



Brussels, **XXX**
C(2012) 9609/2

COMMUNICATION FROM THE COMMISSION

**EU Guidelines for the application of state aid rules in relation to the rapid deployment
of broadband networks**

{SWD(2012) 448}
{SWD(2012) 449}

EU Guidelines for the application of state aid rules in relation to the rapid deployment of broadband networks

1. INTRODUCTION

- (1) Broadband connectivity is of strategic importance for European growth and innovation in all sectors of the economy and for social and for territorial cohesion. The Europe 2020 Strategy ("EU2020") underlines the importance of broadband deployment as part of the EU's growth strategy for the coming decade and sets ambitious targets for broadband development. One of its flagship initiatives, the Digital Agenda for Europe ("DAE")¹ acknowledges the socio-economic benefits of broadband, highlighting its importance for competitiveness, social inclusion and employment. The achievement of Europe 2020 objective of a smart, sustainable and inclusive growth depend also on the provision of widespread and affordable access to high speed internet infrastructure and services. Meeting the challenge of financing a good quality and affordable broadband infrastructure is a crucial factor for Europe to increase its competitiveness and innovation, provide job opportunities for young people, prevent de-location of economic activity and attract inward investments. The DAE restates the objective of the EU2020 to bring basic broadband to all Europeans by 2013 and seeks to ensure that, by 2020, (i) all Europeans have access to much higher internet speeds of above 30 Mbps and (ii) 50% or more of European households subscribe to internet connections above 100 Mbps.
- (2) To achieve the objective of access to internet speeds of above 30 Mbps it is estimated² that up to €60 billion of investment would be necessary and up to €270 billion for at least 50% of households to take up internet connections above 100 Mbps.³ Such investments shall primarily come from commercial investors. However, the DAE objectives cannot be reached without the support of public funds. For this reason, the DAE calls on Member States to use "*public financing in line with EU competition and State aid rules*" in order to meet the coverage, speed and take-up targets defined in EU2020⁴. Demand for capacity-intensive services is expected to increase in the future, as cloud computing, a more intense use of peer to peer technologies, social networks and video on demand services will develop further.
- (3) The electronic communication sector has undergone a thorough liberalisation process and is now subject to sectoral regulation. The EU regulatory framework

¹ Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, COM (2010) 245 final *A Digital Agenda for Europe*.

² See Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, European broadband: investing in digitally driven growth, COM (2010) 0472 final.

³ The actual investments costs could be significantly lower depending on the re-usability of existing infrastructures and depending on the market, technology and regulatory developments.

⁴ Paragraph 2.4, Key Action 8.

for electronic communications also provides harmonisation rules concerning broadband access.⁵ With regard to legacy broadband networks, wholesale markets are to date subject to ex ante regulation in the majority of Member States. The regulatory approach has proved successful to foster competitive markets, to encourage investment and to increase consumer choice: for example, the highest broadband coverage and take-up is found in Member States with infrastructure competition, combined with effective ex ante regulation to promote service competition. Further deployment of broadband networks and in particular of Next Generation Access ("NGA") networks continues to require the intervention of the national regulatory authorities ("NRAs") due to their role in the electronic communications sector.

- (4) It is all the more important that public funds are carefully used in this sector and that the Commission ensures that state aid is complementary and does not substitute investments of market players. Any state intervention should limit as much as possible the risk of crowding out private investments, of altering commercial investment incentives and ultimately of distorting competition contrary to the common interest of the European Union.
- (5) In its Communication on State Aid Modernisation (SAM), the Commission notes that state aid policy should focus on facilitating well-designed aid targeted at market failures and objectives of common European interest⁶. State aid measures can, under certain conditions, correct market failures, thereby improving the efficient functioning of markets and enhancing competitiveness. Further, where markets provide efficient outcomes but these are deemed unsatisfactory from a cohesion policy point of view, State aid may be used to obtain a more desirable, equitable market outcome. In particular, a well-targeted state intervention in the broadband field can contribute to reducing the 'digital divide'⁷ between areas or regions where affordable and competitive broadband services are on offer and areas where such services are not.
- (6) However, if state aid for broadband were to be used in areas where market operators would normally choose to invest or have already invested, this could significantly undermine the incentives of commercial investors to invest in broadband in the first place. In such cases, State aid to broadband might become counterproductive to the objective pursued. The purpose of State aid control in the broadband sector is to ensure that State aid measures will result in a higher level, or a faster rate, of broadband coverage and penetration than would be the case without state aid, while supporting higher quality, more affordable services and pro-competitive investments. The positive effects of the aid should outweigh the distortions of competition.

⁵ See Article 12 (4) of Directive 2002/21/EC of the European Parliament and of the Council of 7 March 2002 on a common regulatory Framework for Electronic Communications Networks and Services (Framework Directive) OJ L 108, 24.04.2002, p.33, as amended by Directive 2009/140/EC (Better Regulation Directive), OJ L 337, 18.12.2009, p. 37 and by Regulation (EC) No 544/2009, OJ L 167, 29.6.2009, p. 12.

⁶ Communication from the Commission on EU State aid Modernization (SAM). Brussels, 8.5.2012. COM(2012) 209 final.

⁷ The term 'digital divide' is most commonly used to define the gap between those individuals and communities that have access to the information technologies and those that do not. Although there are several reasons for this 'digital divide', the most important is the lack of an adequate broadband infrastructure. From the regional point of view, the degree of urbanisation is an important factor for access to and use of ICTs. Internet penetration remains thus much lower in thinly populated areas throughout the European Union.

- (7) In response to the Commission's calling on them to do so in the DAE, most Member States developed national broadband strategies to achieve the DAE objectives in their respective territories. Most of these strategies envisage using public funds to extend broadband coverage in areas where there is no incentive for commercial operators to invest in and accelerate the deployment of very high speed, next generation access networks.
- (8) These guidelines summarise the principles of the Commission's policy in applying the State aid rules of the Treaty to measures that support the deployment of broadband networks in general (Section 2). They explain the application of these principles in the assessment of aid measures for the rapid roll-out of basic broadband and very high speed, next generation access (NGA) networks (in Section 3). The Commission will apply the guidelines in the assessment of State aid for broadband. This will increase the legal certainty and transparency of its decision-making.

2. THE MAIN PRINCIPLES OF THE COMMISSION'S POLICY ON STATE AID FOR BROADBAND

- (9) According to Article 107 (1) of the Treaty on the Functioning of the European Union ("TFEU"), "*any aid granted by a Member State or through State resources in any form whatsoever which distorts or threatens to distort competition by favouring certain undertakings or the production of certain goods shall, in so far as it affects trade between Member States, be incompatible with the common market*". It follows that in order for a measure to qualify as State aid, the following cumulative conditions have to be met: (a) the measure has to be granted out of State resources, (b) it has to confer an economic advantage to undertakings, (c) the advantage has to be selective and (d) distort or threaten to distort competition; (e) the measure has to affect trade between Member States.

2.1. Article 107(1) TFEU: Presence of aid

- (10) **The use of State resources:** The transfer of State resources may take many forms such as direct grants, tax rebates⁸, soft loans or other types of preferential financing conditions. State resources will also be involved if the State provides a benefit in kind, for instance investing in the construction of (part) of the broadband infrastructure. State resources can be used⁹ at the national, regional or local level. Funding from European funds such as the European Agricultural Fund for Rural Development (EAFRD) and the European Regional Development Fund (ERDF)¹⁰

⁸ See for instance Commission decision N398/2005 – Hungary, *Development Tax Benefit for Broadband*.

⁹ Resources of a public undertaking constitute State resources within the meaning of Article 107 of the Treaty because the public authorities control these resources. Case C-482/99 France v Commission, [2002] ECR I-4397. In line with this judgment, it will further have to be assessed whether financing via a public undertaking is imputable to the State.

¹⁰ Regulation 1698/2005 of 20 September 2005 on support for rural development by the European Agricultural Fund for Rural Development (EAFRD) OJ L 277, 21.10.2005, p.1, Regulation 1080/2006 of 5 July 2006 on the European Regional Development Fund and repealing Regulation (EC) No 1783/1999 OJ L 210 31.7.2006, p.1, Regulation 1083/2006, of 11 July 2006 laying down general provisions on the European Regional Development Fund, the European Social Fund and the Cohesion Fund and repealing Regulation (EC) No 1260/1999 OJ L 210, 31.7.2006, p.25.

will likewise constitute State resources, when these funds are allocated at a Member State's discretion¹¹.

- (11) **Undertaking:** State measures supporting broadband investments usually address the exercise of an economic activity, such as the construction, operation and granting of access to broadband infrastructure or enabling the provision of connectivity to end users. Also the State itself can carry out an economic activity when it operates and exploits (parts of) a broadband infrastructure, for instance via an in-house company or as part of the State administration. The construction of a broadband network infrastructure with a view of its future commercial exploitation by the State or third party operators, will also constitute an economic activity¹². The roll-out of a broadband network for non-commercial purposes might not constitute State aid¹³, because the network construction does not favour any undertaking¹⁴. However, if such a network is subsequently opened for the use of broadband investors or operators, State aid is likely to be involved¹⁵.
- (12) **Advantage:** The aid is usually granted directly to investors of the network, which in most cases are chosen by means of a competitive tender process. When the State's contribution is not provided on normal market terms and consequently qualifies as State aid under the market economy investor principle (see paragraph (16) below), the use of a competitive selection process ensures that any aid is limited to the minimum amount necessary for the particular project. However, it does not eliminate the aid, as the public authority will still provide a subsidy to the winning bidder (for instance in terms of "gap funding" or in-kind contribution) and the purpose of such procedure is precisely the selection of the aid beneficiary. The financial support received will enable the successful bidder to conduct this commercial activity on conditions which would not otherwise be available on the market. Besides the direct beneficiary of the aid, third party operators receiving wholesale access to the subsidised infrastructure may be indirect beneficiaries¹⁶.

¹¹ See for instance Commission Decision in Case N157/2006 - United Kingdom South Yorkshire *Digital Region Broadband Project*. The Court has confirmed that once financial means remain constantly under public control and are therefore available to the competent national authorities, this is sufficient for them to be categorised as State aid, see Case C-83/98 P France v Ladbroke Racing Ltd and Commission [2000] ECR I-3271, paragraph 50.

¹² Case T-443/08 and T-455/08 Freistaat Sachsen and Others v. Commission [Not yet published], paragraphs (93) to (95).

¹³ See for instance Commission decision in Case NN24/2007 - Czech Republic. *Prague Municipal Wireless Network*.

¹⁴ Similarly, if a network is constructed or broadband services are procured to satisfy the own needs of the public administration, under certain circumstances, such intervention might not confer advantage to economic undertakings. See Commission decision in case N46/2007– United Kingdom, *Welsh Public Sector Network Scheme*.

¹⁵ Commission Decision in Case SA.31687(N436/2010) - Italy *Broadband in Friuli Venezia Giulia (Project Ermes)* and in Case N 407/2009 – Spain, *Xarxa Oberta*.

