

**BEREC response to the public
consultation on the draft revised European
Commission Guidelines on State aid for
broadband networks**

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Executive summary

BEREC welcomes the opportunity to submit its input regarding the draft revised European Commission (EC) Guidelines on State aid for broadband networks (hereinafter: “Draft Guidelines”)¹. BEREC supports the approach adopted by the Commission, that is to say the improvement of the Guideline in order to reflect technological and market developments to best accompany the necessary investments in the coming years in a manner compatible with the internal market and the achievement of the connectivity objectives for 2030.

The BEREC response to the public consultation on the Draft Guidelines consists of the following parts: (i) Part I: Draft Guidelines except Annex I ‘Mapping’ and (ii) Part: II: Annex I ‘Mapping’ of the Draft Guidelines.

Part I of the BEREC response

BEREC’s input is based on the specific experiences National Regulatory Authorities (hereinafter: “NRAs”) made with the application of State aid rules for broadband networks (see BoR (17) 246) and NRA’s extensive experiences in sectoral regulation, in particular with regard to market analysis, wholesale access products and pricing principles.

BEREC is of the view that it should be considered to make the consultation of NRAs in the design of State aid measures (paragraph 113) mandatory, given the direct link to wholesale access conditions in different frameworks (SMP and Art. 61(3) EECC², impact of State aid on the competitive environment). BEREC strongly supports the mandatory requirement to consult the NRAs with respect to wholesale access products, conditions and pricing (paragraph 145). BEREC is of the view that dispute settlement on access products, conditions and pricing regarding State aid is best placed as being mandated to the NRA. In addition, the Member States should ensure that the NRAs are provided with sufficient resources and competences. BEREC regards this mandatory consultation of NRAs as necessary in the stage of setting up State aid schemes in a Member State (e.g. at the national, regional, local level etc.) and in the stage of dispute settlement and conflict resolution mechanism.

BEREC fully supports the connectivity targets set by the EC (e.g. Digital Compass Communications). Several frameworks have been established, such as the EECC (e.g. Art. 3(2)(a)), Art. 61(3), Art. 76), the Broadband Cost Reduction Directive (BCRD)³ and the Common Union toolbox for Connectivity, which aim to facilitate private investment in the roll-out of broadband networks (including very high capacity networks) and, therefore, contribute to the achievement of these connectivity targets. State aid intervention should be clearly

¹ Available at https://ec.europa.eu/competition-policy/public-consultations/2021-broadband_en.

² Directive (EU) 2018/1972 of the European Parliament and of the Council of 11 December 2018 establishing the European Electronic Communications Code.

³ Directive 2014/61/EU of the European Parliament and of the Council of 15 May 2014 on measures to reduce the cost of deploying high-speed electronic communications networks

regarded as a subsidiary instrument, i.e. where private investments are insufficient to meet end-users' connectivity needs.

BEREC considers necessary that the market definition (paragraphs 20, 35) does not preclude a Member State from the possibility to combine fixed, mobile and backhaul networks in a single State aid scheme, e.g. to prevent that mobile networks are per se excluded when addressing a lack of fixed ultrafast access network coverage in very rural areas.

BEREC does not share the view of the EC on the market failure definition outlined in the present Draft Guidelines. However, BEREC's position on the definition of white, grey and black areas as well as on the definition of step-change in these areas, results mainly from additional considerations, independent from the market failure. BEREC agrees with the definition of white areas (paragraph 55), and the principle definition of grey areas (paragraph 56), however, BEREC considers that the regime for black areas (paragraph 60) likely results in a severe distortion of competition and the crowding out of private investment, save very specific circumstances which may arise in the future.

BEREC agrees with the step-change foreseen in white areas (paras. 99a, 99b), however, Member States should have the possibility to take mobile networks into account in case of State aid for fixed broadband networks (e.g. in very rural areas, as mentioned above). BEREC sees some issues with regard to the step-change in grey areas and considers it necessary to adapt the definition of grey area slightly in order to ensure certainty for investment recovery on the existing networks. BEREC is of the opinion, as already mentioned above, that black areas should in principle not be eligible to funding and consequently there is no need to define a step-change for black areas.

BEREC is of the view that any State aid scheme should have wholesale access obligations attached to it, designed to ensure the best outcomes in terms of delivering sustainable downstream competition. BEREC considers that all wholesale access products may be required in principle, but the Guidelines should leave NRAs the possibility to adjust the access obligations' portfolio in advance to fit the State aid regime taking into account e.g. the principle of proportionality and remedies imposed under the EECC.

BEREC welcomes that the pricing principles (paragraph 151) continue the practice of the EC provisions on State aid currently in place. However, it is important that the wording will be adapted slightly otherwise there would be a risk of severe distortions in the pricing systems implemented.

BEREC notices that the provisions with regard to the NRA Guidelines for local authorities provide more flexibility for the NRAs. BEREC welcomes that the Draft Guidelines (paragraph 127) follows the technological neutrality principle and clarify that this is without prejudice to the possibility for the Member States to determine the desired performance. However, wholesale access obligations depend on media, technology and network architecture and an unrestricted application of the principle of technological neutrality seems not possible.

BEREC wants to point out that if the scope of the revised BCRD will be limited to very high capacity networks (VHCN) this may have a negative impact on State aid. BEREC is of the

view that this potential negative impact on State aid needs to be considered in the revision of the BCRD.

BEREC is of the view that the NRA should also be a recipient of the report that Member States must submit to the EC every two years (paragraph 208 and Annex V).

BEREC welcomes the possibility to issue social vouchers. In case of connectivity vouchers, BEREC is of the view that it needs to be ensured that the potential negative impacts are minimised.

BEREC welcomes that environmental aspects are considered in the Draft Guidelines and that they encourage Member States to include criteria related to environmental impacts in State aid granted projects. BEREC is of the view that the Guidelines should also assist in specifying indicators for network operators to report the environmental impact of the planned network deployment and mitigating measures and that BEREC's and NRAs' expertise on the sector should be taken into account when defining these indicators.

BEREC suggests that the final Guidelines should foresee an appropriate transition period in order to allow ongoing aid measures (including pre-notified measures) to be finalised under the current regime for reasons of legal certainty.

BEREC is of the view that the GBER⁴ needs to be aligned regarding the duration of wholesale access obligations, wholesale access prices, speed conditions of vouchers and some definitions (e.g. passive network) with the final version of the revised EC Guidelines on State aid for broadband networks.

Part II of the BEREC response

Part II of the BEREC response deals with Annex I and provides BEREC's views on the recommended methodologies to carry out the mapping exercise to support state aid interventions.

BEREC holds that the public authorities should make efficient use of Articles 22, 20 and 21 of the EECC, which provide for surveys of the reach of broadband networks as required for the application of state aid and for the tasks under the EECC. Therefore, BEREC considers that the Draft SAG should recognise the purpose of these articles in delivering the information necessary to support state aid notifications. Moreover, BEREC elaborated Guidelines to support the implementation of Article 22 of the EECC and considers that the data collected following these should be the primary source of information for state aid purposes as, in many cases, it would suffice to assess market failures as described in the Draft SAG. The duplication of data requests should be avoided.

⁴ Commission Regulation (EU) 2021/1237 of 23 July 2021 amending (EU) No 651/2014 of 17 June 2014 declaring certain categories of aid compatible with the internal market in application of Articles 107 and 108 of the Treaty.

Annex I requires that information is provided at address level for fixed and fixed wireless networks and address or small grids level for mobile ones. BEREC argues that alternative options should be allowed, until 21st of December 2023, in conformity with the expectations set in the BEREC Guidelines and the EECC.

BEREC contends that, since the information needed to support state aid intervention depends on the specific circumstances and objectives, public authorities should have the authority to design the data requests in a meaningful, proportionate and least burdensome to handle manner.

Considering planned deployments, BEREC calls for additional standards which would enable the collection of less granular information, given that data as detailed as required by Annex I would, in general, not be available for longer forecast periods.

BEREC concludes that for legal certainty and technical reasons, the Draft SAG should use the “premises passed” concept as defined in the BEREC Guidelines and requests that the criteria that characterize peak time conditions in sections 3 and 4 of Annex I are clarified. In particular, BEREC considers that, for fixed networks, the criteria should take into account all end users and not depend on the contracted speeds of network clients and that the performance information for wireless networks should be provided per address or grid, as argued in paragraph (9) of Annex I and not per end-user, technology and operating frequency as paragraph (20) would imply.

Part I - Draft revised European Commission Guidelines on State aid for broadband networks except Annex I 'Mapping'

1 Introduction

This is Part I of the BEREC response to the public consultation on the Draft Guidelines.

BEREC focuses its input on the issues that are particularly important for BEREC e.g. the role of NRAs in granting State aid, market definition, market failure, step-change, wholesale access conditions and prices. BEREC's input is based on the specific experiences NRAs made with the application of State aid rules for broadband networks and the BEREC Report on the 'Analysis of individual NRAs' role around access conditions to State aid funded infrastructure' which BEREC published in 2017.⁵ A further fundamental basis for BEREC's input is the NRA's extensive experiences in sectoral regulation, in particular with regard to market analysis, wholesale access products and pricing principles.

BEREC has already contributed to the revision of the EC Guidelines on State aid for broadband networks with its response to the targeted public consultation on the evaluation of the State aid rules for the deployment of broadband networks in December 2020.⁶ The BEREC response to the public consultation on the Draft Guidelines is also based on this contribution.

BEREC acknowledges that the Guidelines and the General Block Exemption Regulation (GBER) have different scopes, scenarios and enforceability. In this regard, there can be some variations between the two of them. The GBER defines ex ante compatibility conditions, while the Draft Guidelines lay down the rules for the assessment of aid measures that do not fulfil those ex ante conditions and have to be notified to the EC⁷.

However, NRAs intervention is required in both cases. Furthermore, the market situation will be very similar no matter if the project is subject to the GBER or to an EC Decision. There is not a clear explanation why some conditions are harder in the Draft Guidelines than in the

⁵ BoR (17) 246, see https://berec.europa.eu/eng/document_register/subject_matter/berec/reports/7531-berec-analysis-of-individual-nras8217-role-around-access-conditions-to-state-aid-funded-infrastructure

⁶ BoR (20) 226, see https://berec.europa.eu/eng/document_register/subject_matter/berec/others/9724-berec-response-on-the-targeted-public-consultation-on-the-evaluation-of-the-state-aid-rules-for-the-deployment-of-broadband-networks

⁷ See Roadmap "Modification of the General Block Exemption Regulation for the Green Deal and the Industrial and Digital Strategies" [file:///L:/System/Downloads/090166e5da533400%20\(4\).pdf](file:///L:/System/Downloads/090166e5da533400%20(4).pdf)

GBER⁸ or why the definitions differ.⁹ For this reason, BEREC is of the view that the GBER needs to be aligned regarding the duration of wholesale access obligations, the wholesale access prices (see section 6 below), speed conditions of vouchers (GBER Art. 52c(3)) and some definitions with the final version of the revised EC Guidelines on State aid for broadband networks and that the BEREC response to the public consultation on the Draft Guidelines shall also be taken into account in this alignment of the GBER.¹⁰

2 The role of NRAs in granting State aid

BEREC welcomes that in the Draft Guidelines (paragraph 112) the Commission acknowledges that the role of NRAs in designing the most appropriate State aid measure in support of broadband is particularly important. However, BEREC considers that the proposed change from „*pro competitive State aid measure*“ in the 2013 Guidelines to „*most appropriate State aid measures*“ in paragraph 112 of the present Draft Guidelines should be reversed. The criteria for what is most appropriate are less tangible than those for what is most competitive which may ultimately hinder private investments.

BEREC agrees that the NRAs are best placed to support public authorities with regard to the design of State aid measures because of the technical knowledge and expertise of the NRAs which they have gained due to the crucial role assigned to them by sectoral regulation.

BEREC welcomes and agrees with the importance that the Draft Guidelines (paragraph 113) encourage the Member States to systematically consult NRAs on the design of State aid measures, and in particular but not limited to, in the following areas:

- identification of target areas;
- assessment of step-change;
- wholesale access products (conditions and pricing); and
- conflict resolution mechanisms as well as dispute settlement.

It is positive that Member States are encouraged to involve the NRAs in more activities compared to the 2013 Guidelines, which now explicitly includes also the assessment of step-change and conflict resolution mechanisms. BEREC also welcomes that the Draft Guidelines

⁸ E.g. article 52.7 GBER: Active wholesale access shall be granted for at least *seven* years and the wholesale access to the physical infrastructure including ducts or poles shall not be limited in time. Paragraph 142 of the Draft Guidelines: Effective wholesale access must be granted for at least *ten* years for all access products except VULA.

⁹ E.g. passive network.

¹⁰ The EC has already launched a revision of the GBER on 23 July 2021 and a public consultation on revised GBER on 6 October 2021 which closed on 8 December 2021. This revision will align the GBER to several EU State Aid Guidelines (the Energy and Environmental Aid Guidelines, the Regional Aid Guidelines, the Research, Development and Innovation Framework and the Risk Finance Guidelines), however, not yet to the new EC Guidelines on State aid for broadband networks. See https://ec.europa.eu/competition-policy/public-consultations/2021-gber_en

(paragraph 114) provide that NRAs may issue guidelines for local authorities on, inter alia, carrying out specific market analysis and definitions of wholesale access products and pricing.

Compared to the 2013 Guidelines, BEREC notes that the role of NRAs seems to be altered in paragraph 113. Whereas in the 2013 Guidelines NRAs “*should be consulted*” the draft now states that “*Member States are encouraged to systematically consult NRAs on the design of State aid measures*”. The wording “encouraged” is unusual and not fully clear and, therefore, BEREC is of the opinion that the final Guidelines shall clarify this. Nevertheless, BEREC is of the view that the NRA involvement should be mandatory, given the direct link to wholesale access conditions in different frameworks, in particular SMP and Art. 61(3) EEC, because the different provisions for these frameworks will often overlap to a degree in a target area and given the impact of State aid and the attached obligations on the competitive environment in the electronic communications markets in general. Therefore, Member States should also not only be “*encouraged*” to provide NRAs with resources and competences. Rather the Member States should ensure that the NRAs are provided with sufficient resources and competences. Footnote 81¹¹ should be put in the main body of the text, because it is referring to an important issue, regarding the timely involvement of NRAs.

BEREC regards this mandatory consultation of NRAs as necessary in the stage of setting up State aid schemes in a Member State (e.g. at the national, regional, local level etc.) and in the stage of dispute settlement and conflict resolution mechanism.

While BEREC supports that in paragraph 134 a consultation of the NRA is regarded as important, BEREC notes that the consultation is not obligatory (“*may consult*”) whereas in paragraph 145 it is stated that Member States “*must consult*” the NRAs, on pricing for wholesale products, which also includes ducts and poles. Even though paragraph 134 addresses a different wholesale access – the access to existing infrastructure – where some NRAs may not have the responsibility on pricing aspects, but they often do. In particular this is the case, where the NRA is at the same time the dispute settlement body (DSB) according to the BCRD or where access to existing infrastructure by an undertaking is subject to SMP regulation or obligations under Art. 61(3) EEC is imposed. The wording should be changed to “*must consult where the NRA is responsible for pricing obligations of such infrastructure*”. Otherwise there is an evident risk that inconsistent pricing principles and methods for access to existing infrastructure are implemented within a Member State.

