the wholesale-only operator is less prone to grant access to civil infrastructure than a vertical integrated operator due to the fact that its main business is based on selling a complete active or passive network service.

Yet, some exceptions to this rule may apply depending on the case. In particular where the wholesale-only provider only deploys the network infrastructure and doesn't actively operate his network. In such a case the access seeker(s) operate the active equipment and an imposition of the obligation to offer active services would likely be disproportionate.

117. Are the costs of providing all access products, as listed in the Broadband Guidelines, proportionate to the benefit (in terms of encouraging competition)?

[...] ~~Totally~~

[X] Partially

[...] ~~Neutral~~

[...] ~~Not at all~~
[...] ~~Not applicable/no relevant experience or knowledge~~

Please explain
[...]
In principle the obligation to offer all access products is the best way to avoid anti-competitive behavior of the funded operator. Therefore the costs of providing all access products are normally proportionate to the benefit, considering that public financing is involved. However, situations can emerge where the costs of this obligation are not proportionate to the benefit.

With respect to the stage of network deployment, state aid funds are currently targeted to areas scarcely populated, with low demand and low profitability. Offering all access products could oblige the beneficiary to undertake higher investments in the network without seeing demand and could therefore be inefficient and economically undesirable (reasonable demand; see Q. 108). Also the provision of passive products might sometimes not be technically or economically feasible. In such a case it might be necessary to rely on VULA or bitstream services. Vice-versa, situation could emerge where physical unbundling for fibre is prevalent and therefore a general need to offer bitstreams services is not given. In principle, the concept of "reasonable demand" is suitable to prevent the costly provision of access services which are not required (see also answer to Q.118 and Q.119).

Against this background, no type of access service should be excluded in principle. But following an economic analysis of situations similar to the aforementioned, certain derogations from this principle should be possible depending on local circumstances. This usually implies requiring less amount of public money, where this could be avoided, as well.

118. If the network operator also provides retail service, should it be obliged to perform separate accounting, to ensure a level playing field?

[...] ~~Yes~~
[X] No
[...] ~~Not applicable/no relevant experience or knowledge~~

Please explain
[...]
From BEREC's perspective, the question arises whether the positive effects of accounting separation (e.g. monitoring the profitability of particular business/services, identifying cross-subsidisation and enforcing non-discrimination) outweigh the administrative challenges and burdens in cases where the subsidised operators are small local/regional (non-SMP) undertakings. In these cases, imposing accounting separation might cause disproportionately high efforts for the operators. Therefore, imposing accounting separation might be too intrusive in the state aid context. In order to encourage competition and to ensure fair and non-discriminatory wholesale prices, other measures such as wholesale access requirements or transparent benchmark prices (see answer to question 105) seem normally more appropriate. Where a beneficiary is not complying with the regulations imposed, it should be obliged to provide separated accounts.

119. As an exception under the current rules, access products for which intervention is costly and are not otherwise planned can be offered only if there is reasonable demand, and under certain conditions.

a. Is this exception for access on reasonable demand appropriate?

[X] Yes

[...] ~~No~~

[...] ~~Not applicable/no relevant experience or knowledge~~

Please explain

[...]

When answering the question whether all access products should be imposed immediately, there is a trade-off that needs to be considered.

On the one hand, the provision of access products only in the case of reasonable demand might cause critical delays with respect to the access seeker's business plan which, in an extreme case, might prevent the access seeker from pursuing his plan in the first place, if a lengthy procedures with uncertain outcome has to be anticipated. Therefore, there is the risk that the exception for access on reasonable demand could impair competition.

On the other hand, providing access products even if there is no reasonable demand is associated with rising costs for the subsidised network operator. Depending on the product concerned, these costs could be substantial e.g. regarding the expenditures to provide technical interfaces or to internally administer the provision of the product. These incurred costs, in turn, are likely to reduce the deployment areas or increase the amount of subsidies granted. In both cases, taxpayers' money would not have been allocated efficiently which should be avoided.

All aspects considered, in BERECs opinionthe exception for access on reasonable demand is appropriate if there are adequate safeguards that alleviate negative effects on competition. As already foreseen in the current BBSA GL (see para 80 (a)), the exception should be limited to sparsely populated areas where demand for certain access products is low and is expected to remain low. Moreover, it could be considered to foresee certain timetables for the subsidised operator according to which it is obliged to provide the access products if reasonable demand arises in order to improve the ability of access seekers to enter the market. The risk of a lack of wholesale demand and its effect on effective competition should be taken into account in the design of the state aid measures.

b. Is it problematic that no access product was mandatory?

[...] ~~Yes~~

[X] No

[...] ~~Not applicable/no relevant experience or knowledge~~

Please explain

[...]

As argued in the answer to the Q.119, BEREC is of the view that the exception for access on reasonable demand is appropriate if it is limited to sparsely populated areas and possibly safeguarded by timetables where the subsidised operator has to offer access products in the case of developing demand. Under these conditions, it should be ensured that wholesale access is always available for third-party operators

without unduly delaying the timetables of such undertakings and thereby undermining their business plans. As a consequence, access is not denied or prevented, but only postponed until reasonable demand arises, preserving competitive incentives to the benefit of consumers.

120. What are the costs associated with offering access to ducts and poles for the purposes of state aid?

Generally costs are inflicted for the use of the infrastructure, mostly driven by investment and the actual service provision.

In principle the costs for ducts and poles are not different compared to costs for such facilities outside of the state-aid context, but generally costs might vary due to local conditions. Most important, areas subject to state aid funding are normally characterised by low population density. In consequence the average costs per subscriber and/or homes passed can assumed to be considerably higher compared to areas which allow for commercially viable roll out without state aid funding. Also the costs of service provision to access seekers themselves might by higher in average due to low economies of scale. For the actual service provision in principle the same type of costs are relevant as e.g. in SMP-regulation. This costs include billing, OPEX, common costs, etc. A general statement regarding the amount of the actual costs is not possible as actual data to allow for thorough assessment of the differences in costs is generally not available to NRAs. In Germany for instance, the DSB doesn't differentiate the costs between funded and non-funded areas.

An additional aspect that could be considered in the context of state aid, are the costs incurred on the funded operator using existing infrastructure (ducts, poles) inside and outside of the targeted area. In this case the costs depend on the pricing principles applied to the existing infrastructure.

121. Aid is granted to construct infrastructure in a defined target area. Have aid beneficiaries been allowed to expand such infrastructure outside the target area, if they financed the expansion themselves?

[X] Yes, with any restriction

[...] ~~Yes, only after a certain time period~~

[...] ~~Yes, only under certain condition/with adequate safeguards~~

[...] ~~No, they have not been allowed to do this~~

[...] ~~Other~~

[...] ~~Not applicable/no relevant experience or knowledge~~

Please note, we assume that the first option of the multiple choice should read "Yes, without any restriction.

Please explain

[...]

BEREC has no complete picture whether the expansion of such infrastructure outside the target areas was accepted in all MSs (or by the NRAs, where the latter are mandated with this task).

However, in BERECs opinion if the amount of the aid is calculated correctly, it should normally only cover the target area. Thus, there is no reason to limit the expansion of any infrastructure outside the target area. The more this helps to get operators interested in the scheme, the better. This might also raise the attractiveness for private investment of areas neighboring to the targeted area. Concerns could arise, where in the extension area another network of a different operator deployed with private investment and no involvement of state aid funding is already present (e.g. in a grey area).