¹⁶ It is likely that the benefit of the subsidy is at least partially passed on to third party operators even if they pay a remuneration for the wholesale access. Indeed wholesale prices are often regulated. Price regulation leads to a lower price than the one which the wholesaler could otherwise achieve on the market (which could be a monopoly price if there is no competition with other networks). Where prices are not regulated, the wholesaler will in any case be required to benchmark his prices on the average prices applied in other, more competitive areas (see paragraph (78) h) below) which is also likely to lead to a price lower than the one which the wholesaler could otherwise have achieved on the market.

- (13) **Selectivity:** State measures supporting the deployment of broadband networks are selective in nature in that they target broadband investors and third party operators which are active only in certain segments of the overall electronic communications services market. As regards the business-end users of the subsidised network¹⁷, by contrast, the measure might not be selective as long as the access to the subsidized infrastructure is open to all sectors of the economy. Selectivity will exist if broadband deployment is specifically addressed to dedicated business users, for instance if the State support is geared toward the deployment of a broadband network in favour of pre-determined companies which are not chosen according to general criteria applicable in the entire area for which the granting authority is responsible¹⁸.
- (14) **Distortion of competition:** According to the case law of the Court of Justice of the European Union ("the Court"), financial support or support in kind distorts competition in so far as it strengthens the position of an undertaking compared with other undertakings¹⁹. Due to the State aid granted to a competitor, existing operators might reduce capacity or potential operators might decide not to enter into a new market or a geographic area. Distortions of competition are likely to be enhanced if the beneficiary of the aid has market power. Where the aid beneficiary is already dominant on a market, the aid measure may reinforce this dominance by further weakening the competitive constraint that competitors can exert.
- (15) **Effect on trade:** Finally, insofar as the State intervention is liable to affect service providers from other Member States, (also by discouraging their establishment in the Member States in question) it also has an effect on trade since the markets for electronic communications services (wholesale and retail broadband markets) are open to competition between operators and service providers²⁰.

2.2. *Absence of aid: the application of the market economy investor principle*

- (16) Article 345 TFEU provides that '*[t]his Treaty shall in no way prejudice the rules in Member States governing the system of property ownership*'. According to the case-law of the Court, it follows from the principle of equal treatment that capital placed by the State, directly or indirectly, at the disposal of an undertaking in circumstances which correspond to normal market conditions cannot be regarded as State aid. When equity participation or capital injections by a public investor do not present sufficient prospects of profitability, even in the long term, such intervention must be regarded as aid within the meaning of Article 107 TFEU, and its compatibility with the common market must be assessed on the basis solely of the criteria laid down in that provision²¹.
- (17) In its Amsterdam decision, the Commission has examined the application of the principle of the market economy private investor in the broadband field²². As underlined in this decision, the conformity of a public investment with market

¹⁷ Subsidies to residential users fall outside the scope of Article 107(1) TFEU.

¹⁸ An example would be aid to a business districts, see for instance Commission decision in Case N626/2009 – Italy, *NGA for industrial districts of Lucca*.

¹⁹ Case C-310/99, Italian Republic v Commission [2002] ECR-I-02289, paragraph 65.

²⁰ See Commission Decision in Case N237/2008 — Germany, *Broadband support in Niedersachsen*.

²¹ Case C-303/88, Italian Republic v Commission, [1991] ECR I-1433, at paragraphs 20-22.

²² Commission Decision of 11 December 2007 in case C 53/2006 – The Netherlands, *Citynet Amsterdam - Investment by the city of Amsterdam in a fibre-to-the home (FttH) network*, OJ L 247, 16.9.2008, p.27.

terms has to be demonstrated thoroughly and comprehensively, either by means of a significant participation of private investors or the existence of a sound business plan showing an adequate return on investment. Where private investors take part in the project, it is a *sine qua non* condition that they would have to assume the commercial risk linked to the investment under the same terms and conditions as the public investor. This also applies to other forms of State supports such as soft loans or guarantees²³.

2.3. *State aid for broadband deployment as a service of general economic interest – Altmark and compatibility under Article 106 (2) TFEU*

- (18) In some cases, Member States may consider that the provision of a broadband network should be regarded as a service of a general economic interest ('SGEI') within the meaning of Article 106(2) TFEU²⁴ and the Altmark jurisprudence²⁵ and provide public funding on this basis. In such cases, Member States measures have to be assessed in line with the Commission Communication on the application of the EU State aid rules to compensation granted for the provision of services of general economic interest²⁶, the Commission Decision of 20 December 2011 on the application of Article 106(2) of the Treaty on the Functioning of the European Union to State aid in the form of public service compensation granted to certain undertakings entrusted with the operation of services of general economic interest²⁷, the Commission Communication on a European Union framework for State aid in the form of public service compensation (2011)²⁸ and the Commission Regulation of 25 April 2012 on the application of Articles 107 and 108 of the Treaty on the Functioning of the European Union to de minimis aid granted to undertakings providing services of general economic interest²⁹. These Commission documents (referred to all together as the "SGEI package") indeed also apply to State aid for broadband deployment. What follows will only illustrate the application of some of the principles clarified in these documents to broadband financing, in the light of certain sectoral specificities

The SGEI definition

- (19) Concerning the SGEI definition, the Commission has already clarified, in general terms, that Member States cannot attach specific public service obligations to services that are already provided or can be provided satisfactorily and under conditions, such as price, objective quality characteristics, continuity and access to

²³ Commission Notice on the application of Articles 87 and 88 of the EC Treaty to State aid in the form of guarantees, OJ C 155, 20.6.2008, p. 10-22 and the Corrigendum to the Notice, OJ C 244, 25.9.2008, p.32.

²⁴ According to the case-law, undertakings entrusted with the operation of services of general economic interest must have been assigned that task by an act of a public authority. In this respect, a service of general economic interest may be entrusted to an operator through the grant of a public service concession; see Joined Cases T-204/97 and T-270/97 EPAC - Empresa para a Agroalimentação e Cereais, SA v Commission [2000] ECR II-2267, paragraph 126 and Case T-17/02 Fred Olsen, SA v Commission [2005] ECR II-2031, paragraphs 186, 188-189.

²⁵ Case C-280/00, *Altmark Trans GmbH and Regierungspräsidium Magdeburg v Nahverkehrsgesellschaft Altmark GmbH* [2003] ECR I-7747.

²⁶ OJ C 8, 11.01.2012, p. 4-14.

²⁷ OJ L7, 11.01.2012, p. 3-10.

²⁸ OJ C8, 11.01.2012, p. 15-22.

²⁹ OJ L 114 of 26.4.2012, p. 8.

the service, consistent with the public interest, as defined by the State, by undertakings operating under normal market conditions³⁰.

- (20) Applying this principle to the broadband sector, the Commission considers that in areas where private investors have already invested in a broadband network infrastructure (or are further expanding the network) and are already providing competitive broadband services with an adequate broadband coverage, setting up a parallel competitive and publicly-funded broadband infrastructure cannot be considered as an SGEI within the meaning of Article 106 (2) TFEU³¹. However, where it can be demonstrated that private investors are not in a position to provide in the near future³² adequate broadband coverage to all citizens or users, thus leaving a significant part of the population unconnected, a public service compensation may be granted to an undertaking entrusted with the operation of an SGEI provided the conditions of the SGEI communication cited above are fulfilled. In this respect, the networks to be taken into consideration for assessing the need for an SGEI should always be of comparable type, namely either basic broadband or NGA networks.
- (21) Moreover, the deployment and the operation of a broadband infrastructure can qualify as an SGEI only if such infrastructure provides all users in a given area with universal connectivity, residential and business users alike. Support for connecting businesses only would not be sufficient³³.
- (22) The compulsory nature of the SGEI mission also implies that the provider of the network to be deployed will not be able to refuse wholesale access to the infrastructure on a discretionary and/or discriminatory basis (because for instance, it may not be commercially profitable to provide access services to a given area).
- (23) Given the degree of competition that has been achieved since the liberalisation of the electronic communications sector in the Union, and in particular the competition that exists today on the retail broadband market, a publicly-funded network set up within the context of an SGEI should be available to all interested operators. Accordingly, the recognition of an SGEI mission for broadband deployment should be based on the provision of a passive³⁴, neutral³⁵ and open infrastructure. Such a network should provide access seekers with all possible

³⁰ See point 48 of the Commission Communication on the application of the EU State aid rules to compensation granted for the provision of services of general economic interest and point 13 of the Commission Communication on a European Union framework for State aid in the form of public service compensation (2011).

³¹ See paragraphs 49 of the Commission Communication on the application of the EU State aid rules to compensation granted for the provision of services of general economic interest

³² The term in the "near future" should be understood as referring to a period of three years in line with paragraph (63) of these Guidelines.

³³ In line with the principle expressed in paragraph 50 of the Commission Communication on the application of the EU State aid rules to compensation granted for the provision of services of general economic interest. See also Commission Decision N284/05 – Ireland, Regional broadband Programme: *Metropolitan Area Networks* ("MANs"), phases II and III and N890/06 – France, *Aide du Sicoval pour un réseau de très haut débit*.

³⁴ The passive network infrastructure is basically the physical infrastructure of the networks. For a definition, see glossary.

³⁵ A network should be technologically neutral and thus enable access seekers to use any of the available technologies to provide services to end users.

forms of network access and allow effective competition at the retail level, ensuring the provision of competitive and affordable services to end-users³⁶.

- (24) Therefore, the SGEI mission should only cover the deployment of a broadband network providing universal connectivity and the provision of the related wholesale access services, without including retail communication services³⁷. Where the provider of the SGEI mission is also a vertically integrated broadband operator, adequate safeguards should be put in place to avoid any conflict of interest, undue discrimination and any other hidden indirect advantages³⁸.
- (25) Given that the market for electronic communications is fully liberalised, it follows that an SGEI mission for broadband deployment cannot be based on the award of an exclusive or special right to the provider of the SGEI within the meaning of Article 106(1) TFEU.

Calculation of the compensation and claw-back

- (26) For the calculation of the SGEI compensation the principles of the SGEI package fully apply. However, in the light of the specificities of the broadband sector, it is useful to add a clarification for SGEI intended to cover unconnected neighbourhoods or districts (so called "white spots") within a broader area in which some operators have already deployed their own network infrastructure or may plan to do so in the near future. In cases in which the area for which the SGEI is entrusted is not limited just to the "white spots", because of their size or location, the SGEI provider may need to deploy a network infrastructure also in the profitable areas already covered by commercial operators. In such situation, any compensation granted should only cover the costs of rolling out an infrastructure in the non-profitable white spots, taking into account relevant revenue and a reasonable profit³⁹.
- (27) In many circumstances, it may be appropriate to fix the compensation amount on an ex ante basis, so as to cover the expected funding gap over a given period, rather than to establish the compensation merely on the basis of costs and revenues as they occur. In the former model, there are typically more incentives for the company to contain costs and to develop the business over time⁴⁰. Where an SGEI

³⁶ In line with paragraph (78) g of these Guidelines.

³⁷ This limitation is justified by the fact that, once a broadband network providing universal connectivity has been deployed, the market forces are normally sufficient to provide communication services to all users at a competitive price.

³⁸ Such safeguards should include, in particular, an obligation of accounting separation, and may also include the setting up of a structurally and legally separate entity from the vertically integrated operator. Such entity should have sole responsibility for complying with and delivering the SGEI mission assigned to it.