BEREC strongly supports the mandatory requirement to consult the NRAs with respect to wholesale access products, conditions and pricing and also agrees that NRAs should be encouraged to support aid granting bodies with guidance as is foreseen in paragraph 145 of the current Draft Guidelines. As also stated in the response to the EC’s evaluation on State

¹¹ Footnote 81: “*When the NRA has received the necessary competences under national law for their involvement in State aid broadband projects, the Member State should send to the NRA a detailed description of aid measures and the relevant characteristics, at least two months prior to a State aid notification to allow the NRA to have a reasonable period of time to provide its opinion*”.

aid¹², involvement of NRAs was insufficient in many Member States and the remedies imposed were not always in line with the best practices applied under the regulatory framework. The mandatory involvement of NRAs will likely contribute in avoiding unnecessary and harmful distortions of competition and will further enable NRAs to contribute with their experiences gained in the regulation of electronic communication networks.

Furthermore, on many occasions the Draft Guidelines emphasise the important role of competition policy and State aid rules in particular in fulfilling digital strategy objectives (i.e. paragraph 9) as well as the important role of NRAs in ensuring effective competition of the electronic communications sector (i.e. paragraph 10). Considering the ambitious aims of the Europe's digital strategy and the crucial role of NRA's fulfilling them, in BEREC's view it should be mandatory to consult the NRA on wholesale access products, the terms and conditions for wholesale access, including on prices and on related disputes. Therefore BEREC proposes to change the term "should be consulted" in paragraph 152 into "*must be consulted*". This modification is also required to avoid inconsistencies in the text: While paragraph 145 imposes ("*must*") the consultation to the NRA on wholesale access products, conditions and pricing, the current wording of paragraph 152 only suggests this approach. Therefore the text of the latter should be in line with paragraph 145 and be changed into "*must be consulted*".

BEREC is of the view that dispute settlement on access products, conditions and pricing regarding State aid is best placed as being mandated to the NRA because of the interactions of the State aid regulations, BCRD, SMP-regulation and the symmetric regulation pursuant to Article 61(3) EEC (see section 7).

Legal basis

Paragraph 113 of the Draft Guidelines states "Where necessary, Member States should provide an appropriate legal basis for such involvement of NRAs in State aid broadband *projects*". This means that it lies within the discretion of the Member States to establish such a legal basis. BEREC is concerned that this aspect has not changed from the current guidelines (cf. paragraph 42 of the 2013 Broadband State Aid Guidelines).

The lack of a compulsory legal basis for the role of the NRAs can lead to practical issues regarding NRAs' insufficient knowledge of State aid cases, particularly with respect to access and pricing conditions. In this respect, BEREC wants to point out that, as was also stated in the BEREC response on the targeted public consultation on the evaluation of the State aid rules for the deployment of broadband networks in December 2020, only some countries have created 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 Member States. This can also be seen in the BEREC report on an "Analysis of individual NRA's role around access conditions to State aid funded infrastructure" (BoR (17) 246). For example, in 14 countries the

¹² BoR (20) 226, 10.12.2020.

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, BEREC considers that a clear legal basis would be preferable and lead to more consistent and certain NRA involvement. It would add more clarity given the fact that NRA involvement is crucial and important to set consistent requirements on access obligations. As a result also the market players (access providers, access seekers and ultimately end-users) involved in both, private and publicly funded areas, would benefit from an increased security for investment plans on network deployment and wholesale access. In that respect, the final Guidelines should make clear that the NRAs need to be involved in the areas listed in paragraphs 113 in order for State aid cases to be accepted by the EC.

Monitoring

BEREC further wants to highlight that a monitoring task is not explicitly foreseen. Many NRAs have neither the means nor the legal mandate to monitor the State aid schemes once they have been submitted. Indeed, as the aforementioned BEREC analysis (BoR (17) 246) found out, in 2017 only NRAs from six Member States 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). 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 Member States, 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). BEREC believes that it has to be ensured that NRAs can observe access and pricing conditions in the context of State aid, for instance for consistency with regard to other access regimes in a target area. Therefore, BEREC asks that the Member States may involve NRAs in the monitoring of, at least, the areas for which the NRAs have been consulted.

3 Identification of target areas

An important part of the identification of target areas is mapping. BEREC's response to the provisions with regard to mapping, in particular to Annex I 'Mapping', is provided in Part II of the BEREC response to the public consultation on the draft revised EC Guidelines on State aid for broadband networks (see section1).

4 Market definition, market failure and step-change

BEREC notes that the Draft Guidelines aim at significantly expanding the role of State aid in achieving the overall connectivity targets until 2030. BEREC fully shares those connectivity targets and is determined to foster the utilization of all tools available to NRAs to achieve them. However, BEREC considers that the primary focus should remain on incentivizing private investments, utilizing the tools of the EECC in light of the new regulatory objective to promote connectivity and take up of very high capacity networks (VHCN) and the BCRD. BEREC notes

in that regard that both the BCRD and the Access Recommendation are currently under review, in particular to foster the effectiveness of those instruments for achieving the connectivity targets. However, BEREC continues to regard State aid as a subsidiary instrument where commercial roll out would otherwise not happen and end users would absent the aid not benefit from this essential service. Therefore, BEREC is concerned about the apparent foreseen expansion of the role of State aid in the electronic communications sector.

Indeed, BEREC overall welcomes that the Draft Guidelines provide for an updated framework with respect to market definition, market failure and step-change. BEREC regards this update of utmost importance in order to have the State aid framework keeping pace with economic, social and technological developments and the connectivity targets across the EU. BEREC would like to raise attention to several points, which in BEREC's view require further improvement or have a certain lack in clarity, however. BEREC is particularly concerned by the definition of the market failure and its implications on competition and private investment. Closely related, BEREC is alerted by the possibility to direct State aid to network deployments in grey areas and, in particular, in black areas as defined in the current Draft Guidelines, which will likely result in severe problems for competition and private investment, save very specific circumstances which may arise in the future.

4.1 Market definition

Paragraph 20 of the Draft Guidelines distinguishes, for the purposes of State aid assessment, between fixed ultrafast access networks, mobile access networks and backhaul networks. Complementary to this differentiation, the Commission considers the market for fixed broadband services as separate from the market for mobile broadband services in paragraph 35.

Even though under the SMP framework NRAs typically define separate markets for fixed and mobile services, given the lack of sufficient substitutability of services, in some cases deployment of a mobile instead of a fixed network might be justified as an alternative to remedy a connectivity issue, in particular in remote and or very low-density areas. This should always be assessed on a case by case basis for a given market. In particular, a mobile broadband network planned to support services with very generous data packages or unlimited data may in some Member States or geographic markets within a given Member State serve as a substitute to fixed broadband.¹³

Moreover, even in Member States where fixed and mobile broadband services are not regarded as (full) substitutes, mobile network coverage might be the most affordable and fastest solution to address a lack of end-user broadband connectivity, in particular for very remote areas with poor or non-existent fixed network coverage. Therefore, also the definition

¹³ For example, in Austria, mobile broadband (data tariffs) was found to be a close enough substitute to fixed broadband in the residential segment in order to include it in the same product market at the retail level since several years. This applies both to areas with poor fixed network quality and urban areas with readily available high speed networks.

of markets as defined in paragraph 35 should be drafted more carefully. The strict distinction between fixed and mobile services may prevent technically sound and cost effective solutions in particular in some very remote white areas (see also comment to paragraph 99 below).

BEREC wants to point out that it is aware that, according to the Draft Guidelines, Member States have the possibility to set up three State aid schemes in the same intervention area at the same time, one scheme for fixed broadband networks, one for mobile broadband networks and one for backhaul networks. However, BEREC understands that in this case Member States seem not to have the possibility to select only a mobile broadband network but have to select also a fixed broadband network, since the scheme for fixed networks has been set up and a call for proposals has been launched and, therefore, the Member State would not have the possibility to close the scheme for fixed networks without selecting a proposal and spend public funds for the implementation of this proposal.

Therefore BEREC, mindful of the principle of technological neutrality, considers that the distinction between fixed and mobile broadband services should be based on qualitative criteria and allow exceptions based on a case by case assessment. The definition in paragraph 35 should therefore reflect this possibility and at the same time keep a sufficient distance between market analyses carried out under the SMP framework and markets relevant to the specific market failure addressed by the State aid Guidelines. To give sufficient room for flexibility, paragraph 35 could include the possibility that this distinction does not preclude a Member State from the possibility to combine fixed, mobile and backhaul networks in a single State aid scheme, e.g. to prevent that mobile networks are per se excluded when addressing a lack of fixed ultrafast access network coverage in very rural areas.¹⁴

Moreover, if (full) substitutability between mobile and fixed networks should evolve in the future due to significant changes in consumer behaviour across multiple Member States, the Guidelines may need revising.

4.2 Market Failure

4.2.1 Existence of market failure as regards fixed access networks

BEREC would like to reiterate its full support to the targets set by the EU Commission in the Gigabit Communication, Communication on Shaping Europe's digital future and the Digital Compass Communications. BEREC deems it of utmost importance that the EU keeps pace with technological, social and economic developments, which will require considerable investments in the deployment of electronic communications networks. BEREC also supports measures aiming at a reduction to close the digital divide in order to enable the citizens of the EU and undertakings as well as public sector institutions in the Member States to participate

¹⁴ In this case, Member States may need to collect data on the speed of mobile services in buildings (indoor). BEREC is of the view that Member States shall use the method they consider appropriate, however, BEREC does not see the need to define such a method in Annex I 'Mapping' of the final version of the Guidelines.

in the digital society. Several instruments have been implemented, in order to facilitate the roll-out of broadband networks, including VHCN.

Firstly, the EECC added a new regulatory objective, “*to provide connectivity and access to, and take-up of, very high capacity networks*” (EECC Article 3 paragraph 2 lit a). To that end the EECC foresees a variety of tools which give room to preserve incentives for private investment).¹⁵

In addition, the BCRD – currently under review by the EU Commission – “[...] *aims to facilitate and incentivise the roll-out of high-speed electronic communications networks by promoting the joint use of existing physical infrastructure and by enabling a more efficient deployment of new physical infrastructure so that such networks can be rolled out at lower cost.*” The BCRD therefore seeks to reduce the costs for the deployment of electronic communications networks, by enabling the use of synergies, which can foster private investment into such networks.¹⁶ Furthermore, in June 2021 the Commission released the Recommendation of a common Union Toolbox, which further aims, among other things, to foster network deployment in the Member States.

The measures implemented according to these tools therefore all aim to facilitate private investment and will contribute to achieving the above mentioned targets. BEREC is of the view that State aid is an additional instrument of significant importance aiming to remedy a lack of investment and provide connectivity, where private investments fail to achieve this goal in a forward looking perspective. To this end, State aid intervention should be clearly regarded as a subsidiary instrument, i.e. only where private investment was insufficient to meet end-user needs and is very unlikely to emerge in the medium-term future to meet such needs.

Paragraph 50 of the Draft Guidelines envisages the possibility to address high retail prices, due to different competitive conditions, by granting State aid for the deployment of a second network by an alternative operator. Whilst quality of service provision and a lack of coverage are certainly issues to be addressed by State aid intervention, BEREC considers that the objective to address high retail prices as a result of a lack of competition is normally addressed by the instruments provided for ex-ante regulation under the EECC (in fact, paragraph 51 of the Draft Guidelines highlights the subsidiarity of State aid with respect to “other policies and measures”). Such intervention may entail risks for private investment incentives and competition in particular, if the analysis of the competitive situation and price levels made by the authority granting the aid and the analysis carried out by the NRA’s differ. Therefore, such

¹⁵ For example, Article 61(3) subparagraph 3 (exemptions for new network deployments, wholesale only VHCN and possibly different other VHCN), Article 74 subparagraph 3 (pricing flexibility in order to maintain investment incentives), Article 76 (exemptions from certain SMP-remedies in case of open co-investments), Article 80 paragraph 2 (limited set of remedies on wholesale only undertakings), etc.

¹⁶ At the same time the BCRD may also reduce the amount of public funds for the roll-out of broadband networks due to the use of existing physical infrastructure of other operators.

State aid intervention should only be possible if the NRA explicitly agrees in a formal consultation.

BEREC does not share the view of the EC on the definition of the market failure for fixed networks as currently laid out in paragraph 52 of the Draft Guidelines. While BEREC observes a general trend that supply and demand for broadband connections above 100 Mbps download are increasing and varies to a significant extent between Member States, currently average demand does not exceed 100 Mbps download in a large number of Member States and demand for connections of 1 Gbps services is low across the EU. Moreover, in many Member States, consumers continue to make conscious decisions for “low speed - low price” products up to 100 Mbps, even where faster connections are available.

In this market environment, BEREC does not share the view that fixed connectivity below the 1 Gbps download threshold could currently be reasonably regarded as a market failure *per se*, especially considering the peak time conditions defined in Annex I.¹⁷ Even though such a service demand is likely to further develop in the future, such a high and strict threshold appears to be premature (it rather seems appropriate to take such long term perspectives into account, when looking at the step-change definitions and possible upgrade paths towards a Gigabit-Society). It does not seem appropriate that fixed connectivity falling short of the 2030 targets may constitute a market failure already in 2022. In particular, areas where there is an existing VHCN (e.g. FTTH P2P, FTTH PON, FTTB, certain networks based on DOCSIS 3.1 and higher) should not be subject to publicly funded networks overbuild, with the exception mentioned in the paragraph 59 of the Draft Guidelines. BEREC would regard overbuild of such networks through State aid projects as an unjustified distortion of competition because those networks may be capable of being upgraded to 1 Gbps (without any further infrastructure roll out) when this demand has been developed. BEREC considers that as demand for higher speed services will continue to develop in the next years, private investments will likely already have closed the gap in connectivity in several areas, which would otherwise in principle be eligible for State aid already now according to the Draft Guidelines. As increasing demand for high speeds is likely in the future, it may be a possible solution to amend the proposed definition of market failure by introducing the possibility for Member States to consider an evolutive market failure definition through a progressive approach. This would allow for as much private investment as possible, but also to ensure reaching the 2030 targets at the same time. In particular, the Guidelines could foresee the possibility for Member States to demonstrate a market failure related to a different level of bandwidth demand compared to the final Guidelines, where the development in the individual Member State justifies this.

¹⁷ Availability of 1 Gbps per user during peak time, according the definition in Annex I ‘Mapping’ (paragraph 15) of the Draft Guidelines (20% of users are transmitting concurrently), implies that for example every 64 users connected to the same FTTH tree requires 12,8 Gbps, higher than the capacity provided by XGS PON. Even more, a higher pressure exists when evaluating backhaul capacity since it implies to equip OLTs with backhaul interfaces of 100’s of Gbit/s when covering an area of 500 households, that is as OLT equipped with only 10 GPON ports.