122. Can you identify any preferences for access products? If so, please discuss possible reasons for specific products in subsidised areas.

[…]

In general, the availability of data on take-up and demand of different access products provided under the state aid rules is not comprehensive. Most NRAs mostly are only aware of the state aid schemes encompassing the obligations to offer a range of access products. Generally it can be derived that physical unbundling has the merit that access seekers have the possibility to decide which active equipment they want to deploy and use. This may enhance a dynamic competitive environment, also on the retail service level. Where access seekers depend on active access, the possibilities to create own innovative retail services are limited to a degree, although a VULA-service should be designed to be the closest possible equivalent to unbundling. Thus, in principle, physical unbundling should be obligatory, where possible.

The preferences of access seekers in particular may depend on the points of hand over and the number of end-users which can be reached by accessing the respective access points as deployment costs have to be taken in consideration. Bitstream services might sometimes be able to be accessed by access seekers at lower average costs per end-user in light of the significant fixed costs associated with making use of physical unbundling. Access seekers might e.g. first have access with bitstream products in some areas and decide to climb the ladder of investment and unbundle physically in a later stage.

123. Please submit any additional information you have about wholesale access obligations – in particular different types of access product requests and take-up rates in subsidised areas (in comparison to other, non-subsidised areas) and the reasons for this.

[…]

As stated in Q.122, NRAs generally don’t have a specific overview on the actual access products acquired by access seekers. In principle, operators of subsidised broadband infrastructure should offer a wide range of wholesale access products. This range should normally include access to the unbundled local loop and sub loop, bitstream and the right to use ducts, poles, dark fibre and street cabinets. The BBSA GL recognise that in particular in areas with low population density, where broadband services are limited, or for small companies, the imposition of all types of access products might disproportionately increase investment costs without delivering significant benefits in terms of increased competition. In BERECs view such situations might be present frequently in state aid funded areas. The requirement of reasonable demand therefore seems justified. Additionally it has to be noted that reasonable demand allows the funded operator to postpone the supply of wholesale access services and should not be seen as permission not to offer these access services, if reasonable demand develops.

Otherwise, the revised state rules should not impose any limitations to the range of access products per se, as it often depends on the local conditions and preferred business models of access seekers, which products will be best suited to promote competition.

Section 13 – Wholesale pricing (para 78(h), Broadband Guidelines, article 52(6), GBER)

124. Are the Broadband Guidelines clear about wholesale prices?

[X] Yes
[...] ~~No~~
[...] ~~Not applicable/no relevant experience or knowledge~~

Please explain
[...]
In BEREC's view the BBSA GL are clear in principle, but certain difficulties in their application may arise. Often the pricing principles established by NRAs within sector regulation are appropriate and the prices established can serve as a reference for state aid. Although, in scarcely populated areas, where provision of retail services is more expensive, the regulated prices for wholesale access products might not always fit the requirements of the target areas. The access prices need to ensure that access seekers are able to compete with retail services provided by the operator that received the funds. It's hence of crucial importance to achieve an effective wholesale access. The arrangements to secure efficient wholesale access should be clear from the outset, when designing the aid measures and when the geographical scope of the projects are defined as well as in the design of the tender.

Moreover BEREC notes a circular reasoning with respect to the notion of "comparable competitive areas". Areas subject to public funding are normally characterised as being uncompetitive and thus not comparable to competitive areas. Conversely, areas where an operator is designated as having SMP are uncompetitive by definition as well. In most MSs incumbent operators are designated as having SMP on a nation-wide scale at least in market 3a (wholesale local access) and in many MS the same is also true for market 3b (wholesale central access), where SMP is established often on a nationwide basis but with few exceptions at least in geographical areas of considerable size. Therefore, the notion of "comparable competitive areas" should be replaced by "comparable non-state aid areas" to avoid any room for misinterpretations.

As pointed out in the answer to Q.105, monitoring and transparency obligations for prices would also greatly contribute to implement pricing models which are suitable to promote efficient access and effective competition. The revised state aid rules should foresee sufficient transparency obligation with respect to prices for funded operators.

In BERECs opinion NRAs should have a central role in developing pricing methodologies and setting appropriate prices, because of the important interlinks to market regulation and the BCRD (for which NRAs often are mandated with the role as DSB).

125. Is this guidance sufficient?

[X] Yes
[...] ~~No~~
[...] ~~Not applicable/no relevant experience or knowledge~~

Please explain
[...]
The guidance in principle is sufficient. The references to SMP-prices and comparable areas both are suitable indications as a starting point. It is important to leave enough room for NRAs to develop pricing methodologies and apply appropriate pricing concepts, which are also consistent with other frameworks on access regulation in place. As NRAs are mandated with the tasks of sector regulation and often also with tasks on the BCRD, NRAs are best placed to develop effective, efficient and consistent pricing methodologies.

In particular, where new services appear, the guidance might be difficult to apply in practice by authorities. Some type of access products might not be frequently asked for and establishing suitable prices requires time, resources and the relevant knowledge. Different concepts to set regulated prices are well established. This includes economically replicable test principles as currently adopted by many NRAs, as well as benchmarking or cost orientation depending on target areas. Retail price replicability should be taken into account when setting prices, as an important goal of access provision is to enable wholesale access seekers to offer retail services at prices similar to the ones in more competitive areas and also similar to the retail services of the beneficiary.

In BEREC's view additional guidance to this end is not required, but if additional guidance is provided, particular attention should be payed to the consistency with established principles.

126. Have the requirements for wholesale prices been appropriate, ensuring competition and affordable prices at retail level?

[...] ~~Totally~~
[...] ~~Partially~~
[X] Neutral
[...] ~~Not at all~~
[...] ~~Not applicable/no relevant experience or knowledge~~

Please explain
[...]
Comprehensive data for a thorough assessment on the question whether wholesale prices have been appropriate and enabled to ensure competition and affordable prices is not available as stated in the answer to Q.105.

The aim of state aid should be to increase competition in order to meet end-user needs. For this reason, retail prices should normally be similar to those of other more competitive areas, also a certain room for increased flexibility might sometimes be justified due to local conditions. Low demand in scarcely populated areas sometimes can lead to situation where the price of wholesale access services based on other more competitive areas might be insufficient to obtain profitability by third party operators in the subsidised areas. For this reason, particular attention should be payed to the principle of economic replicability. The amount of state aid granted should take into account revenues expected from wholesale service provision and hence the wholesale access prices in order to promote both, broadband roll-out and effective competition.

It has to be noted that wholesale prices can only promote a competitive retail environment, where demand by access seekers is present. Where this demand is absent, only the funded provider will offer retail services of a certain quality and the wholesale regulation might remain ineffective.