³⁹ It is for Member States to devise, given the particularities of each case, the most appropriate methodology to ensure that the compensation granted will only cover the costs of discharging the SGEI mission in the white spots in line with the principles of the SGEI package, taking into account the relevant revenue and a reasonable profit. For instance, the compensation granted could be based on a comparison between revenues accruing from the commercial exploitation of the infrastructure in the profitable areas already covered by commercial operators and the revenues accruing from the commercial exploitation in the white spots. Any profit in excess of a reasonable profit, i.e. profits beyond the average industry return on capital for deploying a given broadband infrastructure, could be assigned to the financing of the SGEI in the non-profitable areas while the remaining profits could be part of the financial compensation granted. See Commission decision in case N 331/2008, France - *THD Hauts de Seine*.

⁴⁰ However, where future costs and revenue developments are surrounded by a high degree of uncertainty and there is a strong asymmetry of information, the public authority may also wish to adopt compensation

mission for the deployment of a broadband network is not based on the deployment of a publicly-owned infrastructure adequate review and claw back mechanisms should be put in place to prevent the SGEI provider from obtaining an undue advantage by retaining ownership of the network that was financed with public funds when the SGEI concession expires.

2.4. *Administrative and regulatory measures supporting broadband roll-out falling outside the scope of EU State aid rules*

- (28) As also explained in the Commission's Broadband Communication⁴¹, Member States may choose several types of measures in order to accelerate the deployment of broadband and in particular NGA networks besides providing direct funding to companies. These measures do not necessarily need to involve State aid within the meaning of Article 107(1) TFEU.
- (29) Given that generally a large part of the cost of deploying NGA networks is in the civil engineering work⁴², Member States may decide in accordance with the EU regulatory framework for electronic communications, for instance, to facilitate the acquisition process of rights of ways, to require that network operators coordinate their civil engineering works and/or that they share part of their infrastructure. In the same vein, Member States may also require that for any new constructions (including new water, energy, transport or sewage networks) and/or buildings a connection suitable for NGA should be in place. Third parties may also place at their own cost their passive network infrastructure when general civil engineering works are carried out in any event. This opportunity should be offered in a transparent and non-discriminatory way to all interested operators and should in principle be open to all potential users and not just electronic communications operators (i.e. electricity gas, water utilities etc.)⁴³. A centralised inventory of the existing infrastructure (subsidised or otherwise), possibly also including planned works, could help the roll-out of commercial broadband⁴⁴. Existing infrastructure does not only concern telecommunication infrastructure, such as wired, wireless or satellite infrastructure, but also alternative infrastructures (sewers, manholes, etc.) of other industries (such as utilities)⁴⁵.

models that are not entirely ex ante, but rather a mix of ex ante and ex post (e.g. using claw backs such as to allow a balanced sharing of unanticipated gains).

⁴¹ For reference, see footnote 2.

⁴² For instance digging, laying down cables, in-house wirings. In case of deploying fibre to the home networks, such costs could entail up to 70%-80% of the total investment costs.

⁴³ See also N 383/2010 2009 – Germany – Amendment of N 150/23008 Broadband in the rural areas of Saxony. This case concerned a situation where general civil engineering works, like road maintenances, did not constitute State aid. The measures taken by the German authorities constituted 'general civil engineering works' which would have been carried out by the State for maintenance purposes in any event. The possibility of placing ducts and broadband infrastructure at the occasion of the road maintenance – and at the costs of the operators - was announced publicly and not limited to or geared towards the broadband sector. However, it cannot be excluded that public funding of such works falls within the notion of aid of Article 107(1) TFEU if they are limited to or clearly geared towards the broadband sector.

⁴⁴ See for instance the German NRA's 'Infrastrukturatlas', where operators voluntarily share information on the available and potential reusable infrastructures.

⁴⁵ It should be recalled that the EU regulatory framework for e-communications gives the competent national authorities the possibility to require undertakings to provide the necessary information in order for these authorities to be able to establish, in conjunction with NRAs, a detailed inventory of the nature, availability and geographical location of network elements and facilities, and make it available to interested parties. See Article 12 (4) of Directive 2002/21/EC of the European Parliament and of the Council of 7 March 2002 on a common regulatory Framework for Electronic Communications Networks and services (Framework

2.5. *The compatibility assessment under Article 107(3) TFEU*

- (30) Where State intervention to support broadband deployment fulfils the conditions defined in Section 2.1, its compatibility will generally be assessed by the Commission under Article 107 (3) (c) TFEU⁴⁶. To date, regional and local authorities have adopted different models of intervention. A non-exhaustive list of these models is provided in the Annex. Apart from those described in the annex, public authorities may also develop other models of supporting broadband deployment.⁴⁷ For all types of intervention forms all the compatibility criteria set out in these Guidelines must be applied⁴⁸.
- (31) Broadband State aid projects may be implemented in assisted areas within the meaning of Article 107(3) (a) and (c) TFEU, and the Regional Aid specific rules⁴⁹. In this case, aid for broadband may qualify as aid for an initial investment within the meaning of the regional aid rules. Where a measure falls within the scope of such rules, and where it is envisaged to grant individual ad hoc aid to a single firm, or aid confined to one area of activity, the Member State is responsible for demonstrating that the conditions of the regional aid rules have been fulfilled. This includes in particular that the project in question contributes towards a coherent regional development strategy and that, having regard to the nature and size of the project, it will not result in unacceptable distortions of competition.

Overview of the common principles of compatibility

- (32) In the assessment under Article 107 (3) (c) of the TFEU the Commission ensures that the positive impact of the aid measure in reaching an objective of common interest outweighs its potential negative side effects, such as distortions of trade and competition. This exercise is conducted in two steps.
- (33) First, every aid measure has to comply with the below necessary conditions. Failure to comply with one of the following conditions will result in declaring the aid incompatible with the internal market:
- (1) Contribution to the achievement of objectives of common interest
 - (2) Absence of market delivery due to market failures or important inequalities
 - (3) Appropriateness of State aid as a policy instrument
 - (4) Existence of incentive effect

Directive) as amended by Directive 2009/140/EC of the European Parliament and of the Council of 25 November 2009.

⁴⁶ The list of all the Commission decisions taken under the State aid rules concerning broadband is available at http://ec.europa.eu/competition/sectors/telecommunications/broadband_decisions.pdf.

⁴⁷ For instance, loans (as opposed to grants) may be a useful tool to counteract the lack of credit for long term infrastructure investments.

⁴⁸ This is without prejudice to the possible application of the Regional Aid Guidelines as referred to in paragraph (31).

⁴⁹ Guidelines on national regional aid applicable *ratione temporis* (e.g. Guidelines on national regional aid for 2007-2013, OJ C 54, 04.03.2006, pages 13-44).

- (5) Aid limited to the minimum necessary
 - (6) Limited negative effects
 - (7) Transparency
- (34) Second, if all necessary conditions are met, the Commission balances the positive effects of the aid measure in reaching an objective of common interest against the potential negative effects.
- (35) The individual steps of the Commission assessment in the field of broadband are set out in further detail in what follows.

(1) Contribution to the achievement of objectives of common interest

- (36) As regards the common interest objective, the Commission will assess to what extent the planned intervention will contribute to the achievement of the objectives of common interest explained above as further specified in the DAE.

(2) Absence of market delivery due to market failures or important inequalities

- (37) A "market failure" exists if markets, left to their own devices, without intervention fail to deliver an efficient outcome for society. This may arise for instance when certain investments are not being undertaken even though the economic benefit for society exceeds the cost⁵⁰. In such cases, the granting of State aid may produce positive effects and overall efficiency can be improved by adjusting the economic incentives for firms. In the broadband sector, one form of market failure is related to positive externalities. Such externalities arise where market players do not internalise the whole benefit of their actions. For example, the availability of broadband networks paves the way for the provision of more services and for innovation, both of these are likely to benefit more people than the immediate investors and subscribers to the network. The market outcome would therefore generate insufficient private investment in broadband networks.
- (38) Due to economics of density, the deployment of broadband networks is generally more profitable where potential demand is higher and concentrated, i.e. in densely populated areas. Because of high fixed costs of investment, unit costs increase significantly as population densities drop⁵¹. Therefore, when deployed on commercial terms, broadband networks tend to profitably cover only part of the population. However, as acknowledged in the DAE, widespread and affordable access to broadband generates positive externalities because of its ability to accelerate growth and innovation in all sectors of the economy. Where the market does not provide sufficient broadband coverage or the access conditions are not adequate, State aid may therefore help to remedy such market failure.
- (39) A second possible objective of common interest is related to equity. Governments may choose to intervene to correct social or regional inequalities generated by a

⁵⁰ However, the fact that a specific company may not be capable of undertaking a project without aid does not mean that there is a market failure. For instance, the decision of a company not to invest in a project with low profitability or in a region with limited market demand and/or poor cost competitiveness may not be an indication of a market failure, but rather of a market that functions well.

⁵¹ Satellite systems also have unit costs, but in larger steps and therefore tend to be more independent of population density.

market outcome. In certain cases, State aid for broadband may also be used to achieve equity objectives, i.e. as a way of improving access to an essential means of communication and participation in society as well as freedom of expression for all members of society, thereby improving social and territorial cohesion.

(3) *Appropriateness of State aid as a policy instrument and the design of the measure*

- (40) Public intervention in support of broadband networks may take place at State, regional or municipal level⁵². Therefore coordination of the various interventions is essential to avoid duplications and incoherence. To ensure consistency and coordination of the local interventions, it is necessary to ensure a high level of transparency of local initiatives.
- (41) Wherever possible and respecting competences and specificities, Member States are encouraged to design nationwide schemes containing the main principles underlying the public initiatives and to indicate the most relevant features of the planned networks⁵³. National framework schemes for broadband development ensure coherency in the use of public funds, reduce administrative burden on smaller granting authorities and accelerate the implementation of the individual aid measures. Further, Member States are encouraged to give clear guidance at central level for the implementation of State aid-financed broadband projects.
- (42) The role of NRAs in designing a pro-competitive State aid measure in support of broadband is particularly important. The NRAs have gained technical knowledge and expertise due to the crucial role assigned to them by sectoral regulation⁵⁴. They are best placed to support public authorities with regard to the State aid schemes and should be consulted when target areas are being identified. NRAs should also be consulted with regard to determining the wholesale access prices and conditions and solving disputes between access seekers and the subsidised infrastructure operator. Member States are encouraged to provide NRAs with the resources they need to give such support. Where necessary, Member States should provide an appropriate legal basis for such involvement of NRAs in State aid broadband projects. In keeping with best practice, NRAs should issue guidelines for local authorities which include recommendations on market analysis, wholesale access products and pricing principles taking into account the Electronic Communications Regulatory Framework and relative Recommendations issued by the Commission⁵⁵.
- (43) In addition to the involvement of NRAs, National Competition Authorities may also provide useful advice in particular in relation to large framework schemes to help establishing a level playing field for the bidding operators and to avoid that a disproportionately high share of state funds is earmarked to one operator, thereby

⁵² For municipal and regional funding see Commission Decisions in cases SA 33420 (2011/N) – Germany, *Breitband Lohr am Main*, N 699/2009 – Spain, *Desarrollo del programa de infraestructuras de telecomunicaciones en la Región de Murcia*.