The market failure threshold might also be problematic with respect to the *ex-ante* regulatory regime, in particular in areas that have been found competitive and which have been de-regulated accordingly. The Guidelines should therefore clearly state that the market failure – regardless of its precise definition – is no indication whatsoever of a market failure that needs to be remedied by SMP regulation.

BEREC considers the proposed market failure threshold in terms of upload speed to be problematic. This concern includes the data rate of 200 Mbps upload as well as the possibility to even regard higher upload data rates of up to 1 Gbps as a market failure, given the current conditions on the retail markets across the EU. Of course such demand might develop in the future and some networks operators already started deploying XGS PON which can even provide symmetric data rates, as can DOCSIS 3.1 full duplex.¹⁸ Deployment of such networks by private investment is more likely in areas where two ultrafast broadband networks are already present and a certain degree of infrastructure based competition is developing. Even if deployment of such networks is not observable at very large scale today, this is not indicative of a market failure at the moment, as these technologies have been introduced only in the recent years. It may indeed be correct and even likely that upload speed is becoming increasingly relevant for end users in the mass market. However, it remains less relevant than download speed at this point in time and BEREC is not aware of any indications that the pace of development in demand patterns can justify a market failure of this magnitude already at present.

The main need for reliable upload capacity on a broader scale in the mass market that BEREC observes at this stage, can be attributed to videoconferencing / telework / home-schooling applications (as also highlighted in section 6.1 of the Draft Guidelines). These types of demand would technically typically be fully satisfied with reliable upload speeds much below the upload threshold of 200 Mbps. Even in light of the very important connectivity targets referred to above, BEREC is of the view that defining upload speeds of 200 Mbps and above as a market failure at this point in time is not justified. Overbuilding of networks with State aid funded projects, which fall short of such a capability now, will likely lead to an unjustified distortion of competition, in particular where such networks are already competing against each other (see also comments on black areas, paragraphs 60 and 61). Moreover, the prospect that State aid funding can be received, where in particular overlapping ultrafast broadband networks are already present, can discourage private investment.

In conclusion, BEREC does not share the view of the EC on the market failure definition outlined in the present Draft Guidelines. However, BEREC's position on the definition of white, grey and black areas as well as on the definition of step-change in these areas, results mainly from additional considerations, independent from the market failure. Furthermore, the market failure definition may be subject to adjustments as the decade progresses.

¹⁸ With DOCSIS 4.0 the next standard for the upgrade of HFC DOCSIS networks is already specified, which will bring even higher capabilities.

Definition of white areas

BEREC agrees with the definition of white areas in paragraph 55 and is of the view that these areas reflect a market situation, which is very likely to justify intervention with State aid. However, BEREC would like to reiterate that in such areas Member States should have the possibility to take into consideration, based on a case-by-case assessment, mobile broadband networks even if the mobile services they provide are not regarded as substitutes to fixed access services (see comments on paragraphs 20 and 35 in section 4.1 above).

Definition of grey areas

In principle BEREC agrees with the definition of grey areas in paragraph 56, although it disagrees with the market failure definition (see section 4.2.1). It is also unclear from the text, if the market failure threshold in paragraph 57 could be even subject to upwards adjustments with respect to upload speeds (as is suggested in paragraph 52 and later in footnote 54). Indeed this should not be the case.

The current definition of grey areas results in the following significant problem. If the one ultrafast network available in the grey area is upgradable to 1 Gbps download and 200 Mbps upload speeds, it is not allowed to apply for State aid as no significant new investments are necessary (see paragraph 96 and footnote 71). Consequently, State aid would result in an overbuilding of this network which is clearly to be avoided. Moreover, the new network may not even have a better performance than the existing network which is upgradable to 1 Gbps.

BEREC considers it to be important that public funding in grey areas should provide certainty for investment recovery on the existing networks and, therefore, it is necessary to adapt the definition of grey areas slightly as follows. Grey areas are areas in which one ultrafast network is present or credibly planned in the relevant time horizon (as defined in paragraph 56) and this network cannot provide at least 1 Gbps download and 200 Mbps upload speeds (as defined in paragraph 57) and is also not upgradable to such speeds (new characteristic). This ensures that the existing network is not excluded from State aid and has the possibility to apply for State aid.

If the definition of grey areas were not adjusted as suggest by BEREC above, BEREC considers it needs to be ensured that public funding in grey areas provides certainty for investment recovery on the existing networks by other means. This could be achieved by specifying a minimum number of years since the deployment of network with private investment took place prior to public funding (detailed explanation see section 4.3.3).

As market failures present in white areas have not yet been fully addressed, BEREC therefore advises the Commission to foresee that Member States prioritize white areas to a degree when deciding about the distribution of public funds in State aid schemes. This does not mean that market failure issues in grey areas should not be addressed already at this point in time, but rather that the funding of non-white areas should not be considered at an undue expense of white areas.

Definition of black areas

BEREC considers that granting State aid to black areas as described in paragraph 60 is likely to lead to harmful distortions of competition, save very specific circumstances which may arise in the future. In all Member States, retail products of 100 Mbps and above are typically part of the same market defined under the SMP framework. In most cases of black areas, at least one of the networks has been deployed commercially by a non-incumbent operator. Providing State aid to one of two ultrafast networks in a given area, or even a third player, would clearly lead to a significant distortion of competition which in the view of BEREC is not justified by the expected benefits resulting from the aid. As a result, one network will have a significant and unfair advantage over the other network(s), without any clear benefit for the end-users.

It is unclear from the text, if the market failure threshold in paragraph 60¹⁹ could be even subject to upwards adjustments with respect to upload speeds, which is indicated by footnote 54²⁰. Indeed, this should not be the case.

It has to be considered that black areas – by definition – are characterised by a higher degree of infrastructure based competition. This does not necessarily lead to the conclusion that such areas are tending towards effective competition or that there is absence of high and non-transitory barriers to market entry, when being assessed in a market definition and market analysis pursuant to Articles 64 and 67 EEC. Nevertheless, such areas have a prospect to see a significantly higher degree of investment in network infrastructure and improvements of service quality to the benefit of end-users in the medium to long-term perspective as a direct consequence of competition. The prospect of such areas being eligible for State aid funding can – adversely – discourage such private investment. The likely result of public funding to black areas will therefore be the crowding out of private investment. The proposition is unlikely to have a positive incentive effect and may increase the risks of opportunistic behaviours by stakeholders.

In addition, BEREC points out that market failures in white (and grey) areas at this point in time have not fully been addressed by State aid measures in the Member States. This might transfer funding resources from white and grey areas away to black areas. This is a further reason to regard funding of black areas as premature.

In summary BEREC considers that the State aid scheme for black areas as proposed by the Commission in the Draft Guidelines would likely result in a severe distortion of competition and the crowding out of private investment. Yet, BEREC considers that some specific cases that could justify such an intervention may arise in the future where it is evident that no further private investment into network infrastructure takes place which is suitable to meet end-user demand. For instance, a market failure can be demonstrated and would justify such an

¹⁹ (60) if none of the existing networks can provide 1 Gbps download and 200 Mbps upload speeds and if none of the existing providers commits to upgrade its network to those speeds in the relevant time horizon.

²⁰ Footnote 54: Irrespective of demonstrated needs for enhanced upload speed, no intervention is possible if there are at least two networks that can be upgraded to provide at least 1 Gbps upload speed.

intervention in places with socio-economic drivers, such as digitally intensive enterprises, schools, hospitals and public administration in line with the Gigabit Communication.

BEREC supports provision (72) of the 2013 Guidelines that notes that “*accordingly, there is very little scope for State intervention to bring further benefits. On the contrary, State support for the funding of the construction of an additional broadband network with comparable capabilities will, in principle, lead to an unacceptable distortion of competition, and the crowding out of private investors. Accordingly, in the absence of a clearly demonstrated market failure, the Commission will take a negative view of measures to fund the roll-out of an additional broadband infrastructure in a ‘black area’*”.

BEREC would also like to remark on the notion of “*... typically provided under competitive conditions ...*” within paragraph 60. This notion might lead to the impression that such areas are in themselves also regarded as being competitive under the framework of the EECC. BEREC agrees that areas with parallel infrastructures with similar capabilities are more competitive compared to areas where this is not the case. Whether these areas are tending towards effective competition needs to be addressed under the SMP framework, however. The observations outlined above also apply to paragraph 61 which should be changed accordingly. Nevertheless, BEREC welcomes the clarification provided for in footnote 55 and would like to express agreement to the definition of “upgradeable”.

4.2.2 Existence of market failure as regards backhaul networks

In the Draft Guidelines, there is no consistency with the criteria used for market failure between access networks and backhaul networks. For access networks, a market failure is considered when there is a single and even two ultra-fast networks. On the contrary, there is no market failure when a single fibre based (or equivalent) backhaul network is present, even when sometimes it is more necessary for competition.

BEREC is of the opinion that it may be appropriate in the assessment of market-failure and the necessity of a State intervention for the deployment of a backhaul network or its enhancement, to revise the suggested criteria in paragraph 72. BEREC suggests that assessment criteria of market failure concerning backhaul should be conducted with guidelines that fit backhaul networks characteristics, in terms of architecture (capacity and dimensioning according to backhaul users). Also, it should be clear whether market failure concerning backhaul networks applies to areas where public intervention is needed to deploy or enhance backhaul networks only, or also areas where backhaul needs are assessed for the effectiveness of access to fixed and/or mobile networks planned to be State funded. It should be at least clarified how to avoid an overlap with access obligations to dark fibre, provided for in section 5.2.4.4 of the Draft Guidelines (see section 5.1.2 b) below).

4.3 Step-change

BEREC welcomes that the Draft Guidelines (paragraph 113) encourage Member States to systematically consult NRAs in the design of State aid measures also with regard to the assessment of step-change. This section examines the Draft Guidelines in more detail with regard to the following aspects of step-change:

- Necessary enhancement of the characteristics of the network;
- Step-change in white areas of fixed access networks;
- Step-change in grey areas of fixed access networks;
- Step-change in black areas of fixed access networks;
- Step-change in case of enhanced upload speeds of fixed access networks;
- Step-change of mobile access networks;
- Step-change in case of backhaul networks.

The Draft Guidelines (paragraph. 96) define that a step-change needs to demonstrate that as the result of the public intervention (i) the new fixed or mobile network deployment represents a significant new investment in broadband network and (ii) the State funded network brings significant new capabilities to the market in terms of broadband service availability, capacity, speeds and competition. In addition, the Draft Guidelines provide further information on step-change for fixed access networks (paragraphs 98-106), mobile access networks (paragraphs 107-109) and backhaul networks (paragraph 110).

4.3.1 Necessary enhancement of the characteristics of the network

BEREC agrees with the Draft Guidelines (paragraph 96) that the State funded fixed and mobile access networks must provide significantly enhanced characteristics in comparison to existing networks and, therefore, should be able to ensure a step-change.

Considering paragraphs 99 to 106 for fixed networks or paragraph 109 for mobile networks, BEREC understands that the step-change in the Draft Guidelines defines the minimum enhancement of the characteristics the networks have to show for the Commission to consider State aid compatible with the internal market. This means that Member States are free to choose higher speed limits for the network. BEREC welcomes that the Draft Guidelines define the step-change as minimum enhancement of the characteristics the networks have to show in order for State aid being considered compatible with the internal market by the Commission.

4.3.2 Step-change in white areas of fixed access networks

BEREC considers that it is indeed important and reasonable to allow for State aid in white areas to achieve increases of download speeds as suggested by options a) (at least double the existing download speed and reach at least 30 Mbps download speed) and b) (triple existing download speed and at least reach ultrafast download speeds), because these speed increases are technically necessary to allow customers in these areas to enjoy key broadband services to fully utilize applications for teleworking, video-conferencing, home-schooling etc.

However, BEREC would like to point out that the step-change in paragraph 99 b) is not fully clear. Paragraph 99 b) states '*at least triple the download speed and at least reach ultrafast download speed [i.e. 100 Mbps]*' and then quotes a strategic objective of the Union that by 2025 '*all European households, rural or urban, will have access to Internet connectivity offering a downlink of at least 100 Mbps, upgradable to Gigabit*'. The inconsistency needs to be addressed. It is not fully clear whether the step-change "only" demands at least 100 Mbps download speed or whether it demands not only at least 100 Mbps download speed but also

to be upgradable to 1 Gbps. BEREC assumes that the step-change only refers to at least 100 Mbps download, for the following reasons. If it would also demand upgradable to 1 Gbps, then this might mean FTTB (or a fibre roll out rather similar to FTTB) as upgradable means, according to footnote 55, that the network can provide 1 Gbps download speed on the basis of limited investment such as an active equipment upgrade. As the step-change in grey areas (paragraph 102) does not demand that the publicly funded network needs to be upgradable to 1 Gbps, BEREC considers that it would be unreasonable, if the requirements in white areas were higher than in grey areas. However, BEREC considers that it is important that the capacity of a network to be upgradable to 1 Gbps will be taken into account favourably in the competitive selection procedure. This would mean that FTTB (upgradable to 1 Gbps) should be preferred over FTTC and VDSL (vectoring).

Furthermore, BEREC is of the opinion that Member States should have the possibility to take mobile networks into account, in particular in white areas, in case of State aid for fixed broadband networks (see comment on paragraph 20 in section 4.1 above). In cases where the fixed access network does not provide ultrafast download speeds, the 4G/5G mobile network already in place (or a new deployment of e.g. 5G) may readily provide the broadband performance that is envisaged by the Draft Guidelines as the step-change. In those situations, State aid for gradual improvements to the fixed network which would as a result not significantly outperform the existing mobile network might appear inefficient, when a mobile network is able to provide similar performance for significant less investment.

Where the fixed and mobile networks do not provide fixed access services with ultrafast download speeds, it may in some cases (in particular in very rural areas) be much more cost effective to upgrade the mobile network to provide mobile broadband instead of fixed network services.

Therefore, BEREC considers that the Guidelines should follow the principle of technological neutrality and allow achieving the step-change thresholds, regardless of the underlying technology, that could include mobile, where this is justified on a case by case assessment.

4.3.3 Step-change in grey areas of fixed access networks

With respect to the required step-change in grey areas according to paragraph 102 of the Draft Guidelines, BEREC would like to address that while it might be reasonable and necessary that a State funded investment in the new network at least triples the download speed and sufficiently increases the upload speed as compared to the existing infrastructure in some cases, it might be very desirable that such a network fulfils the targets of the Gigabit Society Communication as outlined also in paragraph 99 b) in the Draft Guidelines and would technically be capable to be “upgradable” in line with footnote 55. If this requirement would not be mandatory, aid granting bodies should at the very least be able to take such a capability favourably into account in the competitive selection procedure in order to avoid multiple State aid funding in the long term perspective (see also comment on paragraph 99 b) above).

Market failure in grey areas is defined in terms of speed requirements that are not fulfilled by the existing network or credibly planned networks: *“A market failure may be demonstrated if the existing and credibly planned ultrafast network cannot provide at least 1 Gbps download*

and 200 Mbps upload” (paragraph 57). Paragraph 102 stipulates that State funds can be provided for a network that triples the download speed and sufficiently increases upload speed as compared to existing infrastructure. In addition, the public intervention requires a significant new infrastructure investment.