127. Has the NRA's involvement in setting wholesale access prices preserved a level playing field?

[...] ~~Totally~~
[X] Partially
[...] ~~Neutral~~
[...] ~~Not at all~~
[...] ~~Not applicable/no relevant experience or knowledge~~

Please explain
[...]
According to the BBSA GL and the GBER, the NRA's involvement in setting wholesale prices is limited to assessing the general criteria in the scheme prior to the tender but not afterwards except through a dispute resolution procedure. This has limited influence on preserving a level playing field. Limitations of involvement are true for NRAs in most MS as was demonstrated in BoR (17) 246. CNMC, for instance, has approved the price applicable by the beneficiary only when the European Commission has ordered that in a Decision -Decision N 407/2009 – Spain Optical fibre Catalonia (Xarxa Oberta) (Recital 135 and 137.b). In principle NRAs are best placed to monitor and set the conditions to preserve a level playing field, because of the competencies in sector regulation and (often) the BCRD, but the legal framework did not fully facilitate the role of NRAs in this regard. As pointed out in the BBSA GL, it would be important for each member state to secure that sufficient resources are allocated for the NRA to play a more active role.

128. Have you experienced any problems in relation to prices for accessing active services?

[X] Yes
[...] ~~No~~
[...] ~~Not applicable/no relevant experience or knowledge~~

Please explain
[...]
NRAs insights in problems related to prices for access to active services are mostly confined to a limited number of dispute resolutions.

While a clear picture cannot be drawn, seemingly other operators than the beneficiary do often not go to subsidised areas. Reasons might be that the wholesale prices do not allow them to recover their investment but also generally unfavorable economies of scale and density effects. Regulated wholesale prices for active services such as VULA or leased lines established through SMP regulation at a national level can often be a starting point, but may require adaptions depending on local circumstances. It has to considered that access seekers might face replicability issues, because the difference between the wholesale and the retail prices prevalent in the area is insufficient.

In Spain for instance initially the prices of a regulated bitstream at the regional level allowed access seekers to compete and recover the costs, but this was not always the case when a bundled services including IPTV where subject to the service replicability.

Initiatives from the granting authority when designing the measure to secure sufficient economies of scale in terms of technical and contractual arrangements would be important in minimising the risk for such situations. The granting authority, probably with the support from the NRA, could also play an important role in harmonising contractual and technical arrangements for wholesale access across projects to increase economies of scale across projects for beneficiaries and access seekers alike.

In some cases it was also reported that access seekers and access providers had difficulties to agree on conditions of bitstream access. This was not always exclusively related to pricing aspects, but also to other product characteristics. E.g. the bandwidth of the access providers bitstream offer differed from the products the access seeker already supplies in different, neighboring areas, based on his own network infrastructure. Disputes on prices for additional products can be the consequence (as well as a decline to offer an adjusted products at all).

129. Have you experienced any problems in relation to prices for accessing passive infrastructure?

[...] ~~Yes~~
[...] ~~No~~
[X] Not applicable/no relevant experience or knowledge

Please explain
[...]
It is not possible to draw a clear picture on problems with respect to prices for access to passive infrastructure as the experiences of NRAs are still very limited.

More generally, on a case-by-case basis disputes on state aid background with respect to access to civil infrastructure have been observed however (the same can be said with respect to the application of the BCRD).

130. If an equivalent regulated product exists, should the regulated access price have been used?

[...] ~~Yes~~
[...] ~~No~~
[X] Not applicable/no relevant experience or knowledge

Please explain
[...]
In practice the regulated wholesale access prices have normally been used when the beneficiary is the SMP operator. It is often a suitable way to set a price. In countries where access is regulated symmetrically (e.g. France), the determination of the access prices for subsidised networks follow the same principles as the ones applied in areas where deployment relies on private investment.

Price convergence between state aid areas and non-state areas of wholesale access should be taken into account for several reasons. Firstly, in some cases such tariff convergence could make it possible to preserve a reasonable return on investment for infrastructure operators over the long term, by controlling the power of a limited number of access seekers to negotiate tariffs with a multitude of wholesale operators with a local footprint, while ensuring that the remuneration received is reasonable. On the other hand, it would be likely to significantly reduce transaction costs between access seekers and subsidised operators. Finally, it would offer the possibility for the main commercial operators to maintain a relative homogeneity of their retail offers. This homogeneity of retail offers can make it possible to promote marketing across all networks, especially in subsidised areas, and strengthen equality between areas for the benefit of end-users.

Price convergence is a principle to follow, but is not always possible to reach. Indeed, the price that may be offered by the subsidised operator depends significantly on the local conditions. Even though areas where networks have been deployed by private investors are often difficult to compare to areas which require state aid funding, some privately funded areas might be better comparable. In particular where private investments are carried out in areas with low population density, it might be considered to draw comparisons to the wholesale and retail prices prevalent in these areas. In scarcely populated areas, low demand or small-scale projects means that sometimes the regulated price of wholesale access services is insufficient to obtain profitability by access seekers in those territories. The principle of economic replicability it therefore of high importance when determining prices.

131. In cases where certain access products required for the state aid measures were not required by national regulations, a pricing methodology has to be developed. What has been your experience?

[…]

NRAs are best placed to develop pricing methodologies due to of their wide experience and knowledge in sector regulation as well as the application of the BCRD. Further guidance from the EC on pricing methodologies is not required. Any guidance on pricing has to take into account the consistency to pricing aspects of the above mentioned provisions and their actual application in the MSs. For instance, as reported in the answer to Q.130, regulated wholesale prices have been applied in state aid cases, where applicable. Some NRAs also developed pricing methodologies for state aid purposes.

For instance AGCOM has considered that a wholesale price can be determined by the following formula:

PWS = PM + %(PRO – PM)

where PM is the cost of management of the infrastructure and PRO is the price derived from the SMP regulated Reference Offer for the same or equivalent service. To set the value of PM, AGCOM has defined a model based on the cost of the corresponding amount of Full Time Equivalent (FTE) needed to manage activation, maintenance and commercial cost of the increment of the wholesale services, POR is the corresponding price of the reference offer for equivalent services. When a direct comparison with regulated services is not available, a BU-LRIC+ model, with same principle and same underlying assumptions of the cost oriented price model adopted to set SMP regulated prices, has been considered.

The percentage (%) has been chosen by the contracting Authority and verified by AGCOM in order to guarantee condition of competition on the market. The prices determined by those principles have been available during the tender procedure. Any change to the corresponding prices before taking effect have to be approved by AGCOM.

Final remark

This section addresses other relevant points related to the current state aid rules on broadband infrastructure deployment.

150. Do you have any other suggestions/comments?

[...]

BEREC is of the view that consistency to related regulatory instruments, in particular SMP-regulation, symmetric market regulation and the BCRD should be maintained and where possible enhanced.

Attention should also be payed to definitions used, e.g. on types of networks, in order to maintain and enhance clarity of the provisions on state aid.

Also for mapping purposes, the state aid provision might draw on established concepts, where relevant.

A lack of data availability, in particular for access prices and conditions, demand and take up for the different access services and retail prices linked to state aid funding remains a challenge for most NRAs.

In BERECs opinion sufficient monitoring and transparency requirements should be addressed in the revision of the state aid regulations.

The involvement of NRAs, in particular with respect to access conditions and pricing aspects should not be optional but rather mandatory.

In addition, BEREC addressed the following relevant aspect.