⁵³ Often Member States notify framework programmes which describe under which conditions municipal or regional funding can be granted to broadband deployment. See for instance N62/2010 – Finland, *High speed broadband construction aid in sparsely populated areas of Finland*, N53/2010 – Germany, *Federal framework programme on duct support*, or N30/2010 – Sweden, *State aid to Broadband within the framework of the rural development program*.

⁵⁴ For reference, see above footnote 5.

⁵⁵ This would increase transparency, ease the administrative burden on local authorities and could mean that NRAs would not have to analyse each State aid case individually.

strengthening its (possibly already dominant) market position⁵⁶. In addition to the role of NRAs, some Member States set up national competence centres to help small, local authorities to design adequate state aid measures and ensure consistency in the application of the State aid rules as specified in these Guidelines⁵⁷.

- (44) So that the measure is properly designed, the balancing test further requires that State aid is an *appropriate* policy instrument to address the problem. In this respect, whilst *ex ante* regulation has in many cases facilitated broadband deployment in urban and more densely populated areas, it may not be a sufficient instrument to enable the supply of broadband service, especially in underserved areas where the inherent profitability of investment is low⁵⁸. Likewise, although they can contribute positively to broadband penetration⁵⁹, demand-side measures in favour of broadband (such as vouchers for end users) cannot always solve the lack of broadband provision⁶⁰. Hence, in some situations there may be no alternative to granting public funding to overcome the lack of broadband connectivity. Granting authorities shall also take into account spectrum (re-)allocations leading to possible network roll-out in the target areas that could achieve the objectives of the granting authorities without the provision of direct grants.

(4) Existence of incentive effect

- (45) Regarding the *incentive effect* of the measure, it needs to be examined whether the broadband network investment concerned would not have been undertaken within the same timeframe without any State aid. Where an operator is subject to certain obligations to cover the target area⁶¹, it may not be eligible for State aid, as the latter is unlikely to have an incentive effect.

(5) Aid limited to the minimum necessary

- (46) In assessing the *proportional* character of the notified measures, the Commission has highlighted a number of necessary conditions to minimise the State aid involved and the potential distortions of competition as explained more in detail in the following Sections.

(6) Limited negative effects

⁵⁶ See for instance Avis n° 12-A-02 du 17 janvier 2012 relatif à une demande d'avis de la commission de l'économie, du développement durable et de l'aménagement du territoire du Sénat concernant le cadre d'intervention des collectivités territoriales en matière de déploiement des réseaux à très haut débit (French Competition Authority's opinion in relation to the deployment of very high speed broadband networks)

⁵⁷ See for instance Commission decisions in cases N 237/2008 *Broadband support in Niedersachsen, Germany* or SA.33671 *Broadband Delivery UK, United Kingdom*.

⁵⁸ See for instance, Commission Decision N473/2007 – Italy, *Broadband connection for Alto Adige*, Decision N570/2007 – Germany, *Broadband in rural areas of Baden-Württemberg*.

⁵⁹ In particular to promote take-up of already available broadband solutions, be they locally available terrestrial fixed or wireless networks or generally available satellite solutions.

⁶⁰ See for instance Commission Decision N222/2006 – Italy, *Aid to bridge the digital divide in Sardinia*.

⁶¹ This may, for instance, apply to mobile LTE (long-term evolution) or LTE advanced operators with coverage targets under their licence conditions. in the target area. Similarly, if an operator designated with an universal service obligation (USO) receives public service compensation, no additional State aid can be granted to finance the same network.

- (47) The change in the beneficiary's behaviour because of the aid may also have negative effects on competition and trade, however. The significance of the distortion of competition can be assessed in terms of effects on competitors. If competitors see the profitability of their prior investment decreasing because of the aid, they may decide to reduce their own future investment or even withdraw from the market altogether⁶². Additionally, where the aid beneficiary to be chosen following the competitive selection process is likely to be an undertaking already dominant on a market or may become dominant due to the State funded investment, the aid measure could weaken the competitive constraint that competitors can exert. Moreover, if a State aid measure or the conditions attached to it (including its financing method when it forms an integral part of it) entail a non-severable violation of EU law, the aid cannot be declared compatible with the internal market⁶³.

(7) Transparency

- (48) Aid shall be awarded in a transparent manner; in particular, it must be ensured that the Member States, economic operators, the interested public and the Commission have easy access to all relevant acts and pertinent information about the aid awarded thereunder. The details of the transparency requirements are specified in paragraph (78).

(8) The overall balancing exercise and the compatibility conditions to limit the distortion of competition

- (49) A carefully designed State aid scheme for broadband should ensure that the overall balance of the effects of the measure is positive.
- (50) In this regard, the effect of the State aid measure can be described as a change of activity compared with what would have happened without the aid. The positive effects of the aid are directly linked to the change in the aid beneficiary's behaviour. This change should enable the achievement of the desired common interest goal. In the broadband sector, the aid leads to the rollout of a new infrastructure which would not have been there otherwise, thus delivering additional capacity and speed on the market as well as lower prices and better choice for consumers, higher quality and innovation. This would also result in more access for consumers to on-line resources and, together with increased consumer protection in this area, it is likely to stimulate an increase in demand. This will contribute to the completion of the Digital Single Market and bring benefits to the EU economy as a whole.
- (51) A subsidised network should be able to ensure a "step change" in terms of broadband availability. A "step change" can be demonstrated if as the result of the public intervention (1) the selected bidder makes significant new investments in the broadband network⁶⁴ and (2) the subsidised infrastructure brings significant

⁶² This type of effects can be referred to as "crowding out".

⁶³ See for instance Case C-156/98 *Germany v Commission* [2000] ECR I-6857, paragraph 78 and Case C-333/07 *Régie Networks* [2008] ECR I-10807, paragraphs 94-116.

⁶⁴ For instance, marginal investments related merely to the upgrade of the active components of the network should not be considered eligible for state aid. Similarly, although certain copper enhancing technologies

new capabilities to the market in terms of broadband service availability and capacity⁶⁵, speeds and competition⁶⁶. The step change shall be compared to that of existing as well as concretely planned network roll-outs.

- (52) Moreover, to ensure that the negative effects on competition are minimised, a number of conditions have to be fulfilled in the design of the aid measure, as specified below in Section 3.4.
- (53) To further ensure that distortion of competition are limited, the Commission may require that certain schemes are subject to a time limitation (of normally 4 years or less) and to an evaluation in order to verify (1) whether the assumptions and conditions which led to the compatibility decision have been realised; (2) the effectiveness of the aid measure in light of its pre-defined objectives; (3) its impact on markets and competition and that no undue distortive effects arise under the duration of the aid scheme that is contrary to the interests of the Union⁶⁷. Given its objectives and in order not to put disproportionate burden on Member States and on smaller aid projects, this only applies for national aid schemes and aid schemes with large aid budgets, containing novel characteristics or when significant market, technology or regulatory changes are foreseen. The evaluation shall be carried out by an expert independent from the state aid granting authority on the basis of a common methodology⁶⁸ and shall be made public. The evaluation shall be submitted to the Commission in due time to allow for the assessment of the possible prolongation of the aid measure and in any case upon expiry of the scheme. The precise scope and modalities of the evaluation shall be defined in the approval decision of the aid measure. Any subsequent aid measure with a similar objective shall take into account the results of that evaluation.
- (54) If the balancing test shows that the negative effects outweigh the benefits, the Commission may prohibit the aid, or ask for remedial action, either in the design of the aid, or in the harm it does to competition.

3. THE ASSESSMENT OF STATE AID FOR BROADBAND

3.1. Types of broadband networks

- (55) For the purposes of State aid assessment, the present Guidelines distinguish between basic and NGA networks.

(such as vectoring) could increase the capabilities of the existing networks, they may not require significant investments in new infrastructure hence should not be eligible for State aid.

⁶⁵ For instance an upgrade from a basic to an NGA broadband network. Also certain upgrades of an NGA network (such as extension of fibre connectivity nearer to the end user) could constitute a step change. In areas where broadband networks are already present, the application of the step change should ensure that the use of State aid does not lead to a duplication of existing infrastructure. Similarly, a small, gradual upgrade of existing infrastructures for instance from 12 Mbps to 24 Mbps is unlikely to bring additional service capabilities (and would likely disproportionately favour the existing operator).

⁶⁶ The subsidised network should be pro-competitive, i.e. allow for effective access at different levels of the infrastructure in the way indicated in paragraph (78) and, in the case of support to NGA deployment, also in paragraph (80).

⁶⁷ See for instance Commission decision in case SA.33671 *Broadband Delivery UK, United Kingdom*

⁶⁸ Such a common methodology may be provided by the Commission

- (56) Several different technology platforms can be considered as basic broadband networks including asymmetric digital subscriber lines (up to ADSL2+ networks), non-enhanced cable (e.g. DOCSIS 2.0), mobile networks of third generation (UMTS) and satellite systems.
- (57) At the current stage of market and technological development⁶⁹, NGA networks are access networks which rely wholly or partly on optical elements⁷⁰ and which are capable of delivering broadband access services with enhanced characteristics as compared to existing basic broadband networks⁷¹.
- (58) NGA networks are understood to have at least the following characteristics: (i) deliver services reliably at a very high speed per subscriber through optical (or equivalent technology) backhaul sufficiently close to user premises to guarantee the actual delivery of the very high speed; (ii) support a variety of advanced digital services including converged all-IP services, and (iii) have substantially higher upload speeds (compared to basic broadband networks). At the current stage of market and technological development, NGA networks are: (i) fibre-based access networks (FTTx),⁷² (ii) advanced upgraded cable networks⁷³ and (iii) certain advanced wireless access networks capable of delivering reliable high-speeds per subscriber⁷⁴.
- (59) It is important to bear in mind that in the longer term NGA networks are expected to supersede existing basic broadband networks and not just to upgrade them. To the extent that NGA networks require a different network architecture, offering significantly better quality broadband services than today as well as the provision of multiple services that could not be supported by today's broadband networks, it is likely that in the future there will be marked differences emerging between areas that will be covered and areas that will not be covered by NGA networks⁷⁵.
- (60) Member States can freely decide what form their intervention will take, provided it complies with State aid rules. In some cases, Member States might decide to finance so-called next generation networks (NGN), i.e. backhaul networks which

⁶⁹ Due to rapid technological development, in the future other technologies may also be able to deliver NGA services.

⁷⁰ Coaxial, wireless and mobile technologies make use, to a certain extent, of a fibre support infrastructure, thereby making them conceptually similar to a wired network using copper to deliver the service for the part of the last mile not covered by fibre.

⁷¹ The final connection to the end-user may be ensured both by wired and wireless technologies. Given the rapid evolution of advanced wireless technologies such as LTE-Advanced and the intensifying market deployment of LTE or Wi-Fi, next generation fixed wireless access (e.g. based on possibly tailored mobile broadband technology) could be a viable alternative to certain wired NGA (FTTCab, for example) if certain conditions are met. Since the wireless medium is "shared" (the speed per user depends on the number of connected users in the area covered) and is inherently subject to fluctuating environmental conditions, in order to provide reliably the minimum download speeds per subscriber that can be expected of an NGA, next generation fixed wireless networks may need to be deployed at a certain degree of density and/or with advanced configurations (such as directed and/or multiple antennas). Next generation wireless access based on tailored mobile broadband technology must also ensure the required quality of service level to users at a fixed location while serving any other nomadic subscribers in the area of interest.