Here BEREC sees some points that should be properly addressed.

Grey areas can be seen as not very attractive areas since there is only one ultrafast network player. This means that a network provider has already deployed its network and carried out a significant investment. By providing State aid to a second player, undesirable consequences might unfold as the network already present might be in a competitively disadvantageous situation. Moreover, a disincentive for private investment for the deployment of a network will likely result. The relevant thresholds in the final Guidelines therefore should be defined properly, in particular that the step-change is consistent with the market failure definition, which in BEREC’s view needs to be adapted (see section 4.2 above).

For instance, even in an area in which the ultrafast network is based on FTTH/GPON with a 1:64/1:32 splitting ratio this network would not reach the 1 Gbps download speed for 20% of users in peak-time, so the area would be eligible for State aid funds.²¹ A first point is that even if the existing network could increase its capacity by replacing existing active equipment, it would be restricted to be eligible for State aid funding, as a significant infrastructure investment is required according to paragraph 96 of the Draft Guidelines.

This means that even if the requirements can be met by the existing network operator (to triple the existing speed rate), they cannot apply for State aid, whilst other players could benefit from State aid. In consequence the newcomer could also deploy the same network topology as the existing one, not providing significant improvements since it would invest in infrastructure and only copy the existing deployment which could be the most effective solution. Public funding is not effective in such a scenario, as it is discriminatory and imposes an undue risk on the existing/planned network deployments.

The idea that the current player could prevent the State funding by committing to the upgrade of the existing network to prevent the demonstration of a market failure implies that the operator might be forced to replace active equipment well in advance of its initial assessments (asset lifespan). This effect can compromise private investments as well, due to the uncertainty imposed on the planned business case.

Therefore, BEREC considers it necessary to adapt the definition of grey area slightly to avoid this issue (see section 4.2.1).

²¹ The Draft Guidelines (paragraph 19 i), Annex I paragraphs 5, 15) consider ‘speed’ during peak-time and peak-time conditions are understood as whenever a minimum 20% of the users are active and transmitting concurrently at the nominal peak rate.

BEREC also wants to make the editorial comment that footnote 76 – related to significant new networks and capabilities – refers to footnote 82 which considers the guidelines for local authorities. This should be reviewed and amended if required.

4.3.4 Step-change in black areas of fixed access networks

Regarding the step-change requirements on black areas outlined in paragraph 103 of the Draft Guidelines, BEREC points to the comments on paragraph 52 and 60 in section 4.2 above. As the funding of black areas should be regarded as premature because of its negative impact on competition and the prospect of private investment, such areas should in principle not be eligible to funding and consequently it is highly questionable whether a step-change definition is necessary here.

With the current definition of market failure an area with two FTTH/GPON networks can be eligible for State aid. An intervention in black areas (paragraph 103), as defined by the Draft Guidelines, could deter competition where two other networks are in place or restrain future private investments. For this reason, no public funding should be given to those areas.

4.3.5 Step-change in case of enhanced upload speeds of fixed access networks

With respect to the enhanced upload speeds in paragraph 104 and 105, BEREC refers to the comment on paragraph 52 in section 4.2 above. For mass market provision demonstration of even higher speed requirements might be regarded as premature with respect to the market failure. However, BEREC agrees that with step-change, higher capabilities for upload can be seen as being more future proof and should be regarded as advantageous in the competitive selection procedure. This should be taken into account in a balanced way, as such step-change targets are reaching even beyond the Gigabit Society targets (with the notable exception of socio-economic-drivers).

4.3.6 Step-change in case of mobile access networks

The provisions for mobile access networks (paragraph 109) state that 5G standalone networks ensue a step-change in comparison with 5G non-standalone networks (and previous generations) as they have additional functional capabilities (e.g. ultra-low latency, high reliability, guarantee a certain quality of service) and 4G networks amount to a step-change in comparison with previous generations.

BEREC agrees that newer generations of mobile networks have the potential to provide new capabilities in comparison to existing networks. BEREC also observes that radio frequencies are a scarce resource and must be assigned in a manner to ensure their efficient use. However, in order to ensure that the State aid funded 5G network actually exploits this potential and provides mobile services to the end-users with the corresponding high quality of service, Member States may include also the performance of the network in terms of quality

of service (e.g. speed) as an award criterion in the competitive selection procedure.²² BEREC proposes therefore that the final version of the EC State Aid Guidelines clarify that Member States have this possibility and that the Member States are not forced to consider e.g. any 5G network as a step-change compared to 4G networks. Requiring a certain quality of service is also fully in line with paragraphs 96 and 107 of the Draft Guidelines which both provide that a State funded mobile network must bring significant new capabilities to the market in terms of mobile service availability, capacity, speeds and competition.

4.3.7 Step-change in case of backhaul networks

BEREC in principle welcomes the definition of step-change as outlined in paragraph 110 of the Draft Guidelines.

Infrastructure competition by new ultrafast access network deployments is highly dependent on backhaul offers. When a single backhaul is in place, State aid funding should be considered if the existing backhaul conditions hinder the deployments of access networks by other players. This is especially relevant in network deployments where the access network and the backhaul are provided by the same network operator. Therefore, the possibility to have State funds when only one backhaul exists should be contemplated.²³

Sometimes the scheme includes not only backhaul networks but also fixed or mobile access networks that should be considered in the final capacity required. BEREC suggests to amend the paragraph as follows: *If the backhaul network is included in a State aid scheme which also includes mobile networks and/or fixed access, the step-change of the backhaul is required to support the needs of the mobile and/or fixed access network.*

5 Design of wholesale access conditions

BEREC considers that any State aid scheme should have wholesale access obligations attached to them, designed to ensure the best outcomes in terms of delivering sustainable downstream competition. These are the efficient long-term outcomes, defined as the welfare-maximising resource allocation, in the time horizon in which the most important investment decisions are made. When designing the State aid scheme, long-term efficiency should be sought by imposing the right set of wholesale access obligations, i.e. the set of wholesale access obligations that ensures the best trade-off between promotion of sustainable downstream competition, the level to which the type of network being rolled out is future-proof, and additional cost²⁴.

²² In relation to understanding of how service availability in mobile networks using 5G technology can be predicted/calculated, BEREC held a workshop for experts during September, which demonstrated the complexity of this issue in mobile networks (see BoR (21) 163).

²³ Furthermore, Member State shall have the possibility to combine (fixed and/or mobile) access and backhaul networks in a single State aid scheme (see section 4.1).

²⁴ BoR (12) 91, p. 4.

5.1 Wholesale products covered by the access obligations

BEREC considers that providing effective access to third party operators enables the deployment of competing networks and thus the promotion of a competition level similar to what is already achieved in comparable and more competitive areas. Therefore, in order to ensure consistency, BEREC agrees with the EC statement that the *“type of wholesale access obligations imposed on a State funded network should be aligned with the portfolio of access obligations laid down under the sectoral regulation. However, aid beneficiaries should provide a wider range of wholesale access products than those imposed by NRAs on the operators who have significant market power since the aid beneficiary is using not just its own resources but taxpayers' money to deploy the network.”* (paragraph 135). BEREC is thus of the view that access obligations imposed under existing frameworks, such as sector regulation and BCRD, should be considered when designing State aid access obligations.

The Draft Guidelines contain hardly any references to the relation between retail and wholesale markets. In the target areas, the beneficiary of State aid usually has control over an essential facility with bottleneck character. Therefore, the final Guidelines should ensure that the beneficiary of the aid offers good quality services and competitive prices at the wholesale level (see section 6), since the aim of the aid is to offer broadband services and prices at a competitive level to end-users. As the take-up of wholesale service provision will have an impact on the competitive conditions on the retail market, some provisions must be included in order to highlight the relation between retail and wholesale markets.

In some cases, the State aid beneficiary deploys a network fulfilling the features required in the tender at wholesale level, but offers lower speed services to end-users at retail level (below the speed of the wholesale access set at the tender). The beneficiary has no incentive to offer the higher speed (at retail level) due to low demand and lack of competition in the subsidised area. In such a case, end-users may face difficulties to access enhanced services (e.g. only after complaining to the granting authority). Therefore, it would be advisable to include the obligation to commercialise retail services of the same quality and speed as the one established in the tender at wholesale level, to ensure the provision of quality retail services and the fulfilment of the aid objectives. Also, competitive retail prices – such as the ones existent in competitive areas – should be aimed for in the targeted areas.

5.1.1 Fixed access networks: bitstream access, VULA and physical unbundling

Regarding State funded fixed access networks in white and grey areas, paragraph 137 of the Draft Guidelines provides that the *“State funded network must ensure bitstream access, virtual unbundled access (VULA), access to street cabinets, poles/masts/towers, ducts and dark fibre”*, while paragraph 138 provides that in black ultrafast areas and for networks providing enhanced upload speed, the network must provide, in addition to these products, effective and full physical unbundling.

BEREC notices that in white and grey areas, the EC does not list **physical unbundling** as a requirement among the products that the subsidised network must give access to. BEREC is of the view that the EC requirement in these paragraphs should encourage wholesale access obligations that allow for more independence of access seekers. In particular, physical

unbundled access, where technically possible, would allow an access seeker to design speeds at retail level independently from the active products design of the subsidised undertaking, in addition to inciting access seekers to higher levels of innovation to differentiate their offers at downstream markets' level. As stated in its previous opinions (BoR 12 (91) and BoR 20 (226)), BEREC insists on the importance of not only requiring active access but also access to physical unbundling where it is possible and especially in Member States where such access is imposed in comparable areas. The current list of services required in paragraph 137 is also not in line with the provision of paragraph 135 of the Draft Guidelines. Paragraph 137 seems only to be intended as a minimum set. This could lead to situations, where the portfolio of access obligations will not be fully aligned and State aid obligations may even be softer than SMP or comparable symmetric remedies. Instead of a minimum set, the list of wholesale access products should be designed as a comprehensive list, which should be imposed according to the market circumstances. This implies that aid granting bodies of the Member States in consultation with NRAs should assess whether or not the imposition of the listed access products is or is not justified and proportionate according to the economic and competitive conditions of the target areas and the market(s) concerned.

Accordingly, BEREC notes that full and effective unbundling is not always possible, depending on the network topology (P2P or P2MP)²⁵ and on the adopted technology (G.fast). In some Member States physical unbundling also doesn't play a significant economic role at this point in time. In such cases, Member States have the possibility to require a VULA. As VULA products are far more complex in terms of technological specifications compared to physical unbundling, it is of utmost importance that the NRA has the possibility to give input regarding the VULA product, either in the form of *ex-ante* approval or in the context of dispute settlement, when such assessment appears necessary. BEREC suggests that footnote 94 is adapted in that regard.

Regarding **bitstream access**, BEREC notes that in some Member States, the imposition of this wholesale access obligation may be inconsistent with the national market. Therefore, such an obligation may imply that the subsidised area becomes subject to a different set of obligations in comparable areas. For example, this might be the case if this framework is based on a market-wide physical unbundling wholesale access regime. However, in other Member States, bitstream access is crucial for third party operators to enter into competition (both, VULA and IP bitstream access) and may even play a larger role in the commercial wholesale access market and/or in SMP regulation than physical unbundling. Therefore, a certain flexibility is needed to take into account specific circumstances in Member States. The requirement to provide all access products is appropriate as a principle and should be maintained, whereas in practice, room for discretion is required for Member States and NRAs

²⁵ While there should be room for discretion in respect of the network topology deployed (P2P or P2MP), BEREC considers that P2P is the more future-proof technology to serve the demand in the long term and thus might be preferable regarding the efficient use of public money.

to design wholesale access obligations' portfolio as appropriate in light of the national market circumstances.

Moreover, BEREC welcomes that paragraph 150 in **low population density areas** provides for a certain flexibility to Member States to limit the provision of certain access products, as the imposition of all types of access products might imply a disproportionality between the cost of the investments and the benefits for competition in some situation. BEREC also agrees with the existence of situations where certain access products should be required only when a reasonable demand is present or will emerge. However, BEREC notes that the flexibility provided for in this paragraph concerning the design of access obligations, should not only be conditioned to the density of areas, but should also consider other objective criteria such as the size of the target area and/or the publicly funded project, the national wholesale access regime, and/or the market circumstances (including the existing and widely used products, etc.). For example, in case of small projects it may not be proportionate to impose all types of wholesale access products.

BEREC therefore supports that the notion of *reasonable demand* is kept and further developed in paragraph 150. This will help preventing the imposition of remedies, which are too intrusive in some cases. For example the imposition of access to intermediary distribution points might increase the costs of network deployment considerably, whereas access seekers might often be unwilling to seek access at such locations given the unfavourable economies of scale for co-location. Nevertheless, BEREC is of the view that such flexibility criteria might also allow Member States and NRAs to pursue the aim of consistency with access obligations imposed in comparable areas in accordance with the regulatory framework.

In particular, BEREC notes that paragraph 150 b) contains a reference that the State funded network should offer all types of network access products in densely populated areas. In order to align the text with previous references and give more certainty, it would be useful to refer to the wholesale access products as set out in section 5.2.4.4.1 of the Draft Guidelines. Hence, BEREC considers that paragraph 150 b) provisions should also be consistent with the concerns laid down above, regarding the consideration of not only the density of the target area, but also its size, the size of the subsidised project, the economic and competitive conditions observed in the concerned market(s), and more widely, the national wholesale regime.

Furthermore, BEREC notes that footnote 66 of the Draft Guidelines indicates that a "*public consultation may also include questions to stakeholders as to what wholesale access products they would like to see offered on any newly created State funded network resulting from any public intervention in the future, to inform the design of the measure. This should not prevent access seekers from requesting new forms of access products under an 'access on reasonable demand' approach*". Therefore, BEREC is of the view that the collected needs within the public consultation may also be used for designing wholesale access obligations.

Concerning reasonable demand, BEREC agrees that it should be assessed according to the criteria provided for in paragraph 150 d), e.g. (i) when the access seeker provides a justification of such a demand and (ii) when no comparable product is offered in the area by another undertaking at a price comparable to prices in dense areas. Finally, as stated in its

opinion in 2012 (BoR 12 (91)), BEREC considers that other additional conditions may be considered by Member States to address some particular situations: the State aid decision of the Member State should allow (i) the product to be subject to such a demand, (ii) the costs incurred on the network operator should be fairly recovered and (iii) the access product should be proved substantially beneficial for competition, without provoking a distortion in adjacent markets.

In conclusion, BEREC considers that all wholesale access products may be required in principle, but the Guidelines should leave aid granting bodies in consultation with NRAs the possibility to adjust the access obligations' portfolio according to all elements that were exposed in the above paragraphs in advance to fit its State aid regime. In particular, paragraphs 137 and 138 should in principle not impose explicitly the full range of wholesale access products as in the current Draft Guidelines. BEREC considers it necessary that the Guidelines give more flexibility to Member States and in particular NRAs to assess the appropriate set of obligations among the listed products, following the objectives described in the above paragraphs concerning the principle of proportionality. In particular, NRAs should be able to take into account the requirement to align the State aid remedies with the remedies imposed under the EECC, without precluding the possibility that aid beneficiaries should provide a wider range of wholesale access products than those imposed by NRAs on the operators who have SMP as set out in paragraph 135 of the present Draft Guidelines.