The relation between retail and wholesale markets should also be considered. For example, if the beneficiary of the grant is a retail operator, there have been beneficiaries that deploy the network fulfilling the features required in the tender at wholesale level, but only offering lower speed services to end-users compared to the wholesale products set at the tender. The beneficiary has no incentive to offer the higher speed because the low demand in the benefited area results in a lack of competition. In this case the end-users had difficulties to get access to enhanced services (e.g. only after insisting). Therefore it would be advisable to include the obligation to commercialise retail services of the same quality and speed than the one established in the tender at wholesale level to ensure quality retail services are offered and that the aid objectives are fulfilled. Also, competitive retail prices – such as the ones existent in competitive areas – should be aimed for in the targeted areas.

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Can the Commission contact you for further details on the information you have submitted, if required?

[...] Yes

[...] No

THANK YOU FOR RESPONDING TO THIS QUESTIONNAIRE

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This survey has not yet been published or has already been unpublished in the meantime.

II. Annex - Complete version of original questionnaire

Targeted Public Consultation on the Evaluation of the state aid rules for the deployment of broadband networks (EN)

Introduction

[Section]

Although investment in telecommunications network deployment comes mainly from private operators, EU countries also provide public support ('state aid').

EU competition controls play an important role in ensuring this public support does not harm competition (by crowding out private investment, subsidising local monopolies or discriminating against certain technology platforms), while ensuring that public support creates modern infrastructure that reduces the digital divide where commercial operators have no incentives to invest.

The EU rules for public spending on the deployment of broadband infrastructure are:

- The 2013 Broadband Guidelines
- The relevant parts of the General Block Exemption Regulation (General Block Exemption Regulation) (2014)

Taken together, these EU rules are referred to as 'the state aid rules for the deployment of broadband infrastructure'.

In addition, public support in this sector must be in line with the objectives set out in the:

- Digital Agenda for Europe (DAE) (2010)
- Gigabit Society Communication (targets added in 2016 for telecoms network deployment by 2025, in line with expected use, market and technological developments).

Note also that investing in connectivity to achieve the 2025 objectives is a prerequisite for the new EU digital strategy, Shaping Europe's Digital Future.

Why are we consulting?

[Section]

As part of our evaluation of the state aid rules for broadband infrastructure, we're running 2 consultations in parallel:

- a general questionnaire
- this targeted consultation, which focuses on the technical detail of the Broadband Guidelines and the relevant parts of the GBER.

We would like to know your views on whether the rules:

- have stimulated telecommunications infrastructure deployment and boosted competitiveness in the sector
- respond to both technological developments and socio-economic needs
- meet the new EU strategic objectives in Shaping Europe's Digital Future.

Following the evaluation, we may make some changes (legislative or other).

A **summary of our findings** from the consultation will be published here in Q3/2021.

To help us analyse your reply:

- please **keep your answers concise**
- the 'extra comments' box is limited to 3,000 characters (unless stated otherwise), but you can include **documents** and **URLs** to relevant online content
- although you can respond 'not applicable/no relevant experience or knowledge' to any question, please **give specific answers as much as possible** (to help us gather solid evidence).

Saving and submitting

If you click '**Save as Draft'** (to break off and finalise your response later), you must save the link that you receive from the EUSurvey tool on your computer. Without it, you won't be able to access the draft again.

After submitting your finalised response, you'll be able to **download a copy**.

Questions marked with an asterisk (*) are **mandatory**.To see how we will protect your data, **read the attached privacy statement**.

Contacts

Still got questions?

For **technical problems**, please contact our CENTRAL HELPDESK.

You may also contact us via the following functional mail box: COMP-BBGL@ec.europa.eu

Who are we consulting?

[Section]

The consultation is open to any interested public or private organisation or individual.

However, we are particularly interested in feedback from bodies with expertise or experience in the broadband infrastructure sector (industry, academia, consultancy/law firms, all levels of government and any authorities managing or regulating the relevant EU state aid rules).

This questionnaire is in English and the German and French versions will be uploaded in the end of September – but you can respond in **any official EU language.**

Your details

[Section]

Language for responding

[…]

I am responding as

[…]

If other, please specify

First name

[…]

Surname

[…]

Email

[…]

Organisation name

[…]

Transparency register number

[…]

Country of origin

[…]

I agree with the personal data protection provisions

[…] Yes

What is your interest and the main reason for responding?

[…]

Please briefly explain your activities/describe your organisation/company and - if applicable - the main goods/services you provide.

[…]

What kind of services does your company provide?

[…] Wholesale
[…] Retail
[…] Both

What kind of technology does your company use?

[…] ADSL/SDSL/HDSL
[…] VDSL
[…] VDSL + Vectoring
[…] G.Fast
[…] Coax DOCSIS 1.x/2.x
[…] Coax DOCSIS 3.0
[…] Coax DOCSIS 3.1
[…] 3G
[…] 4G/LTE
[…] 5G
[…] FWA
[…] FTTH
[…] FTTB
[…] FTTC
[…] Other (please specify)

If other, please specify
[…]

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[Section]

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Technical questionnaire

[Section]

This consultation relates to state aid rules for the deployment of broadband infrastructure – specifically the Broadband Guidelines and the relevant parts of the GBER (unless otherwise specified).

Section 1 – Service of general economic interest (paras 18 to 27, Broadband Guidelines)

1. Do the Broadband Guidelines provide clear guidance on state aid for broadband deployment as a 'service of general economic interest' (SGEI)?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

2. Do you consider the specific conditions for designing a measure as SGEI adequate (i.e. intervention in white areas only, need to provide universal connectivity, support only the deployment of a purely passive network equipment, obligation to operate the network under a wholesale-only model without the possibility to provide retail services in any case, and provision of all possible access products on a non-discriminatory basis)?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

3. Where SGEI projects have been implemented, did they have a sufficiently positive impact on users, without unduly distorting competition?

[...] Totally
[...] Partially
[...] Neutral
[...] Not at all
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

Section 2 – Additional measures supporting broadband rollout (paras 28 to 29, Broadband Guidelines)

4. Have demand-side measures (such as vouchers for broadband, demand aggregation, etc.) been implemented in your country, with the aim of supporting one or both of the following goals:

[...] Deploying of broadband infrastructure
[...] Increasing broadband penetration (take-up)

Please explain
[...]

5. Do the Broadband Guidelines provide sufficient guidance on such measures?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

6. Some state intervention falls outside the definition of state aid and so is not subject to EU state aid rules. In your country, have alternative no-aid measures been implemented to boost broadband coverage/penetration:

[...] civil engineering?
[...] regulation?
[...] easing access rights?
[...] measures covered by the cost reduction directive?
[...] others?
[...] not applicable/no relevant experience or knowledge

Please explain

[...]

7. Are such alternative measures effective in supporting broadband coverage and penetration?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

8. What kind of demand-side measures was most effective? Please explain.

[...]

Section 3 – Role of the National Regulatory Authority (NRA) (paras 42-43, Broadband Guidelines)

9. To what extent have the state aid rules for the deployment of broadband infrastructure favoured the involvement of the NRA in designing aid measures?

[...] Totally
[...] Partially
[...] Neutral
[...] Not at all
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

10. To what extent have the state aid rules for the deployment of broadband infrastructure favoured the involvement of the NRA in monitoring the implementation of aid measures?

[...] Totally
[...] Partially
[...] Neutral
[...] Not at all
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

11. To what extent have the NRAs been involved in:

	Totally	Partially	Not at all	Not applicable/no relevant experience or knowledge

Designing the state aid measures				
Monitoring				
Mapping target areas				
Public consultation				
Setting the list of wholesale access products and relevant specifications				
Setting the prices and/or a pricing methodology for wholesale access products				

Please explain
[...]