⁷² The term FTTx refers to FTTC, FTTN, FTTP, FTTH and FTTB.

⁷³ Using at least the 'DOCSIS 3.0' cable modem standard.

⁷⁴ See for instance Commission decision in case SA.33671 *Broadband Delivery UK, United Kingdom*.

⁷⁵ If today the differences between an area where only narrowband internet is available (dial-up) and an area where broadband exists means that the former is a "white" area, likewise an area that lacks a next generation broadband infrastructure, but may still have one basic broadband infrastructure in place should also be considered a "white" NGA area.

do not reach the end-user. Backhaul networks are a necessary input for retail telecommunication operators to provide access services to the end users. These types of networks are able to sustain both basic and NGA types of networks⁷⁶: it is the (investment) choice of the telecommunication operators what type of 'last mile' infrastructure they wish to connect to the backhaul network⁷⁷. Public authorities may also decide to undertake just civil engineering works (such as digging on public land, construction of ducts) in order to enable and accelerate the deployment by the operators concerned of their own network elements. Furthermore, when suitable, public authorities might also wish to take satellite solutions into account.

3.2. *The distinction between white, grey and black areas for basic broadband networks*

- (61) In order to assess market failure and equity objectives, a distinction can be made between the types of areas that may be targeted. This distinction is explained in the following sections. In the identification of the targeted areas, whenever the public intervention is limited to the backhaul part of the network, the State aid assessment will take into account the situation on both the backhaul markets and the access markets⁷⁸.
- (62) The different standards to justify public interventions in these geographical areas will be described below.
- (63) For the purpose of identifying the geographical areas as white, grey or black as described below, the aid granting authority needs to determine whether broadband infrastructures exist in the targeted area. In order to further ensure that the public intervention does not disrupt private investments, the aid granting authorities should also verify whether private investors have concrete plans to roll out their own infrastructure in the near future. The term "near future" should be understood as referring to a period of three years⁷⁹. If the granting authority takes a longer time horizon for the deployment of the subsidised infrastructure, the same time horizon should also be used to assess the existence of commercial investment plans.
- (64) To verify that there are no private investors planning to roll out their own infrastructure in the near future, the aid granting authority should publish a summary of the planned aid measure and invite interested parties to comment.
- (65) There exists the risk that a mere "expression of interest" by a private investor could delay delivery of broadband services in the target area if subsequently such investment does not take place while at the same time public intervention has been stalled. The aid granting authority could therefore require certain commitments from the private investor before deferring the public intervention. These commitments should ensure that significant progress in terms of coverage will be made within the three year period or for the longer period foreseen for the supported investment. It may further request the respective operator to enter into a corresponding contract which outlines the deployment commitments. This contract could foresee a number

⁷⁶ In comparison to other networks which do not reach the end consumer (like FTTC), an important characteristic of NGN backhaul infrastructure is that it is open for interconnection with other networks.

⁷⁷ Commission decision in case N407/2009 – Spain – *Optical fibre Catalonia (Xarxa Oberta)*.

⁷⁸ Commission decisions in cases N407/2009 – Spain – *Optical fibre Catalonia (Xarxa Oberta)* and SA. 33438 – Poland, *Broadband network for Eastern Poland*.

⁷⁹ The three year period would start from the moment of publication of the planned aid measure.

of "milestones" which would have to be achieved during the three year period⁸⁰ and reporting on the progress made. If a milestone is not achieved, the granting authority may then go ahead with its public intervention plans. This rule applies both for basic and for NGA networks.

"White areas": promoting territorial cohesion and the economic development objective

- (66) "White areas" are those in which there is no broadband infrastructure and it is unlikely to be developed in the near future. The Commission targets for the DAE aim for a ubiquitous coverage of basic broadband services in the EU by 2013 and of at least 30 Mbps by 2020. It is therefore a priority to ensure timely investment in areas which are not yet sufficiently covered. The Commission acknowledges therefore that by providing financial support for the provision of broadband services in areas where broadband is currently not available, Member States pursue genuine cohesion and economic development objectives and thus, their intervention is likely to be in line with the common interest, provided the conditions set out in Section 3.4 below are fulfilled⁸¹.

"Grey areas": need for a more detailed assessment

- (67) "Grey areas" are those in which one network operator is present and another network⁸² is unlikely to be developed in the near future. The mere existence of one network operator⁸³ does not necessarily imply that no market failure or cohesion problem exists. If that operator has market power (monopoly) it may provide citizens with a suboptimal combination of service quality and prices. Certain categories of users may not be adequately served or, in the absence of regulated wholesale access tariffs, retail prices may be higher than those charged for the same services offered in more competitive but otherwise comparable areas or regions of the country. If, in addition, there are only limited prospects that alternative operators enter the market, the funding of an alternative infrastructure could be an appropriate measure⁸⁴.

⁸⁰ In this regard, an operator should be able to demonstrate that within the three year period it will cover a substantial part of the territory and of the population concerned thereby. For instance, the aid granting authority may request any operator who declares an interest in building its own infrastructure in the target area to deliver a credible business plan, supporting documents like bank loan agreements and a detailed calendar deployment plan within two months. In addition, within twelve months the investment should be started and permission should be obtained for most of the rights of ways necessary for the project. Additional milestones on the progress of the measure can be agreed for every 6 month period.

⁸¹ See for instance, Commission decisions in cases N607/2009 – Ireland, *Rural Broadband Reach*, or N172/2009 – Slovenia, *Broadband development in Slovenia*.

⁸² The same company may operate separate fixed and mobile networks in the same area but this will not change the "colour" of such area.

⁸³ The competitive situation is assessed according to the number of existing infrastructure operators. In Commission Decision N330/2010 – France, *Programme national Très Haut Débit*, it was clarified that the existence of several retail providers on one network (including Local Loop Unbundling (LLU)) does not turn the area into a black area, but that the territory remains a grey area as only one infrastructure is present. At the same time, the existence of competing operators (at the retail level) will be considered an indication that, albeit grey, the area in question may not be problematic in terms of presence of a market failure. Convincing proof of access problems or quality of service will have to be supplied.

⁸⁴ In its Decision N131/2005 – United Kingdom, *FibreSpeed Broadband Project Wales*, the Commission had to assess whether the financial support given by the Welsh authorities for the construction of an open, carrier-neutral, fibre-optic network linking 14 business parks could still be declared compatible even if the target locations were already served by the incumbent network operator, who provided price regulated leased lines. The Commission found that the leased lines offer by the incumbent operator was very

- (68) On the other hand, in areas where there is already one broadband network operator, subsidies for the construction of an alternative network could distort market dynamics. Therefore state support for the deployment of broadband networks in 'grey' areas is only justified when it can be clearly demonstrated that a market failure persists. A more detailed analysis and a thorough compatibility assessment will be necessary.
- (69) Grey areas could be eligible for State support, provided the compatibility conditions of in Section 3.4 are met, if it is proved that (i) no affordable or adequate services are offered to satisfy the needs of citizens or business users⁸⁵ and that (ii) there are no less distortive measures available (including ex ante regulation) to reach the same goals.
- (70) To establish (i) and (ii), the Commission will assess in particular whether:
- (a) the overall market conditions are not adequate, by looking, *inter alia*, into the level of current broadband prices, the type of services offered to end-users (residential and business users) and the conditions attached thereto;
 - (b) in the absence of ex ante regulation imposed by an NRA, effective network access is not offered to third parties or access conditions are not conducive to effective competition;
 - (c) overall entry barriers preclude the potential entry of other electronic communication operators⁸⁶, and
 - (d) any measures taken or remedies imposed by the competent national regulatory or competition authority with regard to the existing network provider have not been able to overcome such problems.
- (71) Only grey areas that meet the eligibility criteria listed above will undergo the compatibility test described in section 3.4 .

"Black areas": no need for State intervention

- (72) When in a given geographical zone there are or there will be in the near future at least two basic broadband networks of different operators and broadband services are provided under competitive conditions (infrastructure-based competition⁸⁷), it

expensive, almost unaffordable for SMEs. See also Commission Decision N890/2006 – France, *Aide du Sicoval pour un réseau de très haut débit* and Commission Decision N284/2005 - Ireland, *'Regional Broadband Programme: Metropolitan Area Networks ("MANs"), phases II and III.*

⁸⁵ In addition to the specifications of paragraph (70), the granting authorities could take into consideration indicators such as: the penetration rate for services with the highest performance levels, excessively high prices for high-performance services (including leased lines for end users as explained in the previous footnote) having the effect of discouraging take up and innovation, e-government services in the process of being developed which require performances beyond the ones offered on the existing network. Where in the target area a significant proportion of citizens and business users are already adequately served, it has to be ensured that the public intervention does not lead to an undue overbuilt of the existing infrastructure. In that case, the public intervention may be limited to “gap-filling” measures only.

⁸⁶ For instance, whether the broadband network already in place was built on the basis of a privileged use/access to ducts not accessible by or not shared with other network operators.

⁸⁷ If only one infrastructure is present, even if this infrastructure is used – via unbundling (LLU) – by several electronic communication operators, such situation shall be considered to be a competitive grey area. It is

can be assumed that there is no market failure. 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"⁸⁸.

3.3. *The distinction between white, grey and black areas for NGA networks*

(73) The distinction made above in Section 3.2 between "white", "grey" and "black" areas is relevant also for assessing whether State aid for NGA networks is compatible with the internal market under Article 107(3)(c).

(74) At present, by upgrading active equipment, certain advanced basic broadband networks can also support some broadband services which in the future are likely to be offered over NGA networks (such as triple play services) and thereby contribute to meeting the DAE targets. However, novel products or services which are not substitutable from the perspective of either demand or supply may emerge and will require capacity, reliability and substantially higher upload and download speeds beyond the upper physical limits of basic broadband infrastructure.

"White NGA areas"

(75) Accordingly, for the purposes of assessing State aid for NGA networks, an area where NGA networks do not at present exist and where they are not likely to be built within three years in line with paragraphs (63) to (65) by private investors, should be considered to be a "white NGA" area. Such an area is eligible for State aid to NGA provided the compatibility conditions indicated in Sections 3.4 and 3.5 are fulfilled.

"Grey NGA areas"

(76) An area should be considered a 'grey NGA' area where only one NGA network⁸⁹ is in place or is being deployed in the coming three years and there are no plans by any operator to deploy a NGA network in the coming three years. In assessing whether other network investors could deploy additional NGA networks in a given area, account should be taken of any existing regulatory or legislative measures that may have lowered barriers for such network deployments (access to ducts, sharing of infrastructure, etc.). The Commission will need to carry out a more detailed analysis in order to verify whether state intervention is needed since State intervention in such areas carries a high risk of crowding out existing investors and distorting competition. In this respect, the Commission will carry out its

not considered as a 'black area' within the meaning of these Guidelines. See also Commission decision in case SA. 31316 *Programme national «Très haut débit»*, France.

⁸⁸ See Commission Decision of 19 July 2006 on the measure No C 35/2005 (ex N 59/2005) – The Netherlands Broadband infrastructure in Appingedam, OJ L 86, 27.3.2007, p.1. In this decision, the Commission noted that the competitive forces of the specific market were not duly taken into account. In particular, that the Dutch broadband market was a fast-moving market in which providers of electronic communications services, including cable operators and Internet Service Providers, were in the process of introducing very high capacity broadband services without any State support.