5.1.2 Wholesale access products demanding precisions

BEREC notes that paragraphs 137 and 138 indicate that State funded networks must also ensure access to “*street cabinets, poles/masts/towers, ducts and dark fibre*”. In fact, these access products may be necessary, in some cases as ancillary products, to ensure an effective access to the imposed bitstream access, VULA or physical unbundling. They can also be necessary for other operators to deploy their own network infrastructure. Nevertheless, the imposition of such wholesale access obligations is to be assessed by NRAs, consistently with the existent regulatory framework and depending on the reasons that may lead to their imposition. Such products might sometimes also be subject to reasonable demand, e.g. where access to intermediary distribution points is concerned in areas where no access seeker is likely to co-locate at such points.

a) Access to physical infrastructures

The obligation of providing access to physical infrastructure (ducts/poles/mast/towers) may be limited in case the State funded operator is using existing third party infrastructures of which the operator has no control, legal or factual. Moreover, access to physical infrastructures is a *priori* already included in the scope of BCRD even in Member States this is not within the scope of SMP regulation.

BEREC highlights that even though the Draft Guidelines include support of different kind of intervention including only civil engineering work²⁶, there is no reference in the draft to these type of schemes.²⁷ It would be advisable to include a reference in section 5.2.4.4.1 'Wholesale access products' to clarify that when imposing wholesale access obligations in this kind of schemes it is proportionate to limit them to the services they support, e.g. excluding active products²⁸.

b) Access to dark fibre

In BEREC's view, the mention of "dark fibre" in section 5.2.4.4.1. is unclear. As a wholesale product, dark fibre may refer to access segments of networks by designating fibre physical unbundling or passive fibre lines used to connect specific end-users, network elements, and/or street cabinets for example. Dark fibre also refers to passive fibre constituting backhaul segments of networks. BEREC hence invites the EC to specify the references to "dark fibre" by defining the mentioned products more directly and explicitly.

In particular, BEREC considers it important that the EC clarifies what dark fibre refers to in paragraphs 137, 138 and 140, especially if it designates an ancillary product to be imposed in order to ensure the effectiveness of an imposed access obligation such as access to physical infrastructures, physical unbundling or VULA. As mentioned in the introduction of this sub-section, wholesale access to dark fibre can also be useable on its own without the need to buy other wholesale products from the State aid beneficiary. In both cases, BEREC considers that access obligation to dark fibre should be consistent with both the existing wholesale access regime and, whereas it refers to backhaul networks, should be coherent with the design of access obligations mentioned in 5.2.4.4.1.4 regarding subsidised backhaul networks.

c) Backhaul networks

In paragraph 140 the Draft Guidelines provide that for interventions in backhaul networks, the State funded network must ensure bitstream access and access to poles/masts/towers, ducts and dark fibre. Nevertheless, bitstream access by definition encompasses the access (or terminating segment) connecting the end-user. Noting that the definition in paragraph 19 lit e) clarifies that the backhaul network does not include the access network, there may be an inconsistency in this provision.

In order to be able to provide bitstream access, the operator of the State funded backhaul network needs bitstream access from all access networks connected to its backhaul network. It needs appropriate contracts with the operators of these access networks and if the bitstream

²⁶ See annex III, p. 49.

²⁷ BEREC is of the view that in case of such schemes it would be beneficial that Members States ensure that at least one undertaking commits to use this infrastructure to deploy an electronic communications networks according to the step-change defined in the Draft Guidelines.

²⁸ The beneficiary of the aid must not provide electronic communications retail services.

access products of the access networks differ, it has to design an own bitstream product, if this is possible. However, BEREC considers it not appropriate that the backhaul network needs to provide access not only to the backhaul network but up to the end-users including the access networks. BEREC instead deems it as important that other suitable wholesale products (passive and/or active) giving access to the backhaul network can be imposed where justified and proportionate, in particular products subject to market 2 of the Commission Recommendation on relevant product and service markets within the electronic communications sector susceptible to ex-ante regulation, or e.g. activated fibre instead of dark fibre for backhaul needs.

BEREC notes that the wording of *“the foreseeable needs of all the operators in the market”* in paragraph 141 is formulated extremely open and thus cannot always be fulfilled. If this was taken literally, space in ducts etc. could be required for e.g. over 100 operators in markets with a large number of operators (e.g. in the Czech, German, Spanish and Swedish markets). BEREC deems that the intention is to provide space for a sufficient number of operators under competition considerations. Since this paragraph deals primarily with access to passive infrastructures and also refers to paragraph 136, instead the same considerations of the latter should apply here. BEREC assumes that the Member States have the freedom to further specify this requirement, e.g., through material concepts (requirements on dimensioning of civil engineering infrastructure).

Generally, BEREC welcomes that the design of access obligations has to consider the needs of access to physical infrastructure to deploy backhaul networks by third party operators. Nevertheless, it remains advisable that such obligations, as well as those provided for in paragraphs 136 and 141, should be specified in the provisions regarding wholesale access conditions to civil engineering. Also, these conditions should be coherent with the pursued objectives of the provisions on the use of existing infrastructures.

d) Cable

In the document, the word ‘cable’ is used with different meanings (DOCSIS 3.0 cable network or cable as a tube with a certain amounts of fibre). A certain clarification would be helpful with the wording on footnote 102 which, when referring to passive infrastructures with capacity for three networks, establishes that *“for instance, where new ducts are built, they should cater for at least 3 independent cables each able to host at least several operators”*. In this case, it seems that ‘cable’ refers to a tube with several fibres in it.

5.2 Wholesale access terms and conditions

BEREC would like to express full agreement with the requirements in paragraphs 142 and 143. In particular access to VULA should be granted for the same period of time, as access to the passive infrastructure for which VULA is regarded as substitute. With regard to the comment on paragraph 137, BEREC asks the Commission to amend paragraph 142 with an additional sentence: *“Where access to physical unbundling is imposed as a remedy, the wholesale access for these type of products must also be granted for the lifespan of the passive infrastructure concerned.”*

BEREC also strongly supports the extension of the period of time for which access has to be granted from 7 to 10 years for all access products which is foreseen in paragraph 142, as this increases the efficiency of open network access for competitors and therefore the prospect of a competitive development. However, BEREC recommends reviewing the situation after this period and if the competitive situation has not significantly improved towards self-sustaining competition, these obligations should be extended in time to avoid creating monopolies with public money especially in white areas

BEREC appreciates that the access to passive infrastructure referred to in paragraphs 142 to 144 must be granted for the lifespan of the respective infrastructure subject to the State aid measure. BEREC asks the EC to clarify (e.g. in a footnote) that this lifespan refers to the technical life (as opposed to the economic life) of the assets.

6 Design of wholesale access prices

BEREC welcomes that the pricing principles set out in paragraph 151 continue the practice of the EC provisions on State aid currently in place.

Regarding paragraph 151 lit. a) BEREC would welcome a further clarification what the text “published prices” refers to. In BEREC’s view this refers to commercially applied prices NRAs observe in a market, either by monitoring or consulting the market, due to national requirements to submit access conditions to funded networks or other means.

BEREC also observed that the wording of paragraph 151 lit. c) changed from “*cost orientation pursuant to the methodology established ...*” to “*cost orientation or the methodology mandated ...*”. This change indeed is important and necessary, as the sectorial framework is not limited to cost orientations as pricing methodology.

However, the sectorial regulatory framework does also not determine solely two pricing methodologies (cost orientation and one specific other methodology). Therefore, paragraph 151 lit. c) of the draft should be changed into “*or a methodology mandated in accordance with the sectorial regulatory framework*”.

This amendment is important, as otherwise NRAs and aid granting bodies will have difficulties to align the remedies imposed under the sectorial framework. Would the Guidelines remain unchanged, there would be a risk of severe distortions in the implemented pricing systems. as aid granting bodies in consultation with NRAs would not be able to determine consistent prices and/or pricing conditions within the respective Member State and thus might be forced to choose an unjustified pricing methodology.

BEREC also proposes to give a further clarification in a footnote, which could read: “*Such methodologies include, but are not limited to, prices controlled by margin squeeze tests or prices subject to an economic replicability tests (ERT) according to Recommendation EU2013/466 Annex II*”. BEREC also would like to raise awareness that the current Article 52(8) GBER should be fully aligned with the revised State aid guidelines for the same reasons, as soon as possible.

BEREC welcomes that the notion of paragraph 78(h) of the 2013 State aid guidelines (“*should take into account the aid received by the network operators*”) has been dropped. BEREC notes the old provision might lead to circular reasoning in case of wholesale access prices based on cost orientation, since revenues and therefore the wholesale access price need to be determined in order to calculate the funding gap.²⁹ Therefore, in this situation the wholesale access price itself normally cannot depend on the funding gap and thus ultimately the aid received. Nevertheless, BEREC is of the opinion the Guidelines should make clear that it needs to be avoided that the party who received the funds is allowed to charge its total cost (total actually incurred costs without deducting the funds received) and can keep the State aid benefits solely for its own or his customers and gain excessive profits at the wholesale level.

Nevertheless, BEREC is also concerned that in areas with limited end users’ demand wholesale prices following the criteria in the established order as stated in paragraph 151 might turn out to be too high and thus can hamper competition among the beneficiary and the access seekers. The current wording requires applying these criteria in the established order, especially as lit b) and c) are only applicable “*in absence of such published prices*”. Setting wholesale price as the average price in more competitive areas or even in similar areas does not always guarantee that a new entrant would be able to compete at retail level with the funded network operator. To prevent that situation, it is advisable that the final Guidelines clarify that wholesale prices should always allow an efficient operator to compete at retail level with the retail price of the funded network operator. Therefore, BEREC suggests modifying paragraph 151 as follows: “*In setting the prices for the wholesale access products, Member States must ensure that wholesale prices always allow efficient operators to compete at retail level and that the wholesale access price for each access product is based on one of the following benchmarks and pricing principles. Member States must ensure that [...]*”

BEREC also strongly supports the transparency measures foreseen in paragraph 153 of the draft. In this context, BEREC raises the question what happens if the initially offered prices (specified in the tender document) change due to (the regular) prices evolution in the market or when the commitment period expires at the end of the project. For example, in case SMP pricing change following NRA’s review, it should be possible that price conditions of public funded networks follow such variation.

Regarding paragraph 155 of the draft, BEREC suggests a clarification that relates to wholesale access prices. This paragraph concerns the claw-back mechanism and states in lit. ii) “*the actual revenues from the core services*” as a factor which may have an impact on the profitability of a project. Given, that subsidised operators are obliged to grant effective wholesale access to enable the development of competitive conditions in the target area, it should be clarified that revenues include revenues from both, retail services as well as wholesale products.

²⁹ The revenues on the wholesale level directly depend on the wholesale access prices whereas the access prices at the retail level depend on the level on competition and the wholesale access prices.

7 Dispute settlement and conflict resolution mechanisms

BEREC agrees with the view of the EC that an active involvement of NRAs in State aid is crucial, especially regarding mapping, wholesale access, pricing matters and consistency with regard to other access regimes, but also because these different provisions may sometimes overlap in a target area. Thus, BEREC has already explained the importance to assign tasks related to dispute settlement to the national dispute settlement body (DSB) according to the BCRD in its response to the evaluation of the State aid rules.³⁰ BEREC shares the view of the EC, that – given the responsibilities in sector regulation and also often under the BCRD – NRAs have already the expertise to perform the function of dispute settlement.

Because the NRA's have gained broad and profound knowledge of the complex technical and economic conditions in the different electronic communication markets, they are able to intervene quickly and accurately in all matters within their remit where a dispute arises between operators. As already mentioned in section 2 above, compared to the 2013 State aid guidelines, it is questionable that the EC proposed a change in paragraphs 112 from „*pro competitive State aid measure*“ to „*most appropriate State aid measures*“. In the context of the involvements of DSB it is even more likely to consider these measures as pro-competitive bilateral decisions with regard to State aid and in support of broadband roll-out, because measures of DSB are capable to lead to effective wholesale access for competitors in the target area and therefore create a more competitive market.

Another issue of utmost importance are the interactions of the State aid regulations, BCRD, SMP-regulation and the symmetric regulation pursuant to Article 61(3) EEC, all which address the deployment of infrastructure for electronic communications networks and related competition issues, albeit with a different focus. These interactions lead BEREC to the conclusion, that a dispute settlement on access products, conditions and pricing regarding State aid is best placed as being mandated to the NRA. NRAs can address interactions between these instruments and the State aid most appropriately. Thus, NRAs in the role of DSBs can ensure in case of disputes consistent procedural practice and consistent decisions on access conditions including prices for the different, complementary, access regimes with regard to State aid, for example the wholesale access terms. In those cases where the NRA is not the DSB, it is important to ensure that the DSB has to consult both the NRA and the aid granting authority to ascertain whether there are any special factors to take into account in the DSB's decisions.

BEREC notes the draft of paragraph 113 now emphasizes that Member States are „*encouraged to systematically consult NRAs on the design of State aid measures*“. Although in BEREC's view the Member States should not only be „encouraged“ to provide NRAs with resources and competences, but rather should be mandated in this regard, BEREC agrees in general with the provision of the EC that a consultation of NRA's by the Member States should be regular and systematically. To this end it is required that Member States provide the NRAs

³⁰ Bor (20) 226, pages 6, 49.

with the necessary resources and competences, in particular where the NRA is mandated to fulfil the function of DSB on disputes related to State aid obligations (see section 2).

8 NRA Guidelines for local authorities

BEREC notices the change of wording in paragraph 114 with respect to the previous guidelines (“*may*” instead of “*should*” and the addition of “*inter alia*”). BEREC recognises that this provides more flexibility for the NRAs.

Indeed, in countries with a larger number of State aid projects, these are usually implemented on regional or local level. In some of these countries, NRAs 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.

On the contrary, in countries with a limited number of integrated projects that encompass a large area or number of communities/districts, it is commonly unnecessary to issue guidelines because all the conditions on access and pricing methods are included in the tender/project in advance.

9 Technological neutrality

BEREC welcomes that the Draft Guidelines (paragraph 127) follow the technological neutrality principle, which requires that public intervention must not favour or exclude any particular technology, either in the selection of beneficiaries nor in the provision of wholesale access. BEREC agrees that since different technological solutions exist, the tender should not favour or exclude any particular technology or network platform. Bidders should be entitled to propose the provision of the required services using or combining whatever technology they deem most suitable.

BEREC welcomes that the Draft Guidelines also explicitly mention that this is without prejudice to the possibility for the Member States to determine the desired performance (including e.g. the energy efficiency of the networks). Therefore, both the EU's environmental objectives (paragraph 8) and the technological neutrality principle (paragraph 127) seem to be fully in line with each other and neither a contradiction, nor a conflict at present. If Member States set a certain climate and environmental performance criterion any technology which is capable of delivering this performance shall not be refused. This is completely similar to the award criterion performance of the network e.g. in terms of download and upload speed. In this case, also any technology which is capable of delivering this network performance shall not be refused. Another example is the pro-competitive effect of the technology which also should be possible to take into account as a criterion in the competitive selection procedure without a need for changing the definition of the technological neutrality principle. BEREC would like to highlight that it is important to choose certain climate and environmental performance criterion instead of certain technologies.