12. Have you experienced any (legal or practical) problems with the involvement of the NRA in designign, implementing and/or monitoring state aid broadband measures?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

Section 4 - Next Generation Access (NGA) network and Next generation network (NGN) definitions (paras 55 to 60, Broadband Guidelines)

Type of networks classified as NGA in terms of infrastructure: The state aid rules for the deployment of broadband infrastructure define NGA networks as access networks which rely wholly or partly on optical elements and which are capable of delivering broadband access services with enhanced characteristics, compared to existing basic broadband networks. This means

(iv) fibre-based access networks (FTTx);
(v) advanced upgraded cable networks;
(vi) (iii) certain advanced wireless access networks capable of delivering reliable high speeds per subscriber.

13. Is the distinction between basic broadband and NGA networks still relevant?

[...] Totally
[...] Partially
[...] Neutral
[...] Not at all
[...] Not applicable/no relevant experience or knowledge

Please explain

[...]

14. Is this definition of an NGA network still valid, especially in view of the Gigabit and 5G connectivity objectives proposed by the Commission in the Gigabit Communication?

[...] Totally
[...] Partially
[...] Neutral
[...] Not at all
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

15. At this stage of technological and market development, do you think that:

c. other types of telecom networks should have been included in the definition of NGA networks?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

d. some types of telecom networks should have been left out of the definition of NGA networks?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

16. The Broadband Guidelines state that, to be considered NGA, advanced fixed wireless access networks must provide the relevant speeds reliably. Do you think this requirement:

	Yes	No	Not applicable/no relevant experience or knowledge
Is relevant			
Is clear			
Can be applied in a consistent way			

Please explain
[...]

The Broadband Guidelines describe NGA networks as having the following characteristics:

(iv) capable of delivering services reliably at a very high speed per subscriber through optical (or equivalent technology) backhaul sufficiently close to user premises to guarantee the actual delivery of the very high speed;

(v) capable of supporting a variety of advanced digital services including converged all-IP services;

(vi) having substantially higher upload speeds than basic broadband networks.

By referring to the Digital Agenda for Europe targets, NGA networks are generally considered able to provide at least 30 Mbps download speed and ultrafast networks at least 100 Mbps download speed.

17. Is the concept of download speed clear?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

18. Does it take into consideration all relevant aspects?

[...] Yes
[...] No

If not, which aspects?
[...] peak-time speed
[...] normally available speed
[...] maximum speed
[...] minimum committed speed
[...] other aspects (please give details below)

Please explain
[...]

19. Do you think the concept of 'substantially higher upload speed':

	Yes	No	Not applicable/no relevant experience or knowledge
Is clear?			
Should have been further clarified (e.g. clear thresholds)?			

Please explain

[...]

20. The Broadband Guidelines refer to the concept of 'reliability' in defining NGA networks: to be considered NGA, networks must be able to deliver the relevant speeds reliably (cf. para 58, Broadband Guidelines). Do you think that concept:

	Yes	No	Not applicable/no relevant experience or knowledge
Is relevant?			
Is clear?			
Can be applied in a consistent way			

Please explain
[...]

21. Were the technical parameters sufficient when classifying the networks/technologies?

[...] Yes
[...] No

Please explain
[...]

22. The Broadband Guidelines state that the impact of nomadic users needs to be considered when assessing the actual possibility for a mobile network to provide NGA services.

	Totally	Partially	Neutral	Not at all	Not applicable/no relevant experience or knowledge
Is the reference to nomadic users valid for assessing mobile networks?					
Should further guidance have been given?					

Please explain
[...]

The Broadband Guidelines define NGN as backhaul networks which do not reach the end-user, are open for interconnection with other networks and are able to sustain both basic and NGA types of networks.

23. Is the definition of an NGN:

	Yes	No	Not applicable/no relevant experience or knowledge
Clear?			
Relevant? Especially in view of the Gigabit and 5G connectivity objectives proposed by the Commission for 2025			

Please explain
[...]

24. Should further guidance on the NGN definition have been given?

[...] Yes
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

Section 5 - Distinction between white, grey and black areas for NGA and NGN networks (paras 73 to 78, Broadband Guidelines and article 52(3), GBER)

The state aid rules for the deployment of broadband infrastructure identify different areas for the same category (basic broadband or NGA):

– 'white' = no infrastructure
– 'grey' = only one infrastructure
– 'black' = at least two infrastructures of the same category (basic broadband or NGA)

This infrastructure can either be already in place or credibly planned in the near future. For each area, the rules for the broadband infrastructure deployment set specific conditions for public support.

25. Is the distinction between the 3 types of area clear?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

26. Is the distinction between white, grey and black areas useful for identifying the areas most in need of state aid?

[...] Totally
[...] Partially

[...] Neutral
[...] Not at all
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

27. Would additional network categories (apart from basic broadband and NGA) facilitate the design and assessment of a state aid measure?

[...] Totally
[...] Partially
[...] Neutral
[...] Not at all
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

28. What is your experience of the application of the specific criteria for identifiying the colour of intervention areas?

	Positive	Neutral	Negative	Not applicable/no relevant experience or knowledge
In white areas				
In grey areas				
In black areas				

Please explain
[...]

29. Has this 3-color distinction helped in designing state aid measures?

[...] Totally
[...] Partially
[...] Neutral
[...] Not at all
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

30. Has this distinction ensured that public intervention does not unduly distort competition or crowd out existing or credibly planned private investment?

[...] Totally

[...] Partially
[...] Neutral
[...] Not at all
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

31. To what extent are the criteria relating to the colour of the area relevant and sufficient for identifying areas with and without adequate broadband infrastructure - especially in view of the objectives in the Gigabit Communication and the 5G strategic objectives?

[...] Totally
[...] Partially
[...] Neutral
[...] Not at all
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

32. In some cases, a target area does not fall purely into one category of 'white', 'grey' or 'black'. In such areas there are some households already receiving a sufficient service in terms of speed and quality from an existing operator (i.e. households with a connection to an NGA network in an otherwise NGA white area). Have you experienced that situation?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

33. In your view:

[...] The overbuilding of such households with a publicly financed network should always have been prohibited (i.e. these households would have to be 'carved out').
[...] Overbuilding should only have been allowed to a limited extend (i.e. the publicly financed infrastructure should not include more than a certain % of households already sufficiently served by existing infrastructure).
[...] Overbuilding should always be allowed
[...] Other
[...] Not applicable/no relevant experience or knowledge

What % would you suggest?
[...] %

Please explain
[...]

Please explain
[...]

34. Apart from the lack of adequate infrastructure, the Broadband Guidelines also mention other possible criteria determining market failure (lack of competition due to market power or high entry barriers generating insufficient provision of quality and/or high prices, inadequate access conditions). In addition to the number of infrastructures present or planned in an area, have these other criteria been taken sufficiently into consideration?