⁸⁹ The same company may operate separate fixed and wireless NGA networks in the same area but this will not change the "colour" of such area.

assessment on the basis of the compatibility conditions established in these Guidelines..

"Black NGA areas"

- (77) If at least two NGA networks of different operators exist in a given area or will be deployed in the coming three years, such an area should be considered a 'black NGA' area. The Commission will consider that state support for an additional publicly-funded, equivalent NGA network in such areas is likely to seriously distort competition and is incompatible with the internal market under Article 107(3)(c) of the TFEU.

3.4. *Design of the measure and the need to limit distortions of competition*

- (78) Every state measure in support of broadband deployment should fulfil all compatibility principles described above in Section 2.5, including the common interest objective, the existence of market failure, the appropriateness and the incentive effect of the measure. As regards limiting the distortions of competition, besides the demonstration of how a "step change" is achieved in all cases (in white, grey and black areas)⁹⁰, the following necessary conditions must be fulfilled to demonstrate the proportionality of the measure. Failure to meet any of these conditions would most likely require an in-depth assessment⁹¹ which could result in a conclusion that the aid is incompatible with the internal market.
- a) *Detailed mapping and analysis of coverage*: Member States should clearly identify which geographic areas will be covered by the support measure in question⁹², whenever possible in cooperation with the competent national bodies. The consultation of the NRA is encouraged but optional. Best practice examples suggest creation of a central database of the available infrastructure at a national level thereby increasing transparency and reducing the costs for the implementation of smaller, local projects. Member States have the freedom to define the target areas, however, they are encouraged to take into account economic conditions in the definition of relevant regions before launching the tender⁹³.
- b) *Public consultation*: Member States should give adequate publicity to the main characteristics of the measure and to the list of target areas by publishing the relevant information of the project and inviting to comment. A publication on a central webpage at national level would in principle ensure that such information is made available to all interested stakeholders. By also verifying the results of the mapping in a public consultation Member States minimise distortions of competition with existing providers and with those who already have investment

⁹⁰ See paragraph (51) above.

⁹¹ The detailed assessment could necessitate the opening of a procedure according to Article 108(2) TFEU.

⁹² This mapping should be done on the basis of homes passed by a particular network infrastructure and not on the basis of the actual number of homes or customers connected as subscribers.

⁹³ For instance, target areas that are too small might not provide sufficient economic incentives for market players to bid for the aid, while areas that are too big might reduce the competitive outcome of the selection process. Several selection procedures also allow different potential undertakings to benefit from State aid thereby avoiding that one (already dominant) operators' market share is further strengthened by State aid measures by favouring large market players or discouraging technologies which would mainly be competitive in smaller target areas.

plans for the near future and enable these investors to plan their activities⁹⁴. A detailed mapping exercise and a thorough consultation ensure not only a high degree of transparency but serve also as an essential tool for defining the existence of “white”, “grey” and “black” areas⁹⁵.

- c) *Competitive selection process*: Whenever the granting authorities select a third-party operator to deploy and operate the subsidised infrastructure,⁹⁶ the selection process shall be conducted in line with spirit and the principles of the EU Public Procurement Directives⁹⁷. It ensures that there is transparency for all investors wishing to bid for the implementation and/or management of the subsidised project. Equal and non-discriminatory treatment of all bidders and objective evaluation criteria are indispensable conditions. The competitive tender is a method to reduce budgetary costs, to minimise the potential State aid involved and at the same time reduces the selective nature of the measure in so far as the choice of the beneficiary is not known in advance⁹⁸. Member States shall ensure a transparent process⁹⁹ and a competitive outcome¹⁰⁰ and shall use a dedicated central website at the national level to publish all on-going tender procedures on broadband State aid measures¹⁰¹.
- d) *Most economically advantageous offer*: Within the context of a competitive tender procedure, the aid granting authority shall establish qualitative award criteria on which the submitted bids are assessed. Relevant award criteria may include for instance the achieved geographical coverage¹⁰², sustainability of the technological approach or the impact of the proposed solution on competition¹⁰³. Such

⁹⁴ In case where it can be demonstrated that existing operators did not provide any meaningful information to a public authority for the purposes of the required mapping exercise, such authorities would have to rely only on whatever information has been made available to them.

⁹⁵ See for instance Commission decision in case N266/2008 – Germany, *Broadband in rural areas of Bayern*.

⁹⁶ The situation is different when the public authority decides to deploy and manage the network directly (or through a fully owned entity) such as in Commission decision in case N330/2010 - France *Programme national Très Haut Débit and SA.33807 (2011/N) –Italy, National Broadband Plan*. In such cases, to safeguard the results of competition that have been achieved since the liberalisation of the electronic communications sector in the Union, and in particular the competition that exists today on the retail broadband market, in case of a publicly managed subsidised networks (1) the publicly owned network operators shall limit their activity on the pre-defined target areas and shall not expand to other commercially attractive regions; (2) the public authority shall limit its activity to maintain the passive infrastructure and to grant access to it, but shall not engage in competition on the retail levels with commercial operators and (3) to have an accounting separation between the funds used for the operation of the networks and the other funds at the disposal of the public authority.

⁹⁷ Directive 2004/18/EC of the European Parliament and of the Council of 31 March 2004 on the coordination of procedures for the award of public works contracts, public supply contracts and public service contracts. OJ L 134, 30.4.2004, p. 114–240.

⁹⁸ See for instance, Commission Decision N475/2007- Ireland, "*National Broadband Scheme (NBS)*", Commission Decision N157/2006 – United Kingdom, "*South Yorkshire Digital region Broadband Project*".

⁹⁹ When the object of such a competitive selection process is a public contract covered by the EU public procurement directives 2004/17/EC or 2004/18/EC, the tender notice shall be published in OJEU in order to ensure European wide competition, in accordance with the requirements of these directives. In all other cases, tender information should be publicised at least nationwide.

¹⁰⁰ In the case that a competitive selection process does not generate a sufficient number of bidders, the cost calculation proposed by the winning bidder may be put to examination by an external auditor.

¹⁰¹ If for technical reasons it is not feasible to set up a national website, regional websites should be put in place. Such regional websites should be interconnected.

¹⁰² In terms of the geographic area as defined in the call for the competitive selection process.

¹⁰³ For instance, network topologies allowing full and effective unbundling could receive more points. It should be noted that at this stage of market development, a point to point topology are more conducive for long term competition in comparison with point to multipoint topology, while the deployment costs are

qualitative criteria have to be weighed against the requested aid amount. In order to reduce the amount of aid to be granted, at similar if not identical quality conditions, the bidder with the lowest amount of aid requested should in principle receive more priority points within the overall assessment of its bid. The awarding authority shall always specify in advance the relative weighting which it will give to each of the (qualitative) criteria chosen.

- e) *Technological neutrality*: As different technological solutions exist to provide broadband services, the tender should not favour or exclude any particular technology or network platform. Bidders should be entitled to propose the provision of the required broadband services using or combining whatever technology they deem most suitable. On the basis of the objective tender criteria, the granting authority is then entitled to select the most suitable technological solution or mix of technology solutions. In principle, universal coverage of larger target areas can be reached with a mix of technologies
- f) *Use of existing infrastructure*: Since the re-usability of existing infrastructure is one of the main determinants for the cost of broadband roll-out, Member States should encourage bidders to have recourse to any available existing infrastructure so as to avoid unnecessary and wasteful duplication of resources and to reduce the amount of public funding. Any operator which owns or controls infrastructure (irrespective of whether it is actually used) in the target area and which wishes to participate in the tender, should fulfil the following conditions: (i) to inform the aid granting authority and the NRA about that infrastructure during the public consultation; (ii) to provide all relevant information to other bidders at a point in time which would allow the latter to include such infrastructure in their bid. Member States should setup a national database on the availability of existing infrastructures that could be re-used for broadband roll-out.
- g) *Wholesale access*: Third parties' effective wholesale access to a subsidised broadband infrastructure is an indispensable component of any State measure supporting broadband. In particular, wholesale access enables third party operators to compete with the selected bidder (when the latter is also present at the retail level), thereby strengthening choice and competition in the areas concerned by the measure while at the same time avoiding the creation of regional service monopolies. Applying only to State aid beneficiaries, this condition is not contingent on any prior market analysis within the meaning of Article 7 of the Framework Directive¹⁰⁴. The type of wholesale access obligations imposed on a subsidised network should be aligned with the portfolio of access obligations laid down under the sectoral regulation¹⁰⁵. In principle, subsidised companies should

comparable especially in urban areas. Point to multipoint networks will be able to provide full and effective unbundling only once wavelength-division-multiplexed passive optical network (WDM-PON) access is standardised and requested under the applicable regulatory frameworks.

¹⁰⁴ Moreover, whenever Member States opt for a management model whereby the subsidised broadband infrastructure offers only wholesale access services to third parties, not retail services, the likely distortions of competition are further reduced as such a network management model helps to avoid potentially complex issues of margin squeeze and hidden forms of access discrimination. See for instance SA.30317 High-speed broadband in Portugal.

¹⁰⁵ Whenever the State aid measure covers the funding of new passive infrastructure elements such as ducts or poles, access to those should also be granted and be unlimited in time. See for instance Commission decisions in cases N53/3010 – Germany, *Federal framework programme on ducts support*, N596/2009 – Italy – *Bridging the digital divide in Lombardia*, N383/2009 – Germany – *Amendment of N150/2008 Broadband in the rural areas of Saxony*, N330/2010 – France, *Programme national Très Haut Débit*.

provide a wider range of wholesale access products than those mandated by NRAs under sectoral regulation to the operators who have significant market power¹⁰⁶ since the aid beneficiary is using not just its own resources but taxpayers' money to deploy its own infrastructure¹⁰⁷. Such wholesale access should be granted as early as possible before starting the network operation¹⁰⁸.

Effective wholesale access to the subsidised infrastructure¹⁰⁹ should be offered for at least a period of seven years. If at the end of the seven years period the operator of the infrastructure in question is designated by the NRA under the applicable regulatory framework as having significant market power (SMP) in the specific market concerned, access obligations would need to be imposed in accordance with the Electronic Communications Regulatory Framework. NRAs or other competent national bodies are encouraged to publish guidance for granting authorities on the principles to set wholesale access conditions and tariffs. In order to allow effective access, the same access conditions shall apply on the entirety of the subsidised network, including on the parts of such network where existing infrastructures have been used¹¹⁰. The access obligations shall be enforced irrespective of any change in ownership, management or operation of the subsidised infrastructure.

- h) *Wholesale access pricing*: Benchmarking is an important tool for ensuring that the aid granted will serve to replicate market conditions like those prevailing in other competitive broadband markets. Wholesale access price, should be based on the pricing principles set by the NRA and on benchmarks and should take into account the aid received by the network operator¹¹¹. For the benchmark, the average published wholesale prices that prevail in other comparable, more competitive areas of the country or the Union shall be taken or, in the absence of such published prices, prices already set or approved by the NRA for the markets and services concerned. If there are no published or regulated prices available for certain wholesale access products to benchmark against, the pricing should follow the principles of cost orientation pursuant to the methodology established in accordance with the sectorial regulatory framework¹¹². Given the complexity of benchmarking wholesale access prices, Member States are encouraged to provide a mandate and the necessary staffing to the NRA to advice aid granting authorities on such matters. A detailed description of the aid project should be sent to the NRA at least 2 months prior to the notification to allow the NRA to have a

¹⁰⁶ For example, for NGA networks, the point of reference should be the list of access products included in the NGA recommendation.