BEREC also welcomes and agrees that a State funded electronic communications network must enable access on fair and non-discriminatory conditions to all access seekers irrespective of the technology used. BEREC likes to remark that 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),³¹ HFC networks and networks based on (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.

BEREC would still like to remark that paragraph 29 (c) and footnote 33 seem to apply to the notion of *technologically neutral* not correctly, as a network itself cannot be technologically neutral (it is comprised of a certain technology). The intention of this paragraph rather seems to be that a SGEI provider is required to offer the widest possible range of wholesale access services, which can possibly be offered with the given network technology.

10 Use of existing infrastructure

The Draft Guidelines (paragraph 129) demand that Member States must set up a national database on the availability of existing infrastructures that could be re-used for broadband roll-out, including commercial infrastructure assets and those owned by public bodies. BEREC wants to point out that the BCRD³ (Art. 4) provides that certain information on existing physical infrastructure shall be made available via a single information point and that the Member States agreed in March 2021 on the Common Union Toolbox for Connectivity,³² in accordance with the Connectivity Toolbox Recommendation,³³ which includes several measures to improve transparency through the single information point. The Commission is currently carrying out a review of the BCRD and the adoption of the revised BCRD is planned for the second quarter 2022.³⁴ Therefore, Member States typically have already a database with information on existing physical infrastructure. For this reason, BEREC considers it economically inefficient that the Member States have to set up a (new) national database on the availability of existing infrastructures according to paragraph 129 of the Draft Guidelines. BEREC is also of the view that the Guidelines are not the appropriate legal instrument to

³¹ Except several PONs are deployed in parallel which is usually not the case

³² <https://digital-strategy.ec.europa.eu/en/news/connectivity-toolbox-member-states-agree-best-practices-boost-timely-deployment-5g-and-fibre>

³³ Commission Recommendation (EU) 2020/1307 of 18 September 2020 on a common Union toolbox for reducing the cost of deploying very high capacity networks and ensuring timely and investment-friendly access to 5G radio spectrum, to foster connectivity in support of economic recovery from the COVID-19 crisis in the Union

³⁴ https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12463-High-speed-broadband-in-the-EU-review-of-rules_en

impose on the Member States the obligation to provide a data base which should be done through a directive (as the BCRD) or a regulation. Therefore, BEREC strongly recommends to delete this provision from the Draft Guidelines and to demand instead that the Member States must include in the competitive selection procedure's documents information on available existing infrastructure, as already foreseen in paragraph 130 of the Draft Guidelines, and leave it to the Member States how to best provide this information.

BEREC fully agrees with the Draft Guidelines (paragraph 128) that the re-usability of existing infrastructure is one of the main determinants to reduce the overall cost of deployment of a new broadband network and to limit its negative impact on the environment. According to the BCRD (Art. 2(3), Art. 3), network operators have the right to use physical infrastructure of other operators for the deployment of electronic communications networks which provide speeds of at least 30 Mbps. The Commission seems to consider changing the scope of the BCRD to VHCN, as the Commission asked BEREC for an opinion on the revision of the BCRD which includes this question.³⁵

BEREC would like to point out that if the scope of the revised BCRD will be limited to VHCN this may have a negative impact on State aid. Fixed VHCN are networks based on FTTB or FTTH or networks which are capable to provide under usual peak-time conditions at least 1000 Mbps download and 200 Mbps upload speed.³⁶ Therefore, the cost for publicly funded network deployments which do not qualify as a VHCN may increase, resulting in the need for higher State aid funding. BEREC is of the view that this potential negative impact on State aid needs also to be considered in the revision of the BCRD.³⁷

11 Reporting obligations

Regarding transparency (paragraph 208 and Annex V) Member States must submit a report to the EC every two years with information related to the performance of the projects. It would be interesting and important for NRAs to see this data in order to know the competitive situation in their country for the development of their regulatory functions, to define the best performances and to make a proper assessment for future projects. Therefore, BEREC is of the view that the NRA should be a recipient of this information, too.

On the other hand, Member States must send, according to Annex V, 'wholesale and retail prices before and after implementation of the measure' only for projects supporting take-up of

³⁵ See BoR (21) 30, question 4, p. 7-8

³⁶ See BEREC Guidelines on very high capacity networks (paragraph 18), BoR (20) 165.

³⁷ The Draft Guidelines (paragraph 132b) provide that any operator that owns or controls infrastructure in the target area and that wishes to participate in the tender must commit to make this infrastructure available for use by other operators in their bids. However, the BCRD foresees access to existing physical infrastructure not only of electronic communications networks but also of networks of other sectors such as gas, electricity, heating, water etc. and, on the other hand, not all operators of electronic communications networks with physical infrastructure in the target area may necessarily participate in the tender. Nevertheless, BEREC would like to point out that paragraph 132 itself is fully supported, as it contributes to reducing the cost of network deployment in the target area.

electronic communications services, such as vouchers, but not for the ones supporting the deployment of infrastructure. For the latter, Annex V foresees sending information about prices/pricing methodology just of wholesale access products. When analysing a market, NRAs must review upstream but also downstream markets. In this regard, retail prices are crucial elements to be considered to find which scheme has performed better bringing more benefits for the market and end users. BEREC suggests the possibility of including also retail prices before and after implementation of the measure in the information provided by Member States for projects supporting the deployment of electronic communication infrastructure according to Annex V.

12 Social and connectivity vouchers

BEREC welcomes the possibility to issue social vouchers as aid having a social character under Article 107 paragraph 2 (a) TFEU. BEREC considers that this may be an important additional instrument to enable end-users, whose financial circumstances justify aid for social reasons, to benefit from key online services. The Covid-19 pandemic in particular gave a spotlight on digital services used for home office and home schooling and revealed the possibilities of such developments. Even though the pandemic will eventually be overcome, BEREC is of the view that the digitalisation process is irreversible and will further grow in importance. BEREC therefore agrees with the Commission that EU citizens, which live in economically challenged conditions, should not be excluded from the digitalisation process.

Nevertheless, BEREC would also remind the Commission that provisions regarding universal services in the EECC must be considered when issuing this kind of programs.³⁸ The voucher scheme should be able to provide further gains added to the solutions implemented under the EECC avoiding the potential risk of being implemented as a substitute of these. In this regard, further guidance and clarity on how both instruments, which share a similar objective (especially in terms of affordability) and may overlap, can best complement each other would be welcomed.

The Guidelines also open up the possibility for Member States to implement connectivity voucher schemes irrespective of social needs as addressed by social vouchers. BEREC is in agreement with the Guidelines that if a specific market failure regarding take-up can be identified,³⁹ connectivity voucher programs could potentially support the objective of promoting connectivity to and take-up of very high capacity networks by all citizens and businesses of the Union. In this regard, such programs as described in the Guidelines could incentivise end-users to switch from copper to very high capacity networks, which in turn could speed up copper switch-off and thus have positive environmental effects.

³⁸ See Articles 84 and 85 EECC on affordable universal service.

³⁹ The identification of such a market failure would consequently mean that the observable take-up of very high capacity networks needs to be found to be too low considering the demonstrated or anticipated positive externalities of significantly increased take-up for the economy's growth and innovation.

Regarding the potential benefits of a connectivity voucher scheme, a differentiation could be made between (i) subscription to a new service and (ii) upgrading the current service, as mentioned in paragraph 195 of the Guidelines. If end-users are not subscribed to any broadband service at the moment (as per characteristic (i)), the incentive given by a voucher program to use such services will likely generate more positive externalities regarding the acceleration of growth and innovation. The benefits of an upgrade of end-users from a broadband service with lower capabilities to a broadband service with higher capabilities may have comparably less positive impact on the goals addressed by the Guidelines in paragraph 173, but might nevertheless support the objective of widespread take-up of very high capacity networks.

On the other hand, however, BEREC considers it to be of utmost importance to minimise the potential drawbacks of connectivity voucher programs, which the Guidelines itself mention in paragraphs 194 and 198. Situations where a voucher scheme alters conditions for investment and leads to distortions in the markets concerned have to be prevented. BEREC therefore emphasises the need to implement and enforce strict rules regarding the avoidance of unequal treatment of wholesale and/or retail operators as well as regarding evidence to be provided by Member States with regards to the suitability of such programs to address a market failure specifically in terms of take-up.

In particular, for such State aid schemes to be compatible with the internal market, it has to be ensured that all operators in the market can offer the respective services and can benefit from a voucher. If not all operators are given an equal opportunity to benefit from a voucher program, the distortive effect on competition is likely to be high and not justified, in particular if the currently used and the upgraded subscription to retail products are found to be in the same retail market regarding download and upload speeds (or product characteristics in general).⁴⁰

In summary, BEREC agrees with the Guidelines that under certain circumstances connectivity vouchers can address a market failure regarding take-up of very high capacity network services. However, BEREC also stresses the need to carefully assess the potential negative effects of such voucher programs regarding competition and investment. Connectivity voucher programs, as is the case with all other State aid schemes, must not distort competition between operators nor alter investment decisions.

⁴⁰ Which products and bandwidths are part of the same retail product market varies between Member States due to national circumstances. Typically, a wide range of retail access products is still found to be substitutable in most Member States, as all of these products are still able to meet the basic end-user needs (demand), albeit with a different quality and a different price. Therefore, currently, products with rather low bandwidth (entry level) and products with very high bandwidth (premium level) are often still found to be substitutes in principle and therefore part of the same markets.

13 Climate- and environmental impact

BEREC welcomes that environmental aspects are considered in the new Guidelines on State aid for broadband networks. Although environmental sustainability has been gaining attention globally, it may still be considered an underdeveloped area of broadband policy.

The EC set the ambitious goal of the EU becoming climate neutral by 2050 in its European Green Deal. Although digital technologies can contribute to achieving these goals, it is important to think horizontally, as environmental sustainability has to be addressed in every sector.

The information and communications technology (ICT) sector is recognized as a critical enabler in achieving the EU's environmental and climate neutrality goals in the European Green Deal as increasing connectivity can have positive indirect impacts on the environment⁴¹ (e.g. enabling the use of teleworking, smart homes, smart mobility, etc.) as well as on consumer behaviour helping people to become more environmentally responsible. The role of digital technologies in decarbonizing other sectors of the economy is acknowledged as significant by different studies.⁴² Moreover, telecommunications infrastructure such as satellites and submarine cables can function as sensors for earth observation and climate monitoring, contributing to building up scientific knowledge in this area.

However, as set in the European Green Deal, the ICT sector itself has to go through its own green transition. According to recent studies, the ICT sector is responsible for 2-4% of total global greenhouse gas (GHG) emissions,⁴³ of which one quarter is attributed to electronic communications networks and services, and for around 2% of global energy consumption.⁴⁴ Moreover, although this percentage remains low compared to other sectors, recent studies predict that increasing ICT emissions could account for up to 14% of global emissions by 2040 if left unchecked.⁴⁵ Although the annual growth of internet traffic is high,⁴⁶ the improvements in energy efficiency of electronic communications networks can help limit the growth in energy demand and GHG emissions, while the re-use of existing infrastructure and infrastructure sharing can reduce the overall environmental impacts. Steering ICTs' enabling effect and reducing its own environmental footprint is therefore a lever to consider in order to achieve the EU environmental goals, notably the climate neutrality.

⁴² Estimates vary between 15-20% reduction in carbon emissions <http://smarter2030.gesi.org/>
<https://etno.eu/downloads/reports/connectivity%20and%20beyond.pdf>

⁴³ <http://www.electronicssilent.spring.com/wp-content/uploads/2015/02/ICT-GlobalEmissions-Footprint-Online-version.pdf> https://theshiftproject.org/wpcontent/uploads/2019/03/Lean-ICT-Report_The-Shift-Project_2019.pdf

⁴⁴ Global data centre electricity use (excluding cryptocurrency mining) in 2020 was 200-250 TWh (around 1% of global final electricity demand), while data transmission networks consumed 260-340 TWh in 2020,(around 1.1-1.4% of global electricity use) , International Energy Agency <https://www.iea.org/reports/data-centres-and-data-transmission-networks>

⁴⁵ Belkhir, L. & Elmeligi, A. (2018)

⁴⁶ It doubled between 2017 and 2020 and could double again by 2023, International Energy Agency <https://www.iea.org/reports/data-centres-and-data-transmission-networks>

BEREC welcomes that the Draft Guidelines encourages the re-use of existing infrastructure in order to reduce the overall costs and limit the environmental impact of network deployment. BEREC also welcomes that the Draft Guidelines encourage Member States to include criteria related to environmental impacts in State aid granted projects. BEREC agrees, that besides energy efficiency and, the life cycle of investments, eco-design of network components, environmental criteria like biodiversity, use of harmful materials, water consumption and waste management could be considered as well. Moreover, the Guidelines should also assist in specifying indicators for network operators to report the environmental impact of the planned network deployment and mitigating measures, for example the use of renewable energy, materials used, waste management or the methodology for reducing GHG emissions and offsetting the negative environmental impacts in broadband. BEREC's and NRAs' expertise on the sector should be considered in defining these indicators with competent authorities as this topic is of particular importance for telecom regulators in view of sustainability.

In 2022, BEREC will consider the indicators for ECNs/ECSs that could help evaluate the environmental sustainability of ICTs in a report⁴⁷ continuing its first work on sustainability. BEREC will take account of relevant players' findings and ongoing studies regarding electronic communication networks environmental sustainability when working on the subject and a call-for-inputs will be launched for external stakeholders (operators, service providers, end-user associations, environmental organizations, etc.) to help identify, which indicators they deem feasible and useful for the purpose of setting an assessment methodology.

14 Final provisions

According to paragraph 219 of the Draft Guidelines, the Commission will apply the Guidelines to all notified aid measures after the Guidelines have been published in the Official Journal, even where the projects have been notified prior to that date. BEREC is of the view that this provision is not proportional and results in uncertainty to Member States in the notification of the measures. Therefore, BEREC suggests that the final Guidelines should foresee an appropriate transition period in order to allow ongoing aid measures (including pre-notified measures) to be finalised under the current regime for reasons of legal certainty.

15 List of abbreviations

BCRD	Broadband Cost Reduction Directive
DSB	National Dispute Settlement Body

⁴⁷ See BoR (21) 175 section 5.3.3

EC	European Commission
EECC	European Electronic Communications Code
FTTB	Fibre-To-The-Building
FTTC	Fibre-To-The-Cabinet
FTTH	Fibre-To-The-Home
GBER	General Block Exemption Regulation
GHG	Green House Gas
ICT	Information and Communications Technology
NRA	National Regulatory Authority
SMP	Significant Market Power
VHCN	Very High Capacity Network
VULA	Virtual Unbundled Local Access

Part II - Annex I 'Mapping'

1 Introduction

This is Part II of the BEREC response to the public consultation on the draft revised EC Guidelines on State aid for broadband networks (hereinafter: "Draft SAG"). It provides BEREC's opinion on Annex I which recommends methodologies to carry out the mapping exercise to support state aid interventions and the related provisions in the Draft SAG.