[...] Totally
[...] Partially
[...] Neutral
[...] Not at all
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

35. When referring to infrastructure investment credibly planned in the near future, the Broadband Guidelines define the term 'near future' as referring to a period of 3 years. They state that if the public authority takes longer to deploy the subsidised infrastructure, the same time period should also be used to assess the existence of commercial investment plans.

c. What is your experience in applying this requirement? Please explain.
[...]

d. Is 3 years a sufficient time period?
[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

e. Is it right to align the period for assessing potential private investment with the estimated deployment time for the subsidised network if the deployment takes:
[...] longer than 3 years?

[...] less than 3 years?
[...] in none of these situation

Please explain
[...]

36. Are the rules on deploying backhaul networks sufficiently clear?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

37. Are the Broadband Guidelines sufficiently clear on the issue of identifying market failures in terms of backhaul infrastructure that is present or planned in the near future?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

38. Are the Broadband Guidelines sufficiently clear regarding the requirement that whenever the public intervention is limited to the backhaul part of the network, the assessment of market failures will take into account the situation on both the backhaul markets and the access markets?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

Section 6 – Mapping (para 78(a), Broadband Guidelines, article 52(3), GBER)

39. To what extent do the provisions of the state aid rules for the deployment of broadband infrastructure regarding the conducting of a mapping exercise allow the efficient identification of those areas most in need of state aid support?

[...] Totally
[...] Partially
[...] Neutral
[...] Not at all

[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

40. Should more guidance have been provided on how to carry out the mapping exercise?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

41. Have you had problems identifying other appropriate criteria to carry out a mapping exercise?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

42. Should the same criteria have been used for identifying both existing and planned infrastructure?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

43. The state aid rules for the deployment of broadband infrastructure require mapping to be carried out at address level. Do you think the mapping granularity should have been adjusted proportionally to the timeframe for deploying the network? That is, less detail for longer timeframes (e.g. address-level detail for the very near future and grid-level for longer periods)?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

44. Have you had problems identifying the appropriate granularity for mapping?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

45. Have the mapping requirements adequately clarified the distinction between fixed networks and:

	Yes	No	Not applicable/no relevant experience or knowledge
Mobile networks?			
Wireless networks?			

Please explain
[...]

46. Should the state aid rules for the deployment of broadband infrastructure have defined mobile and fixed networks as belonging to different markets?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

47. Currently, the state aid rules for the broadband infrastructure deployment do not contain any time limitation for the validity of the mapping. Is this problematic?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

48. The state aid rules for the deployment of broadband infrastructure require mapping to be carried out on the basis of homes passed by a particular network infrastructure, rather than the actual number of homes or customers connected as subscribers. Is the concept of 'homes passed' sufficiently clear?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

Section 7 – Public consultation (para 78(b), Broadband Guidelines, article 52(3), GBER)

49. To what extent do the state aid rules for the deployment of broadband infrastructure on conducting the public consultation help you to efficiently identify areas most in need of state aid?

[...] Totally
[...] Partially
[...] Neutral
[...] Not at all
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

50. Does the guidance need to be more detailed?

51. The state aid rules for the deployment of broadband infrastructure require that a public consultation be carried out to:

1. consult the market on the design of the measure and the conditions attached to it;
2. publish a preliminary list of target areas and verify their mapping by inviting stakeholders to provide information about their existing infrastructure already in place in the target areas and the presence of credible plans to deploy infrastructure in the near future.

Is the distinction between the mapping exercise and the public consultation clear?
[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

52. Public consultations have to seek information at address level on the basis of premises passed, rather than premises connected – is this requirement clear?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

53. What is your experience in providing information and/or assessing future investment plans (in particular from a technical and economic perspective)? Please explain.

[...]

54. Could more guidance have been given?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

55. Do the rules on public consultations enable credible private investment plans to be efficiently identified?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

56. Do the state aid rules for the deployment of broadband infrastructure provide sufficient guidance on assessing credible investment plans and expressions of interest?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

57. Do the rules on public consultation allow to efficiently consult the market, inform stakeholders of the intention to intervene with public funds and enable them to react?

[...] Totally

[...] Partially
[...] Neutral
[...] Not at all
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

58. Under the state aid rules for the deployment of broadband infrastructure, public consultations must gather information about plans to rollout broadband infrastructure in the next 3 years or an adequate period (depending on the planned deployment timeframe for the infrastructure supported by state aid).

f. Are these rules clear?
[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

g. Is the timeframe in the rules ("next 3 years or adequate period") valid, or should a different timeframe be considered??
[...] Totally
[...] Partially
[...] Neutral
[...] Not at all
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

Section 8 – Step change (para 51, Broadband Guidelines)

To qualify for subsidy, a network should be able to ensure a 'step change' in terms of broadband availability. A 'step change' can be demonstrated if, as the result of the public intervention:
(i) the selected bidder makes significant new investment in the broadband network, and
(ii) the subsidised infrastructure brings significant new capabilities to the market, in terms of broadband service availability and capacity, speeds and competition.

To determine the extent of the change, these factors must be compared both to existing networks and those for which there are concrete rollout plans.

59. Is the concept of step change clear?

[...] Yes
[...] No

[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

60. Do the state aid rules for the broadband infrastructure deployment efficiently ensure that the public investment delivers an improvement, i.e. the positive effects outweigh any distortion of competition?

[...] Totally
[...] Partially
[...] Neutral
[...] Not at all
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

61. Are the criteria for identifying the step change still appropriate, especially in view of the objectives of the Gigabit Communication and 5G strategic objectives?

[...] Totally
[...] Partially
[...] Neutral
[...] Not at all
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

62. Should, under certain specific circumstances, network upgrades have been considered a sufficient step change, even if they only concern active components?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

Section 9 – Competitive selection procedure (para 78(c), Broadband Guidelines, article 52(4), GBER)

63. The state aid rules for the broadband infrastructure deployment require the beneficiary to be selected via an open, transparent and non-discriminatory competitive selection process, in line with EU public procurement rules. Is this efficient to achieve value *for money*?

[...] Totally
[...] Partially
[...] Neutral
[...] Not at all
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

64. Do the conditions for the competitive selection procedure ensure an optimal outcome?

[...] Totally
[...] Partially
[...] Neutral
[...] Not at all
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

65. Are there circumstances in which a competitive selection process was not needed or adequate, or alternatives measures were more appropriate?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

66. Some parties argue that smaller lots may favor participation by smaller operators but may also risk increasing the cost of the intervention. Have the state aid rules for the deployment of broadband networks provided enough guidance on the size of lots to be tendered?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

67. Has the application of the technological neutrality principle in the competitive selection procedure caused any problems?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

68. As a granting authority, have you received bids from an operator based in other country?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

69. As an operator, have you participated in a competitive selection procedure in another country?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

70. Have the state aid rules for the deployment of broadband infrastructures favoured one particular type of operator (who disproportionately wins bids)?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

71. What has been the impact of granting aid to operators benefiting from significant market power (SMP operators), as regards market development and competition? Please discuss whether these impacts have been alleviated by open access conditions.

[…]

72. Have you identified any differences between the type of selected operators in terms of technology, speed, price, type of access and number of service providers (SMP operators compared with other operators)?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

73. Has the wholesale-only model provided a more pro-competitive outcome?

[...] Totally
[...] Partially
[...] Neutral
[...] Not at all
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

74. What have been the costs and benefits of the wholesale only model?

[…]

75. Has the passive-only model led to a more pro-competitive outcome?

[...] Totally
[...] Partially
[...] Neutral
[...] Not at all
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

76. What have been the costs and benefits of the passive-only model?

[…]

77. Do the rules on choosing the most economically advantageous offer ensure that the most relevant, efficient and appropriate offer is chosen?