¹⁰⁷ If state aid is provided to fund the construction of ducts, the latter should be large enough to cater for several cable networks and to host point-to-multipoint as well as point-to-point solutions.

¹⁰⁸ Where the network operator also provides retail services, in line with the NGA recommendation, this would normally imply granting access at least 6 month before the launch of such retail services.

¹⁰⁹ Effective wholesale access to the subsidised infrastructure can be provided by means of the wholesale access products detailed in Annex II.

¹¹⁰ For instance, the usage of wholesale access by third parties cannot be limited only to retail broadband services.

¹¹¹ To what extent the aid amount is taken into account may vary depending on the competitive situation in the competitive selection process and in the target area. The benchmark would therefore be the upper limit of the wholesale price.

¹¹² So that operators do not artificially inflate their costs, Member States are encouraged to use contracts which incentivise firms to reduce their costs with time. For instance, in contrast to cost-plus contracts, a fixed-price contract would give the company the incentive to reduce costs over time.

reasonable period of time to provide its opinion. Where the NRA has obtained such competence, the aid granting authority should seek advice from the NRA in setting the wholesale access prices and conditions. The benchmarking criteria should be clearly indicated in the tender documents.

- i) *Monitoring and claw-back mechanism*: The granting authorities shall closely monitor the implementation of the broadband project during the entire duration of the project. Where the operator is selected on the basis of a competitive procurement procedure, there is typically less need to monitor the subsequent development of the profitability of the project. In many circumstances, it may be appropriate to fix the aid amount on an ex ante basis, so as to cover the expected funding gap over a given period, rather than to establish the aid amount on the basis of costs and revenues as they are incurred. In the former model, there are typically more incentives for the company to contain costs and to become more efficient over time. However, where future costs and revenue developments are surrounded by a high degree of uncertainty and there is a strong asymmetry of information, the public authority may also wish to adopt financing models that are not entirely ex ante, but rather a mix of ex ante and ex post (e.g. using claw backs such as to allow a balanced sharing of unanticipated gains). In order not to put a disproportionately high burden on small, local projects, a minimum threshold may be justified for the claw-back mechanism. Therefore Member States should implement the claw-back mechanism if the aid amount of the project is above EUR 10 million¹¹³. Granting authorities can foresee that any extra profit reclaimed from the selected bidder could be spent for further broadband network expansion within the framework scheme and at the same conditions of the original aid measure. An accounting separation obligation for the winning bidder as regards the subsidy received will make it easier for the granting authorities to monitor the implementation of the scheme as well as any extra profit generated¹¹⁴.
- j) *Transparency*: Member States shall publish on a central website at least the following information on the State aid measures: the full text of the approved aid scheme and its implementing provisions, name of the aid beneficiary, aid amount, aid intensity and used technology. Such information shall be published after the granting decision has been taken and shall be kept for at least 10 years and shall be available for the general public without restrictions. The aid beneficiary is obliged to provide entitled third parties with comprehensive and non-discriminatory access to information on its infrastructure (including *inter alia* ducts, street cabinets and fibre) deployed under a State aid measure¹¹⁵. This will enable other operators to easily ascertain the possibility to access such infrastructure and should provide all relevant information about the broadband network to a central register of broadband infrastructures, if such database exists within the Member State, and/or to the NRA.

¹¹³ The claw back is not necessary in case of publicly owned, wholesale only infrastructures, managed by the public authority with the sole purpose to grant fair and non-discriminatory access to all operators if the conditions specified in footnote 967 are met.

¹¹⁴ Best practice examples suggest monitoring and claw-back for a minimum of 7 years, and any extra profit (i.e. profit higher than in the original business plan or the industry average) to be shared between the beneficiary and the public authorities according to the aid intensity of the measure.

¹¹⁵ This information should be regularly updated (for example every 6 months) and shall be available in non-proprietary formats.

- k) *Reporting*: starting from the date when the network is put into use, for the duration of the aid measure, the State aid granting authority should report every two years key information on the aid projects to the European Commission¹¹⁶. In the case of national or regional framework schemes, the national or regional authorities should consolidate the information of the individual measures and report to the European Commission. When adopting a decision under these Guidelines the Commission may require additional reporting regarding the aid granted.

3.5. Supporting the rapid deployment of NGA networks

- (79) As with the policy followed with respect to basic broadband deployment, State aid in favour of NGA network deployment may constitute an appropriate and justified instrument, provided that a number of fundamental conditions are fulfilled. While commercial operators take their investment decisions in NGA networks on the basis of the expected profitability, the choice of the public authority has to take into account also the public interest in funding an open and neutral platform on which multiple operators will be able to compete for the provision of services to the end users.
- (80) Any measure to support NGA deployment must fulfil the compatibility conditions indicated in Section 2.5 and 3.4. In addition, the following conditions must be met, taking into account the specific situations in which the public investment in NGA networks will occur.
- (a) *Wholesale access*: Due to the economics of NGAs, it is of utmost importance to ensure effective wholesale access for third party operators. Especially in areas in which there are already competing basic broadband operators¹¹⁷, in which it has to be ensured that the competitive market situation which existed before the intervention is preserved. The access conditions described above in Section 3.4 are specified as follows. The subsidised network must therefore offer access under fair and non-discriminatory conditions to all operators who request it and will provide them with the possibility of effective and full unbundling¹¹⁸. Moreover, third party operators must have access to passive and not only active¹¹⁹ network infrastructure¹²⁰. Apart from bitstream access and unbundled access to the local loop and sub-loop, the access obligation should therefore also include the right to use ducts and poles, dark fibre or street

¹¹⁶ Such information should at least include: besides the information already made public following paragraph (78) j), the date when the network is put into use, , the wholesale access products, the number of access seekers and service providers on the network, the number of houses passed, take-up rates.

¹¹⁷ Including LLU operators.

¹¹⁸ At this stage of market development, a point to point topology can be effectively unbundled. If the selected bidder rolls out a point-to-multipoint topology network, it shall have a clear obligation to provide effective unbundling via wavelength division multiplexing (WDM) as soon as the access is standardized and commercially available. Until WDM unbundling becomes effective, the selected bidder shall be required to provide access seekers with a virtual unbundling product, as close as possible to physical unbundling.

¹¹⁹ If they are indirect beneficiaries, when they obtain access at the wholesale level, third party operators may have to give bit-stream access themselves. In spite of the fact that aid was only granted for passive infrastructure, also active access was requested for instance in Commission decision in case N330/2010 – France, *Programme national Très Haut Débit*.

¹²⁰ Such as Customer premise equipment (CPEs) or other equipment needed to operate the network. If it proves necessary to upgrade certain parts of the network in order to provide effective access, this shall be foreseen in the granting authorities' plans, for example: foreseeing adequately sized ducts, increasing the size of street cabinets to provide effective unbundling and so on.

cabinets.¹²¹ Effective wholesale access should be granted for at least seven years and the right of access to ducts or poles should not be limited in time. This is without prejudice to any similar regulatory obligations that may be imposed by the NRA in the specific market concerned in order to foster effective competition or measures adopted during or after the expiry of that period¹²².

It may be the case that in areas with low population density, where there are limited broadband services, or for small local companies, the imposition of all types of access products might disproportionately increase investment costs¹²³ without delivering significant benefits in terms of increased competition¹²⁴. In such a situation, one may envisage that access products requiring costly interventions on the subsidised infrastructure not otherwise foreseen (e.g. co-location in intermediary distribution points) be offered only in case of a reasonable demand from a third party operator. The demand is considered reasonable if i) the access seeker provides a coherent business plan which justifies the development of the product on the subsidised network and ii) no comparable access product is already offered in the same geographic area by another operator at equivalent prices to those of more densely populated areas.¹²⁵

By contrast, the preceding paragraph cannot be invoked in more densely populated areas where one may expect infrastructure competition to develop. Therefore, in such areas, the subsidised network should satisfy all types of network access products that operators may seek.¹²⁶

- (b) Fair and non discriminatory treatment: The subsidised infrastructure must enable the provision of competitive and affordable services to end-users by competing operators. Where the network operator is vertically integrated, adequate safeguards must be put in place to prevent any conflict of interest, undue discrimination towards access seekers or content providers and any other hidden indirect advantages. In the same vein, the award criteria should contain

¹²¹ A strong access obligation is all the more crucial in order to deal with the temporary substitution between the services offered by existing ADSL operators and those offered by future NGA network operators. The access obligation will ensure that competing ADSL operators can migrate their customers to a NGA network as soon as a subsidised network is in place and thus start planning their own future investments without suffering a competitive handicap. See for instance N461/2009 - United Kingdom, *Cornwall & Isles of Scilly Next Generation Broadband*.

¹²² In this regard, the possible persistence of the specific market conditions that justified the granting of an aid for the infrastructure in question should be taken into consideration.

¹²³ The disproportionate increase in costs must be proved with detailed and objective cost calculations by the granting authority.

¹²⁴ For instance, see Commission decision in case N330/2010 – France, *Programme national Très Haut Débit* and in case SA.33671 – United Kingdom, *Broadband Delivery UK*.

¹²⁵ Other conditions may be accepted by the Commission as part of the proportionality analysis in light of the specificities of the case and the overall balancing exercise. See for example, Commission decision in case N330/2010 – France, *Programme national Très Haut Débit* and in case SA.33671 – United Kingdom, *Broadband Delivery UK*. If the conditions are fulfilled, access should be granted within a period which is customary for the particular market. In the case of conflict, the aid granting authority should ask the NRA or another competent national body for an advice.

¹²⁶ For instance, in case of passive fixed networks it shall be able to support both point-to-point as well as point-to-multipoint topologies depending on the choice of the operators. In particular in the more densely populated areas, should they be eligible for State aid, it would not be considered in the public interest to grant aid for investments in simple upgrades of existing networks not bringing a step change also in terms of competition.

the provision that bidders proposing a wholesale-only model, a passive-only model or both shall receive additional points.

- (81) State aid projects aiming at the funding of backhaul networks¹²⁷ or limited to civil works open for access to all operators and technologies exhibit especially pro-competitive features. This feature will be taken into account in the assessment of such projects.

3.6. Aid to ultra-fast broadband networks

- (82) In light of the Digital Agenda objectives, in particular achieving 50% penetration to internet connections above 100 Mbps, and taking into account that especially in urban areas there may be higher performance needs compared to what commercial investors are willing to offer in the near future, by way of derogation to paragraph (77), public intervention could exceptionally be allowed for NGA networks able to provide ultra-fast speeds well above 100 Mbps .