BEREC welcomes the mentions in paragraph (73) of the Draft SAG which state that the identification of market failure areas needs to be done on the basis of a detailed mapping exercise and through a public consultation procedure. Any such approach that increases transparency and plausibility to market players is highly appreciated and promoted by BEREC as well.

At the same time, BEREC is supportive of the position in paragraph (74) that, in justified circumstances and following a consultation process with the National Regulatory Authorities ('NRAs'), Member States ('MSs') might depart from the methodology provided in the Annex I on mapping. In BEREC's view, it is essential that public authorities have sufficient flexibility in order to ensure that state aid interventions can be carried out appropriately and efficiently. In this response, BEREC calls for further flexibility as the need for information to support a state aid measure to deploy a broadband network that goes beyond the level of detail of the BEREC Guidelines will vary on the circumstances and MSs need to assure that information requests are proportionate and reasoned.

In terms of the process, BEREC considers that, broadly speaking, there are three stages in preparing a state aid intervention. In stage one, Authorities need to choose the potential areas where the intervention is needed among all possible areas, in stage two further information may be needed to characterize further the chosen areas, and establish the opportunity and goodness of the considered intervention and, thirdly, additional information should be sought when the competitive selection procedure takes place (stage three), where more information regarding the technical solutions, investments and expected performance of each tender is needed. In stage three, data is sought only from the parties who participate in the tender, whilst, in the former two, data is needed regarding all networks and planned network deployments. In other words, information is requested from agents who may have no interest in competing for the public funds and even before the details of the public funding have been considered. Furthermore, in contrast with stages one and two, BEREC considers that, in stage three, extensive information requests are reasonable in order to establish the best use of public funds and there is a high likelihood for the operators to contribute, as this would be in their direct interest.

By reference to the above, BEREC notes that the Draft SAG are silent on whether the methodology described in Annex I is recommended for the first, second or third stage, when clearly the need for information and the sources of information vary from the first two to the third. Thus, BEREC considers that the Draft SAG should clarify the types of information that

are recommended in each stage, after a careful consideration of the purposefulness and proportionality of data reporting in each stage.

In this respect, BEREC considers that the information in the geographical survey of the reach of electronic communications networks capable of delivering broadband procured following BEREC Guidelines on GS⁴⁸ is sufficient to carry out stage one and, in many circumstances, also to inform stage two.

Additionally, BEREC appraises that a single broadband map (or set of mapping criteria) should be promoted, so as to: (i) enable the mapping tasks to be carried out efficaciously and with no confusion to market agents, (ii) procure the credibility of the mapping initiatives and their results and (iii) avoid legal uncertainties.

Finally, the consultation between the MSs and the NRAs, as recognized in paragraph (76) of the Draft SAG, is highly encouraged by BEREC, as NRAs play a key role in coordinating, monitoring and overseeing broadband deployments and take-up, and in many cases are responsible for the delivery of the geographical surveys of the reach of broadband networks required by Article 22 of the European Electronic Communications Code⁴⁹ ('EECC').

2 Relation of the Draft SAG to the BEREC Guidelines on Geographical Surveys of Network Deployments and to the relevant provisions of the EECC

2.1 The interplay of Article 22 of the EECC and the BEREC Guidelines on Geographical Surveys of Network Deployments with the mapping Annex I

According to Article 22 paragraph (1) of the EECC, NRAs and/or Other Competent Authorities ('OCAs') shall, by 21 December 2023, conduct a geographical survey ('GS') of the reach of electronic communications networks capable of delivering broadband and shall update it at least every three years thereafter.

This GS may also include a forecast of the reach of broadband networks, including very high capacity networks ('VHCN'), for a period determined by the relevant authority. The rationale underlying Article 22 EECC is that geographical information on the reach of broadband networks is an important tool to enable the effective design, implementation and monitoring of broadband policies and related regulation. Accordingly, the GSs must be designed and

⁴⁸ BEREC Guidelines on Geographical surveys of network deployments, document BoR (20) 42

⁴⁹ Directive (EU) 2018/1972 of the European Parliament and of the Council of 11 December 2018

conducted so that they can be used for relevant regulatory obligations and policy functions carried out at Member State ('MS') and/or EU level.

The GSs shall include a survey of the current geographic reach of broadband networks as required for the tasks of NRAs/OCAs under the EECC, and for the surveys required for the application of state aid, as explicitly stated in paragraph (1), Article 22 EECC.

As mandated by Article 22 (7) EECC, BEREC issued guidelines to assist NRAs and other competent authorities on the consistent application of their obligations under Article 22 EECC, after extensive consultation with stakeholders and OCAs. The BEREC Guidelines on GS state that "While the provisions of the EECC would anticipate and foster also state aid compliance, it is not their main objective to ensure compliance with state aid rules. NRAs/OCAs can use information collected under Article 22 EECC to assist the state aid process but may also need to collect complementary information in line with the State Aid Guidelines"⁵⁰.

BEREC notes that there is no reference to the GS of network deployments, neither in the Draft SAG, nor in the Annex I on mapping. At the same time, the Draft SAG make no mention of the relation between Article 22, the BEREC Guidelines on GSs and the State Aid Guidelines.

In this given context, BEREC considers that the European Commission should explicitly recognize the fundamental role that the conduct of GSs play in preparing the mapping for state aid purposes, relying on the provisions of Article 22, as provided in the EECC. Moreover, the data collected for state aid interventions should be complementary to the ones which are already available through the GSs, as any potential duplication or overlap is neither desirable, nor efficient.

Therefore, in BEREC's view, the competent public authorities should start their assessment of intervention zones based on the data readily available through the GSs and, after the potential intervention zones are identified, establish, if necessary, the opportune data collection process and corresponding public consultation targeted at the intervention zones, with the aim of granting state aid for broadband network deployments. Moreover, since the BEREC Guidelines on GSs will eventually lead to a harmonized set of minimal data on current and planned broadband reach in the EU, reliance on these data for state aid interventions would result in a diminishing risk of having mismatched policies regarding the provision of state aids in different MSs. Such an alignment is not only desirable, but highly encouraged by BEREC.

Concretely, for fixed broadband, the Article 22 BEREC Guidelines establish that MSs must provide for address or small grid information relative to upload and download peak-time speeds and maximum achievable speeds, to the access technology and a VHCN qualifier. For mobile broadband, they establish that MSs must provide for small grid information regarding the technology availability (3G, 4G, 5G NSA, 5G SA) and a VHCN qualifier.

In most cases, this information should fully enable the detection of market failures as described in the Draft SAG on the basis of the current situation⁵¹, and if not, it would provide a very good

⁵⁰ Document BoR (20) 42 paragraph (3).

⁵¹ For forecast information, see the paragraphs addressing this issue below.

indication of these areas (i.e. areas susceptible to be considered as intervention zones). Therefore, the data collected following the BEREC Guidelines on GSs should be the primary source of information for state aid purposes, whilst the Annex I on mapping should be complementary to it, by:

- (i) detailing a methodology to evaluate and verify this primary data for state aid purposes exclusively. Indeed, BEREC's verification guidelines establish as indispensable that the broadband maps of current networks' reach are accurate, and that quality assurance is an integral part of the processes leading to their publication and updating. These BEREC Guidelines⁵² establish a series of methods that authorities may use to verify the information, inclusive of data on infrastructure positions and characteristics, and, for example, for mobile network operators and upon request, the full disclosure of tools, methods and assumptions used in generating the mobile broadband data provided to the public authority.
- (ii) and proposing additional information that may be required in some specific cases in the context of state aid, exclusively.

2.2 Legal basis to collect the information included in the mapping Annex

According to Article 20 paragraph (1) EECC, NRAs and OCAs have the power to require undertakings' information regarding the electronic communications networks and associated facilities supplied, which is disaggregated at local level and sufficiently detailed to enable the geographical survey and designation of areas in accordance with the provisions of Article 22. Moreover, in accordance with the provisions of Article 21 paragraph (1), NRAs and OCAs *"may require undertakings to provide information with regard to the general authorisation, the rights of use or the specific obligations referred to in Article 13 (2), which is proportionate and objectively justified in particular for the purposes of [...] (i) conducting geographical surveys [...]"*.

In the light of the aforementioned, BEREC considers that Articles 20, 21 and 22 of the EECC are the appropriate legal basis on which public authorities should rely in collecting the necessary information for state aid purposes. **Yet, despite the fact that it is highly desirable that MSs can make full use of the legal tools available to them to enable the necessary information to support state aid interventions, the Draft SAG do not make any references to these Articles.**

2.3 Availability of data at address or small grid level

Annex I requires that performance information is provided at address level for fixed and fixed wireless access networks and at small grid level for mobile networks, in the near future. The BEREC Guidelines on GSs provide for information which is equally granular. However, the deadline for the implementation of the GSs under the EECC is 21 December 2023. Thus, Annex I can be considered as reducing the time horizon for MSs to complete these tasks by

⁵² For details, see document BoR (21) 82.

more than one year. As it currently stands, BEREC is concerned that there may be an impact on the ability of MSs to plan the state aid intervention to the level of detail required in Annex I and, ultimately, may delay needed interventions. Despite the efforts that the public authorities are doing with regards to the provision of GSs, the adaptation to the new granularity requirements is an intensive-resource process, which takes time.

Furthermore, the BEREC Guidelines on GSs are cognisant of the difficulties encountered in providing address-based information for fixed access networks, allowing grid-based data as a transitory step towards the established target⁵³. It should be also noted that the problem of addressing resourcing is not always (legally, feasibly) in the hands of NRAs/OCAs to solve.

BEREC concludes by highlighting that the timeline for conducting the GSs has been factored into the BEREC Guidelines on GSs, setting expectations of readiness for NRAs, OCAs and market participants. **BEREC is of the opinion that the SAG should follow the BEREC Guidelines, allowing the same required flexibility and a transitory period till 21 December 2023.**

2.4 Conclusions

Articles 20, 21, 22 and 29 of the EECC provide a sound legal frame to support the elaboration of broadband maps, including as required for the application of state aid. Therefore, it is necessary that the Draft SAG explicitly recognise the role of those articles and their purpose in delivering the information necessary to support state aid notifications.

Moreover, given the codified purpose of the geographical surveys of network deployments to inform the application of State aid rules (Article 22 (1) EECC), BEREC considers necessary to clarify within the Draft SAG how and to which extent they incorporate the information collected according to Article 22 EECC and the corresponding BEREC Guidelines (BoR (20) 42 and related BoR (21) 82). Annex I should then be used to lay down additional or complementary requirements that are specific to the state aid intervention, this being the reason for which the information collected under Article 22 EECC may need to be exceeded.

Finally, the Draft SAG should provide for a transitory period or for other adaptation mechanism concerning the data provision at the granularity implied by the current requirements – namely address level for fixed and fixed wireless access networks and address level or maximum 100 m by 100 m grids for mobile networks⁵⁴, recognizing the difficulties implied by the immediate application of the proposed approach.

⁵³ The reasons are that in many countries there are no appropriate addressing resources and that, in others, the types of addressing code/names that different operators use are not harmonised, creating a problem to identify exactly which address(es) is(are) passed.

⁵⁴ See paragraph (9) in the Annex I: mapping.

3 Proportionality

3.1 Proportionality of the mapping exercise described in Annex I

Paragraph (74) in the Draft SAG establishes that MSs must identify which geographic areas will be covered by the state aid measure, through the means of carrying out a mapping exercise, going on to qualify Annex I as the most accurate mapping method. Particularly, Annex I describes the criteria which need to be taken into account for mapping the performance of broadband networks in order to have an objective representation of the “achievable performance” that can be relied on under peak-time conditions⁵⁵. It also provides for a series of itemized data that an Authority may decide to collect for verification purposes and for in depth verification purposes, both for fixed and for wireless network.

As a general principle of good administration, in requesting information, public authorities should always ensure that the data requests they place on market agents are meaningful for their purpose and proportionate⁵⁶. In the case of broadband maps, the data reporting involves a considerable effort on the side of operators⁵⁷, which are the primary source of information. Moreover, the collection and treatment of information is an onerous activity for public authorities since broadband maps are complex and large data sets, where information is collected from many sources. As Annex I rightly points out, to establish the existence of a market failure in the context of a state aid notification, granular information on existing and planned networks is required. Yet, at the same time, in issuing data requests, Authorities should take into account the costs of data provision and management in relation to the information needs. In general, they should require the least onerous information to assess each situation, so that they do not place undue burdens on stakeholders and the activities are manageable by the authorities. **In this light, it should be noted that several NRAs consider that the GSs (following the BEREC Guidelines) provide sufficient elements for state aid decisions in their particular national circumstances.**

Moreover, an important principle in taking care of proportionality is for authorities not to request the same or similar data several times, unless in exceptional cases, where there are very good reasons. Therefore, **BEREC strongly advises against any duplication of the requests of information and corresponding data reporting by the operators.** For example, Annex I mandates the collection of peak time speed information whilst this information is also required in the BEREC Guidelines on GSs for fixed and fixed wireless access networks and should be therefore provided by MSs in the GSs.

⁵⁵ As paragraph (5) in Annex I states, the “achievable performance” **must be characterized at least in terms of download and upload speeds that can be relied upon under peak-time conditions.**

⁵⁶ Article 20 in the EECC confirms that: “Any request for information shall be proportionate to the performance of the task and shall be reasoned”.

⁵⁷ Some of the costs associated are related to the adaptation of the operators' reporting practices with the exact data requests/definitions/methodologies, the interoperability and alignment of the databases (including with the public authorities too) and so on.

The role of mapping in supporting state aid notifications is identification of areas where a market failure exists and for which a step change can be achieved. As the current Draft SAG stand, proving a step change requires that there is a “sufficient gap” between the “existing achievable performance” and the “anticipated achievable performance” of the publicly funded network. Depending on the particularities of each case and intervention, this difference can be established with different information pieces and therefore it should be possible for Authorities to identify the information that better suits the approach, and which is the less costly to provide and efficacious to manage. Thus, **BEREC calls for the possibility that Authorities may judge their needs for data and the proportionality of data requests in each case and take argued decisions regarding the data to request accordingly.** In the same line, especially in the case of mobile access networks⁵⁸, public authorities should be allowed to argue about the (in)existence of capacity constraints as they see fit and by taking into consideration the specific circumstances of each state aid intervention.

For example, paragraph (109) of the Draft SAG states that, for mobile networks, a “step change” may be defined as a change in technology (from 3G to 4G, from 4G/5G NSA to 5G SA). Thus, the case for collecting peak time speed in these circumstances might seem unjustified as technology information (as required in the BEREC Guidelines on GSs) should suffice. BEREC sees this as an example where the information request could be simplified.

Another example is in a fixed network scenario, in the cases in which a MS would like to support a network with a performance up to FTTH standards in an area where only a copper network with xDSL exists. Quite uncontroversially, the peak-time speed that the fiber network could achieve would sufficiently exceed the maximum achievable speed that a copper network can deliver. Then, there might not be a need to establish the peak-time speeds of the copper network for each of the addresses in the intervention zone(s).

Therefore, BEREC sees that, depending on how Authorities argue step change and which particular gains they require in an area, performance-related metrics may be necessary or not.