[...] Totally
[...] Partially
[...] Neutral
[...] Not at all
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

78. According to the State aid rules for the deployment of broadband infrastructures, to select the economically most advantageous offer, qualitative criteria have to be weighed against the requested aid amount, which should have a sufficient weight. Is this requirement clear?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

79. Has the price been adequately taken into account? If yes, what was the adequate weighting ?

[...] less than 20%
[...] between 20% and 30%
[...] between 30% and 40%
[...] more than 40%
[...] other
[...] no

Please explain
[...]

80. Apart from price, what were the other important award criteria?

[...] cost of maintenance and management of the infrastructure over its lifetime
[...] energy efficiency and other environmental criteria (carbon footprint, effects on fauna and plants, etc.)
[...] other

Please explain
[...]

81. Did the 'most economically advantageous offer' requirement result in open and non-discriminatory tender selection? Please explain.

[…]

82. As an exception from the requirements for the competitive selection process, national authorities may also choose to rely on direct investment – deploying and managing a network, either directly or through a fully owned internal body. How do you think this exception has worked in practice?

[…]

83. Should such an exception have also been included under the GBER?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

84. Has the public ownership and direct operation of the network had a positive or negative impact on the market and competition?

[...] Positive
[...] Negative
[...] None
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

85. Are the conditions imposed on the public operators entrusted with the deployment and operation of the network sufficient to preserve competition?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

Section 10 – Technological neutrality (para 78(e), Broadband Guidelines, article 52(4), GBER)

86. The state aid rules for the deployment of broadband infrastructure require that the principle of technological neutrality be respected at the level of the competitive selection process and at the level of the granting of wholesale access. Is the technological neutrality principle clear?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

87. Has the technological neutrality principle prevented distortion of competition?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

88. What has been the impact of the technological neutrality principle on the selection procedure and its outcomes?

[…]

89. What parameters have been used to assess the performance of different technologies in the selection procedure?

[…]

90. Has the application of the technological neutrality principle in the selection procedure caused any problems?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

91. Wholesale access must be offered on open and non-discriminatory terms in line with the principle of technological neutrality. Has the application of the technological neutrality principle to wholesale access obligations caused any problems?

[...] Yes

[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

92. Under the current rules, more pro-competitive technological approaches may receive additional points in the award criteria - for example technologies which allow for physical unbundling compared to technologies which allow only bitstream access. How do you think the application of this possibility has worked in practice?

[…]

93. Certain types of network architecture (e.g. FTTH/Point to Point networks) are considered more pro-competitive, as they allow full unbundling (as compared for instance to FTTH/Point to multipoint infrastructure). However, they are generally regarded as more costly technologies.

How do you consider this trade-off between greater competition and higher cost of providing and managing networks?
[…] The benefits of the more pro-competitive architecture always outweighs the higher costs
[…] In most cases the benefits outweigh the costs
[…] In most cases the costs outweigh the benefits
[…] In all cases the cost outweigh the benefits
[…] Not relevant/don't know

Please explain
[...]

94. What is the percentage of additional costs associated with providing physical fibre unbundling, compared with virtual access (VULA)?

[...] <15%
[...] <30%
[...] <50%
[...] <80%
[...] <90%
[...] between 90% and >100%

Please explain
[...]

95. Have the state aid rules for the broadband infrastructure deployment sufficiently allowed for virtual access (VULA)?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

96. Has the point-to-point fibre unbundling enabled greater differentiation of offers?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

97. Please describe your experience of wholesaling in areas with point-to-point fibre compared with areas with a PON deployment or FTTC/VDSL.

[…]

Section 11 – Use of existing infrastructure (para 78(g), Broadband Guidelines)

98. Under the current rules, any operator who owns or controls infrastructure (regardless of whether it is actually used) in the target areas and wishes to participate in a competitive selection process for state aid to extend coverage in those target areas, must meet certain conditions.

[...] Totally
[...] Partially
[...] Neutral
[...] Not at all
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

99. Should the obligation for bidders to provide information about their existing infrastructure should have included an obligation to provide access to it? If so, under which conditions/prices?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

100. What are the factors enabling or preventing the use of existing infrastructure?
[…]

101. Describe the importance attached to using existing infrastructure in the selection procedure.
[…]

102. What percentage of the broadband network deployed with public support used existing infrastructure?
[…]%

Please explain
[...]

103. Please explain the impact on the overall project costs.
[…]

104. How relevant do you find the national database on the availability of existing infrastructures?
[...] Totally
[...] Partially
[...] Neutral
[...] Not at all
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

Section 12 – Wholesale access (paras 78(g) and 80(a), Broadband Guidelines, article 52(5), GBER)

Effective wholesale access for third parties to a subsidised broadband infrastructure is an indispensable component of any state measure supporting broadband. The subsidised network must therefore offer access under fair and non-discriminatory conditions to all operators who request it, and give them the possibility of effective and full unbundling.
Moreover, third-party operators must have access to passive and not only active network infrastructure. Thus the publicly supported network must ensure full open access, for all access products, including access to ducts, dark fibre, street cabinets, and bitstream and unbundled access to fibre, including full and effective unbundling for NGA deployments.

105. Have the open wholesale access requirements been sufficient to ensure:

[...] competition at retail level?
[...] infrastructure competition?
[...] competition on prices?
[X] other?

Please explain
[...]
The wholesale access requirements in the Broadband Guidelines have established an appropriate general framework in order to ensure competition along the value chain and regarding prices. However, BEREC is unable to extensively evaluate the degree of the competition achieved due the lack of valid data. In this regard, it is also worth mentioning that competition effects might take some time to unfold, i.e. the respective data will first be available after State Aid funded networks have been operated for some time. In many MS however, the network deployment with the support of State Aid still seems at an early stage.

The experiences BEREC can draw on only allows for the brief assessment that there is demand for wholesale access in State Aid cases, however this demand currently seems to be limited. One of the main reasons is probably that funded (usually rural, sparsely populated) areas are less attractive for access seekers due to questionable profitability perspectives. This might change in the future if publicly funded network deployment will extend to grey areas which will likely offer more attractive economic conditions for third-party operators.

In general, BEREC considers transparency about wholesale access and conditions to be one of the key determinants with respect to ensuring competition. Therefore, it is important to disclose relevant information regarding wholesale access on a central platform that market participants have access to at any time. This platform should also contain information on prices which can serve as references for negotiations between network operator and access seeker, thus might foster voluntary commercial wholesale agreements and therefore avoid lengthy dispute settlement procedures.

106. How have the open access requirements worked in practice? Have you encountered difficulties or disputes in relation to them?

[…]

107. What are the factors enabling or preventing efficient access to the subsidised infrastructure?

[…]

108. Is it right that the aid beneficiary must provide all access products, passive and active, to compensate for the advantage they get from public funds?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain

[...]