- (83) In "black NGA" areas, such intervention could only be allowed if the 'step change' required by paragraph (51) is proved on the basis of the following cumulative criteria:

- (a) the existing or planned¹²⁸ NGA networks do not reach the end user premises with fibre networks¹²⁹
- (b) the market situation is not evolving towards the achievement of a competitive provision of ultra-fast services¹³⁰ above 100 Mbit/s in the near future by the investment plans of commercial operators in accordance with paragraph (63) to (65);
- (c) there is expected demand for such qualitative improvements¹³¹.

- (84) In the situation described in the previous paragraph, any new subsidized network must respect the compatibility conditions of paragraphs (78) and (80). In addition, the aid granting authority must also demonstrate that:

- (a) the subsidised network exhibits significant enhanced technological characteristics and performance compared to the verifiable characteristics and performance of existing or planned networks¹³²; and
- (b) the subsidized network will be based on an open architecture operated as a wholesale only network; and

¹²⁷ See above paragraph (60). Interventions going beyond the central office level will be considered already NGA and not NGN. See Commission decision in case SA.34031 - *Next generation broadband in Valle d'Aosta*.

¹²⁸ Based on credible investment plans for the near future of three years in accordance with paragraphs (63) to (65).

¹²⁹ For instance, NGA networks do not reach end user premises with fibre in case of FTTC networks, where fibre is installed only until the nodes (cabinets). Similarly, some cable networks are also using fibre until the cabinets and connect end-users with coaxial cables.

¹³⁰ For example, in an area where there is an FTTC or equivalent network and an upgraded cable network (at least Docsis 3.0) the market conditions are generally considered competitive enough to be able to evolve towards the provision of ultra-fast services without the need of public intervention.

¹³¹ See for example the indicators in footnote 84 and 85.

¹³² See paragraph (63) to (65) above.

- (c) the aid does not lead to an excessive distortion of competition with other NGA technologies that have recently been the subject of significant new infrastructure investments by market operators in the same target areas¹³³.
- (85) Only if these additional conditions are fulfilled, public funding of such networks might be considered compatible under the balancing test. In other words, such funding would have to lead to a significant, sustainable, pro-competitive and non-temporary technological advancement without creating disproportionate disincentives to private investments.

4. FINAL PROVISIONS

- (86) These Guidelines will be applied from the first day following its publication in the *Official Journal of the European Union*.
- (87) The Commission will apply these Guidelines to all notified aid measures in respect of which it is called upon to take a decision after the Guidelines are published in the Official Journal, even where the projects were notified prior to that date.
- (88) In accordance with the Commission notice on the determination of the applicable rules for the assessment of unlawful State aid¹³⁴, the Commission will apply to unlawful aid the rules in force at the time when the aid was granted. Accordingly, it will apply these Guidelines in the case of unlawful aid granted after its publication.
- (89) The Commission herewith proposes to Member States, on the basis of Article 108(1) TFEU, to take appropriate measures and amend, where necessary, their existing aid schemes in order to bring them into line with the provisions of these Guidelines within twelve months after their publication in the Official Journal of the European Union.
- (90) The Member States are invited to give their explicit unconditional agreement to these proposed appropriate measures within two months from the date of publication of the Guidelines in the *Official Journal of the European Union*. In the absence of any reply, the Commission will assume that the Member State in question does not agree with the proposed measures.
- (91) The Commission may review the present Guidelines on the basis of future important market, technological and regulatory developments.

¹³³ This would normally be the case when, due to the aid, market operators cannot recoup the infrastructure investments undertaken in an appropriate period taking into account normal amortisation time. The following (interconnected) factors will in particular be taken into account: the size of the investment, how recent it is, the minimum period required in order to get an adequate return on the investment and the likely effect of the roll-out of the new subsidised ultra-fast network on the number of subscribers to the existing NGA networks and the relative subscription prices.

¹³⁴ OJ C 119, 22.05.2002, p. 22

ANNEX I - TYPICAL INTERVENTIONS FOR BROADBAND SUPPORT

In its case practice, the Commission has observed certain most recurrent funding mechanisms used by Member States to foster broadband deployment, assessed under Article 107(1) TFEU. The following list is illustrative and not exhaustive, as public authorities might develop different ways of supporting broadband deployment or deviate from the models described. The constellations typically involve State aid, unless the investment is carried out in line with the market economy investor principle (see Section 2.2).

1. **Monetary allocation** ("gap funding"¹³⁵): In the majority of cases examined by the Commission, the Member State¹³⁶ awards direct monetary grants to broadband investors¹³⁷ to build, manage and commercially exploit a broadband network¹³⁸. Such grants normally involves State aid within the meaning of Article 107(1) TFEU, as the grant is financed by State resources and gives an advantage to the investor to conduct a commercial activity under conditions which would not have been available on the market. In such case, both the network operators receiving the grant and the electronic communication providers seeking wholesale access to the subsidised network are beneficiaries of the aid.
2. **Support in kind**: In other cases, Member States support broadband deployment by financing the rollout of a full broadband network (or parts thereof) which is subsequently put at the disposal of electronic communication investors which will use these network elements for their own broadband deployment project. This support can take many forms, with the most recurring being Member States providing broadband passive infrastructure by carrying out civil engineering work (for instance by digging up a road) or by placing ducts or dark fibre¹³⁹. Such form of support creates an advantage for the broadband investors who save the respective investment costs¹⁴⁰ as well as for electronic communication providers which seek wholesale access to the subsidised network.
3. **State operated broadband network or parts thereof**: State aid can also be involved if the State, instead of providing support to a broadband investor, constructs (parts of) a broadband network and operates it directly through a branch of the public administration or via an in-house company¹⁴¹. This model of intervention typically consists of the construction of a publicly owned passive network infrastructure, with a view of making it available to broadband operators by granting wholesale access to the network on non-discriminatory terms. Operating the network and granting of wholesale access to it against

¹³⁵ "Gap funding" refers to the difference between investment costs and expected profits for private investors.

¹³⁶ Or any other public authority granting the aid.

¹³⁷ The term "investors" denotes undertakings or electronic communications network operators that invest in the construction and deployment of broadband infrastructures.

¹³⁸ Examples for gap funding are Commission decisions in cases SA.33438 a.o – Poland - *Broadband network project in Eastern Poland*, SA 32866 – Greece – *Broadband development in Greek rural areas*, SA.31851 – Italy – *Broadband Marche*, N 368/2009 – Germany – Amendment of State aid broadband scheme N115/2008- *Broadband in the rural areas of Germany*.

¹³⁹ Commission decisions in cases N 53/3010 – Germany, *Federal framework programme on ducts support*, N596/2009 – Italy – *Bridging the digital divide in Lombardia*, See also N383/2009 – Germany – Amendment of N 150/2008 *Broadband in the rural areas of Saxony*.

¹⁴⁰ Civil engineering costs and other investment in passive infrastructure can constitute up to 70% of the total cost of a broadband project.

¹⁴¹ Commission decision in case N330/2010 – France – *Programme national Très Haut Débit*, which covered various intervention modalities, *inter alia* one in which the collectivités territoriales can operate own broadband networks as a 'regie' operation.

remuneration is an economic activity within the meaning of Article 107(1) TFEU. The construction of a broadband network with a view to its commercial exploitation constitutes an economic activity according to case-law i.e. State aid within the meaning of Article 107(1) TFEU can already be present at the moment of the construction of the broadband network¹⁴². Electronic communication providers seeking wholesale access to the publicly operated network will also be considered aid beneficiaries.

4. **Broadband network, managed by a concessionary:** Member States may also fund the rollout of a broadband network, that remains in public ownership, but whose operation will be offered through a competitive tender procedure to a commercial operator to manage and exploit it at the wholesale level¹⁴³. Also in this case, as the network is constructed with a view to its exploitation, the measure may constitute State aid. The operator managing and exploiting the network as well as third party electronic communication providers seeking wholesale access to the network will also be considered aid beneficiaries.

¹⁴² Case T-443/08 and T-455/08 *Freistaat Sachsen v. Commission* [Not yet published].

¹⁴³ Commission decisions in cases N 497/2010 –United Kingdom, *SHEFA – 2 Interconnect.*, N 330/2010 – France – *Programme national Très Haut Débit*, N 183/2009 – Lithuania, *RAIN project*.

ANNEX II : GLOSSARY OF TECHNICAL TERMS

For the purpose of these Guidelines, the following definitions should apply. The definitions are without prejudice to further market, technological and regulatory changes.

Access segment: "last mile" segment connection the backhaul network with the end user premises.

Backhaul network: The part of the broadband network, which constitutes the intermediate link between the backbone network and the access network and carries data to and from the global network.

Bit-stream access: Wholesale access provider installs a high speed access link to the customer premises and makes this access link available to third parties.

Dark fibre: Unlit fibre without transmission systems connected.

Duct: Underground pipe or conduit used to house (fibre, copper or coax) cables of a broadband network.

Full unbundling: Physical unbundling grants access to the end-consumer access line and allows the competitor's own transmission systems to directly transmit over it. In certain circumstances, virtual unbundling may be considered equivalent to physical unbundling.

FTTH: Fibre to the home network, which reaches the end user premises with fibre, i.e. an access network consisting of optical fibres lines in both the feeder and the drop segments of the access network (including in-house wiring).

FTTB: Fibre to the building, which reaches the end user premises with fibre, i.e. fibre is rolled out to the building, but copper, coax or LAN is used within the building.

FTTN: Fibre to the Nodes. The fibre is terminated in a street cabinet up to several kilometres away from the customer premises, with the final connection being copper (in fibre to the cabinet/VDSL networks) or coax (in the cable/DOCSIS 3 network). Fibre-to-the-node is often seen as a temporary, interim step towards full FTTH.

Neutral networks: networks which can sustain any type of network topologies. In case of FTTH networks, the infrastructure shall be able to support both point to point and point to multipoint topologies.

Next Generation Access Network: Access networks which rely wholly or partly on optical elements and which are capable of delivering broadband access services with enhanced characteristics as compared to existing basic broadband networks.

Passive network: Broadband network without any active component. Typically comprises civil engineering infrastructure, ducts and dark fibre and street cabinets.

Passive wholesale access: Access to a transmission medium without any electronic component.

Point-to-multipoint: A network topology that has dedicated individual customer lines to an intermediate passive node (e.g. street cabinet) where these lines are aggregated onto a shared line. Aggregation could be either passive (with splitters such as in a PON architecture) or active (such as FTTC).

Point-to-Point: Network topology whereby the customer lines remain dedicated all the way from the customer to the Metropolitan Point of Presence.

Wholesale access products: Access enables an operator to utilise the facilities of another operator. The wholesale access products that can be provided over the subsidised network are the following:

- **FTTH/FTTB network:** ducts access, access to dark fibre, unbundled access to the local loop (WDM-PON or optical distribution frame (ODF) unbundling), and bit-stream access.
- **Cable networks:** duct access and bit-stream access.
- **FTTC networks:** duct access, sub-loop unbundling and bit-stream access.
- **Passive network infrastructure:** duct access, access to dark fibre and/or unbundled access to the local loop. In case of an integrated operator: the access obligations (differing from the passive infrastructure access) shall be imposed in accordance with the provisions of the NGA Recommendation.
- **ADSL-based broadband networks:** unbundled access to the local loop, bit-stream access.
- **Mobile or wireless networks:** bit-stream, sharing of physical masts and access to the backhaul networks.
- **Satellite platform:** bit-stream access.