3.2 Further guidance

BEREC considers that the EC should provide accompanying guidance to support the application of Annex I, which clarifies how the information included within is relevant to the state aid assessment, how this information should be used by public authorities when preparing the mapping for state aid and potentially how it will be considered in the EC’s assessment.

In the same line, BEREC considers it would be useful to understand the possible use cases of particular data included in the Annex I and on the circumstances in which one type of information may be preferable over the other. BEREC sees this as important to establish the

⁵⁸ For which the delivery of speeds is particularly difficult because of the various variables involved.

reasonableness of information requests in a transparent manner to stakeholders and also for the authorities to understand what are the EC's expectations in a state aid notification.

3.3 Conclusions

Generally, when requesting information, public authorities need to ensure that the data requests are meaningful for their purpose and proportionate, implying the minimum of effort from the involved parties with which the aim is to be achieved. Particularly, whenever GSs are available and considered sufficient by the MS, they should be the unique source to be used for the purpose of state aid notifications. Should new data needs be identified for specific purposes exceeding the boundaries of Article 22, these should be complementary and reasoned.

Moreover, in BEREC's view, the information needed to support state aid notifications depends on the specific circumstances and intervention (technologies already present (if any), geography and other elements) and, therefore, the public authorities should be given the authority to decide on what data is required to ensure the proportionality of data requests.

4 Considerations on planned deployments and forecasts

This section deals with the use of Annex I in the context of retrieving information about planned deployments.

Paragraph (74) in the Draft SAG states that MSs must identify the geographic areas to be covered by the aid measure by carrying out a mapping exercise. Paragraph (82) states that "irrespective of whether the mapping exercise may already have collected information on future investment plans, the result of the mapping exercise must always be verified in the public consultation". Moreover, paragraph (81) states that the public consultation should be carried out as set out in Annex I, ensuring, "to the best extent possible, the same level of granularity as the mapping exercise".

Therefore, BEREC understands that the information on planned deployments need not be collected when conducting the mapping exercise, but should, in those cases, be collected only in the public consultation phase. In that vein, paragraph (78) of the Draft SAG mentions that "the public consultation must invite interested parties [...] to submit substantiated information regarding the networks [...] credibly planned to be deployed in the target area within the relevant time horizon." Alternatively, if collected in the mapping exercise, it should be checked upon in the public consultation phase. In any case, BEREC comprehends that in the EC's views Annex I would reflect the best methodology to assess planned deployments.

Article 22 of the EECC establishes that the broadband map may also include a forecast of the reach of broadband networks, including VHCNs, for a period determined by the relevant authority. Paragraph (96) of the BEREC Guidelines on Article 22 states that "a detailed and updated survey of forecasts of appropriate characteristics may assist the relevant authority to anticipate some of this information, providing complementary information in state aid proceedings". In paragraph (101) of the same document, BEREC recommends that the frequency of collection of forecast data of areas of interest is annual and also establishes that

the forecast data should be granular (address level or 100m by 100m squares or smaller), as well as that the forecast data should be made available to the extent that the information is available at the stage of request and could be provided with reasonable effort (paragraph (102)). BEREC expressed that the information to be required would include a technology code (for fixed, fixed wireless and mobile), a VHCN qualifier, the maximum download speed category (based on relevant ranges), as well as the dates of the expected start and end of the planned roll out. Peak time speed estimates were not included in the forecast information.

At the same time, as mentioned above, the Draft SAG require that forecasts information should ensure to the best extent possible the same level of granularity as the mapping exercise. Thus, paragraph (81)'s requirement to follow Annex I implies that the peak-time speeds should be required from the operators.

In the case of planned deployments, peak-time speeds could only be calculated with (i) sufficient knowledge of the (uncertain) demand conditions in the targeted areas, as those would need to be assumed, (ii) sufficient level of detail regarding the planned deployments (equipment to be installed, locations, budget links calculation etc), since these would matter for the declaration of premises passed with a certain peak-time speed. Both types of information, but especially the second one, coupled with the fact that the data should be granular, would imply that only forecasts to be done in the short term and which have been carefully planned could be rigorously submitted, but not others, the nature of which would be more uncertain. In the light of this, it is clear that in order to provide information the operators should have considered thoroughly the "targeted zones", the feasibility of network deployments within, the technologies used and conducted the actual planning with all these data feeding in as input variables. Also, regarding the demand conditions in the targeted areas, given that the Draft SAG provide for a voucher mechanism to incentivise demand, the estimation concerning the expected demand might be even more difficult.

Taking due account of the considerations above, BEREC is wary that such an approach might result in the crowding out of private investments, particularly when the plans are not so detailed. For instance, BEREC makes reference particularly to the areas where a market failure is defined as the inexistence of a network achieving 1 Gbps speeds as, in many of these areas, operators will have some plans to invest, but may not have available the details required by Annex I for a credible intervention. BEREC has learnt in its different public consultations that operators have staged procedures for planning and that very detailed plans are only available by the end of the process.

Moreover, paragraph (79) of the Draft SAG requires that MSs consider all the aspects that can be reasonably expected to impact on the duration⁵⁹ of the deployment of the aided network, when assessing the time horizon for deployments. So, in many cases, this time horizon will be long or quite long, taking into account the difficulties of deploying broadband networks. Long term forecasts are more uncertain than short term ones and they may not be ready and detailed as implied by Annex I, at the time when the information needs to be submitted to inform a state aid intervention. Therefore, BEREC would favour consideration of

⁵⁹ Such as the time needed for the completion of the selected procedure, possible legal challenges other legal obligations and alike.

additional standards which would enable to collect less detailed information concerning the forecasts, that the Authority could take into account in the best way it sees fit.

Regarding the interplay with the BEREC Guidelines on Article 22, if the forecast information is collected within the GSs, it would already provide a good basis to establish the existence of planned deployments in a specific area, and, as explained in the sections dealing with the current networks' status, in several cases, the technology-related information (or even the maximum achievable speed data) would suffice to establish a step-change. Where this is the case, BEREC would see no need to collect peak-time speed information, especially as regards the forecasts which may be particularly unreliable. Furthermore, BEREC notes that if sufficient and relevant data about future deployment plans is available in the GSs, at the level of credibility and detail requested by the Draft SAG, there is no need to require (again) the information. In such cases, the public consultation should be focused only on the validation of the readily available results concerning the planned ahead deployments.

Moreover, BEREC suggests that the EC clarifies the opening mention in paragraph (82), which states that "Irrespective of whether the mapping exercise may already have collected information on future investment plans,...." qualifying such a conduct as opportune only for the potential/proposed intervention zones. Additionally, the deadline mentioned in paragraph (83) of the Draft SAG is supported by BEREC, in so far as the period of 30 days is considered sufficient to verify the information on planned network deployment in intervention areas when this information has already been made available, but not when the information is collected *ex novo*. In the latter case, it would take more time for operators to report at the level of detail described in Annex I.

5 Other considerations regarding the criteria and definitions included in Annex I

In this section BEREC raises particular issues which are related to the specific requirements and definitions included in Annex I.

5.1 The premises passed

Paragraph (10) in Annex I provides the following definition of "premises passed": "Premises passed' means premises which can be connected within a short period of time at the normal activation fee for the end user, regardless of whether those premises are connected to the network. A stakeholder can report premises as passed only if, following a request from an end user, it commits to connect the premises and activate the service within 4 weeks from the date of the request and for normal activation fees, meaning without any additional or exceptional cost and, in any case, not exceeding the average activation fee in the Member State concerned."

Premises passed is a crucial definition in any broadband mapping exercise and BEREC Guidelines on GSs provide a very similar definition to that included in Annex I⁶⁰. In that respect, it is important to highlight that the definition in the BEREC Guidelines has been agreed after extensive consultation with stakeholders and OCAs. Therefore, BEREC considers indispensable that the EC carefully aligns the definition included in Annex I with the one included in the BEREC Guidelines. This would prevent the existence of differences in the mapping results because of the small differences in the two texts. Moreover, in BEREC's view, providing slightly different definitions may confuse stakeholders and negatively affect the credibility of the maps and institutions involved.

In particular, BEREC is concerned about the replacement of the term "usual cost" with the term "average activation fee". The reason is three-fold. First, the calculation of an "average" fee is not clear cut, as activation is sometimes bundled with other services, and therefore only a joint price for several services exists. In some countries, for marketing reasons and to entice demand, activation is discounted temporarily and even offered at no cost to consumers and thus is not reflective of the actual costs of the activation service. How to take account of the activation fees in these situations when calculating an "average" is not transparent and potentially quite controversial. Second, the activation fee varies with the technology that is being implemented in the area. For example, the activation fee for fibre networks might be higher than the activation fee for coax or copper networks. It could be that by calculating an overall average for certain technologies, the premises passed would only be those already connected to the network whilst, in reality, those would be considered passed if a technology-related average had been considered. Third, the reference to an "average" would imply that some premises satisfying the conditions of the definition would be qualified as not passed, since for them the connection fee would exceed the average. For example, according to some NRAs, the average would be close to the median value of the distribution of connection fees, and therefore around half of the premises "connectable" to broadband networks in the country would be deemed as not passed. For all these reasons, the BEREC Guidelines used the term "normal" and provided room for NRAs to determine the value or qualification of a normal connection fee. **Therefore, BEREC requires the use of the same wording as the wording in the BEREC Guidelines' definition.**

5.2 The peak time criterion – fixed access networks

Paragraph (15) in Annex I specifies that "peak-time conditions is understood as whenever a minimum 20% of the users are active and transmitting concurrently at the nominal peak rate provided by the operator to each of them, both downstream and upstream, which correspond

⁶⁰ This is: "A premise is considered passed if, on request from an end-user, the relevant operator can provide broadband services (regardless of whether these premises are already connected or not connected to the network) at the end-user premises. The provision of broadband services at the end users premises should not exceed normal connection fees, i.e. without any additional or exceptional cost if it is the standard commercial practice and, in any case, not exceeding the usual cost in the country. The reference for "normal connection fees" should be determined by the relevant NRA/OCA. Furthermore, the operator must be able to technically connect the end user, usually within 4 weeks from the date of the request."

to the usual oversubscription rate definition". BEREC understands that, by setting the peak-time criteria, the EC means to provide guidance to operators and authorities, so as to prevent unreasonable data submissions that would end up challenging state aid interventions, and recognizes the difficulties associated with this endeavour.

However, BEREC considers that there is a need to clarify the criterion to be used by operators in providing upload and download speed data in the case of fixed networks, as it seems not clear for several NRAs what it is that operators must consider, a fact that is deemed problematic. This clarification would provide transparency to the whole process of a state aid analysis. For example, it would be useful to understand how the values of the thresholds were derived.

Some NRAs interpret "active users" as the users connected to a specific broadband network and "nominal peak rate" as related to the specific contractual conditions provided to each of the customers of the operator⁶¹. Under this interpretation, the criterion requires for the provision of information on the network capabilities to provide the highest speed under the networks' demand conditions at peak-time.

However, when providing for public funds for network deployments, Authorities need to take account of all the end-users and all the premises passed in the intervention area, not only those that are customers or demanding services of some network operator. Indeed, the notion of "end user" defined in the Draft SAG⁶², includes any natural or legal person using or requesting electronic communications services and the notion of "premises passed", defined in paragraph (10) of Annex I, includes all premises which can be connected within a short period of time, regardless of whether they are currently connected or not to the network.

Therefore, if the aforementioned interpretation was right, BEREC would find the criterion not useful in a state aid context as it would fail to take into account the end-users in the "premises passed" who are not currently clients of the network. Then, for example, with a small client base, the peak-time speed informed by an operator would overestimate the peak-time speed declaration made if all the premises passed by the network had been considered in the simulation. Certainly, this would be detrimental to the analysis and its results, as areas would be declared as covered with a speed when really many end-users could not benefit from such speed. Moreover, contractual conditions of clients can change quickly and abruptly and should not constitute the basis for the measurement of peak-time speed.

BEREC would instead favour that the "nominal peak rate" referred to a "certain speed" which would be assumed as an output in the operator's simulation and that the "active user" would refer to any end-user residing in the premises passed by the operator's network. In this way,

⁶¹ Under Regulation EU 2015/2120 (the Open Internet Regulation), Article 4 paragraph (1) point d) states that any contract for internet access services should include "a clear and comprehensible explanation of the minimum, normally available, maximum and advertised download and upload speed of the internet access services in the case of fixed networks, [...]", the peak time having been embedded in these specifications.

⁶² BEREC notes that the term "end user" is replaced in the definition by "user".

the requirement should be translated as posing the question of whether the network could support a certain nominal speed when at least a reasoned percentage of the end-users in its “premises passed”, in the specific zone, would be concurrently connected. Here, what the operators should report would be the highest speed satisfying this criterion. This possibility seems better suited for state aid analysis, since the need is to assess the capacity of the network to serve connected and potential users, i.e. all end-users. However, BEREC notes that the definition incorporated in Annex I does not read like this. Still, even under this alternative view, there would be some uncertainties embedded, since operators need not know the number of end-users that are present in the premises passed of their networks and would need to make reasonable assumptions about latent demand.

Finally, it should be noted that network performance would not only depend on a certain number or percentage of end-users being connected concurrently, but also on the utilisation of their broadband connection at such times.

Regarding the ‘20% utilization factor of the most loaded (bottleneck) link’ mentioned in paragraph (13)⁶³, BEREC may interpret that the utilisation factor defined as “the average traffic rate divided by the nominal rate, at peak time” refers to the ratio of the quantity of information transmitted (the bits) to the time interval considered, during peak time. This would not amount to the instantaneous traffic, but to an average value over a time interval in which the traffic arrival process is stationary⁶⁴. In this case, the nominal peak rate would refer to the nominal peak rate of the most loaded link. In the light of this, BEREC would welcome the inclusion of the certain explanations/clarifications to ensure a harmonized understanding in the final version of the SAG.

5.3 The peak time criterion – wireless access networks

Paragraph (20) of Annex I requires, for the purpose of the mapping method for wireless access networks, that the stakeholders calculate their network performance, by “taking into account the following principles: [...]

- (iv). provide the performance per end-user and based on outdoor antennas [...];
- (v). provide the performance per technology and per operating frequency in case of coverage with multiple technologies and multiple frequencies, considering the bandwidth actually available per frequency. [...].”

Given the introductory text in paragraph (20), BEREC understands that it details “considerations or information” to be taken into account by the operators when calculating the performance metrics and does not indicate the actual reporting of these metrics to the authority, as the use of verb “provide” would imply. Instead, Section 2 of Annex I deals with the performance metrics to be submitted. Therefore, BEREC requests that the word “provide”

⁶³ This refers, among others, to an alternative method to carry out the mapping exercise for (fixed) packet switched networks, by using a 20% utilisation factor of the most loaded (bottleneck) links.

⁶⁴ This definition is reflective of that used in queuing systems.

in points (iv) and (v) is replaced by the term “consider”. It should be clear that the reporting of the performance indicators must be done per address or grid, as argued in paragraph (9) and by using the appropriate assumptions, not per end-user, technology and frequency as the current text seems to suggest.