109. Has the obligation to provide all access products - in particular physical unbundling of the local loop - prevented the deployment of certain network topologies or solutions?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

110. Has this obligation had an impact on the cost and level of aid required to deploy the subsidised network?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

111. Should the availability of a virtual access solution have been considered a sufficient replacement for physical unbundling of the local loop? If so, under which conditions?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

112. Under the state aid rules for the broadband infrastructure deployment, effective wholesale access to active infrastructure should be granted for at least 7 years, notwithstanding any other regulatory obligations. Is this 7-year period sufficient to ensure active access – and so competition – in the areas concerned, without discouraging private investment?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

113. Under the state aid rules for the broadband infrastructure deployment, effective wholesale access to new passive infrastructure (such as ducts, poles, dark fibre, cabinets) should be granted an unlimited period (i.e. for the lifetime of that passive infrastructure). Is this period sufficient to ensure for passive access?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

114. Under the state aid rules for the broadband infrastructure deployment, effective wholesale access must also be ensured under the same conditions to all existing infrastructure used in deploying the publicly supported network.

	Yes	No	Not applicable/no relevant experience or knowledge
Is this requirement clear?			
Is this requirement appropriate?			
Should further guidance have been provided?			

Please explain
[...]

115. Under the state aid rules for the broadband infrastructure deployment, to guarantee effective wholesale access, it is necessary to ensure that the passive infrastructure has sufficient capacity to support several access seekers (generally at least 3).

	Yes	No	Not applicable/no relevant experience or knowledge
Is this requirement clear?			
Is this requirement appropriate?			
Should further guidance have been provided?			

Please explain
[...]

116. Wholesale-only investment models must include all access products, both passive and active. Should wholesale-only operators be required to provide only a limited number of mandatory access products?

[…]

117. Are the costs of providing all access products, as listed in the Broadband Guidelines, proportionate to the benefit (in terms of encouraging competition)?

[...] Totally
[...] Partially
[...] Neutral
[...] Not at all
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

118. If the network operator also provides retail service, should it be obliged to perform separate accounting, to ensure a level playing field?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

119. As an exception under the current rules, access products for which intervention is costly and are not otherwise planned can be offered only if there is reasonable demand, and under certain conditions.

h. Is this exception for access on reasonable demand appropriate?
[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

i. Is it problematic that no access product was mandatory?
[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain

[...]

120. What are the costs associated with offering access to ducts and poles for the purposes of state aid?

[…]

121. Aid is granted to construct infrastructure in a defined target area. Have aid beneficiaries been allowed to expand such infrastructure outside the target area, if they financed the expansion themselves?

[...] Yes, with any restriction
[...] Yes, only after a certain time period
[...] Yes, only under certain condition/with adequate safeguards
[...] No, they have not been allowed to do this
[...] Other
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

122. Can you identify any preferences for access products? If so, please discuss possible reasons for specific products in subsidised areas.

[…]

123. Please submit any additional information you have about wholesale access obligations – in particular different types of access product requests and take-up rates in subsidised areas (in comparison to other, non-subsidised areas) and the reasons for this.

[…]

Section 13 – Wholesale pricing (para 78(h), Broadband Guidelines, article 52(6), GBER)

124. Are the Broadband Guidelines clear about wholesale prices?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

125. Is this guidance sufficient?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain

[...]

126. Have the requirements for wholesale prices been appropriate, ensuring competition and affordable prices at retail level?

[...] Totally
[...] Partially
[...] Neutral
[...] Not at all
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

127. Has the NRA's involvement in setting wholesale access prices preserved a level playing field?

[...] Totally
[...] Partially
[...] Neutral
[...] Not at all
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

128. Have you experienced any problems in relation to prices for accessing active services?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

129. Have you experienced any problems in relation to prices for accessing passive infrastructure?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

130. If an equivalent regulated product exists, should the regulated access price have been used?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

131. In cases where certain access products required for the state aid measures were not required by national regulations, a pricing methodology has to be developed. What has been your experience?

[…]

Section 14 – Claw-back (para 78(i), Broadband Guidelines, article 52(7), GBER)

132. Are the current rules on the claw-back mechanism clear?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

133. Is the threshold of 10 million euros of aid per project for the obligation to set up a claw-back mechanism appropriate?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

134. Were the existing rules on applying the claw-back clauses adequate?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

135. Were the rules on claw-black sufficient to prevent overcompensation?

[...] Yes

[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

136. Under the state aid rules for the broadband infrastructure deployment, extra profit made by the aid beneficiary may be shared between the beneficiary and the public authorities, proportionally to the amount of aid ('aid intensity') received. Does this prevent over-compensation efficiently?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

137. One possible claw-back mechanism is to compare the profit forecast in the aid beneficiary's original business plan with their actual profit. Any profit above a certain amount (as a percentage of the original forecast) is recovered. Was it useful that no such maximum profit was specified in the rules?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

138. Are some claw-back clauses more suitable for preventing overcompensation than others?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

Section 15 - Monitoring (para 78(i), Broadband Guidelines and article 52(7), GBER)

139. Are the state aid rules for the broadband infrastructure deployment on monitoring clear?

[...] Yes
[...] No

[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

140. Has there been sufficient guidance?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

Section 16 – Transparency (para 78(j) of the Broadband Guidelines)

141. Do the state aid rules for the broadband infrastructure deployment requiring information on the aid measure to be published on a centralised public website provide sufficient transparency?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

Section 17 – Reporting (para 78(k), Broadband Guidelines)

142. Did the reporting obligation create an excessive burden?

[...] Yes
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

Section 18 - Forms of intervention (Annex I, Broadband Guidelines)

The Commission has observed the following to be the most common types of national intervention to foster broadband deployment: monetary allocation (gap funding); support in kind; state-operated broadband network; publicly-owned broadband network operated by a private concessionary.

143. Is there a form of intervention that you consider more pro-competitive than others?

[...] Yes
[...] No

[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

144. Have any of the above intervention models had an adverse effect on competition?

[...] Yes - gap funding
[...] Yes - support in kind
[...] Yes - state-operated broadband network
[...] Yes - concessionary model
[...] Other
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

145. Is there a form of intervention that could confer an advantage on particular companies, such as SMP operators?

[...] Yes - gap funding
[...] Yes - support in kind
[...] Yes - state-operated broadband network
[...] Yes - concessionary model
[...] Other
[...] No
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

146. Which forms of intervention have worked best?

[...] Nationwide vs. local
[...] Passive vs. passive and active
[...] Other
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

147. Under which conditions have these forms of intervention best worked (e.g. nationwide vs. local; passive vs passive and active; etc.)?

[…]

148. To what extent have the different forms of intervention affected the cost and take-up associated with a state aid measure?

[...] Totally
[...] Partially
[...] Neutral
[...] Not at all
[...] Not applicable/no relevant experience or knowledge

Please explain
[...]

Final remark

This section addresses other relevant points related to the current state aid rules on broadband infrastructure deployment.

149. In addition to paras 78-85 of the Broadband Guidelines and Article 52 of the GBER, are there other conditions that beneficiaries of public support should have been required to comply with, to promote competition/reduce distortions of competition?

[...]

150. Do you have any other suggestions/comments?

[...]

151. Should this consultation examine any other issues? Are there additional questions we should include?

[...]

152. Please list any other competition/state aid concerns you may have in relation to the broadband infrastructure deployment.

[...]

Please upload your file
The maximum file size is 10 MB

Can the Commission contact you for further details on the information you have submitted, if required?

[...] Yes

[...] No

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