

# The new State Aid Broadband Guidelines: not all black and white

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## 1. General context

### 1.1. *The importance of broadband development*

There is widespread consensus on the crucial impact of broadband development for economies and societies<sup>2</sup>. Broadband networks have the potential to affect productivity, innovation and the advancement of a country more than any other type of infrastructure<sup>3</sup>. In that respect, the ongoing debate about public support for the development of broadband networks starts from the premise that widespread availability of broadband access is a worthy political, social and economic objective, shared (and strongly encouraged) by the Commission, the Member States and the industry alike. It is widely acknowledged that broadband deployment offers advantages well beyond those of the mere ‘Information Society’ as it constitutes the key to the development of a genuine ‘Network Society’. Broadband, more than any other physical infrastructure, incorporates a powerful transformative force that is capable of levelling out distance-related, regional handicaps and reshapes the traditional distinction, heavily laden with implications, between the centre and the periphery.

There is little wonder, therefore, that governments all around the world are putting broadband development at the forefront of their political agendas and are drafting comprehensive national broadband strategies<sup>4</sup>.

Nowadays, the objectives — and challenges — that governments face with respect to broadband infrastructure development are twofold: in the short run, to bridge the remaining digital divide, by bringing full and universal coverage of at least basic broadband to all citizens; and in the longer run, to accelerate the widest possible roll-out of Next Generation Access (NGA) networks, able to carry advanced digital services and content.

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<sup>1</sup> This article reflects the personal opinions of the authors and may not be regarded as stating an official position of the European Commission or of its Competition Directorate-General. Responsibility for the information and views expressed lies entirely with the authors.

<sup>2</sup> See for instance Fornefeld, Delaunay and Elixmann (2008), ‘*The impact of broadband on growth and productivity*’ - A study on behalf of the European Commission, at [http://ec.europa.eu/information\\_society/eeurope/i2010/docs/benchmarking/final\\_report-micus-broadband\\_impact-short.pdf](http://ec.europa.eu/information_society/eeurope/i2010/docs/benchmarking/final_report-micus-broadband_impact-short.pdf); Czernich et al., ‘*Broadband infrastructure and Economic Growth*’, CESifo working paper No 2861 (December 2009), at [http://www.ifo.de/pls/guestci/download/CESifo%20Working%20Papers%202009/CESifo%20Working%20Papers%20December%202009/cesifo1\\_wp2861.pdf](http://www.ifo.de/pls/guestci/download/CESifo%20Working%20Papers%202009/CESifo%20Working%20Papers%20December%202009/cesifo1_wp2861.pdf); and P.S. Brogan, ‘The economic benefits of broadband and information technology’.

<sup>3</sup> See for instance Katz and Suter, ‘*Estimating the economic impact of the broadband stimulus plan*’. Columbia Institute for Tele-Information Working Paper (December 2009), at [http://www.elinoam.com/raulkatz/Dr\\_Raul\\_Katz\\_-\\_BB\\_Stimulus\\_Working\\_Paper.pdf](http://www.elinoam.com/raulkatz/Dr_Raul_Katz_-_BB_Stimulus_Working_Paper.pdf).

<sup>4</sup> See ‘*Next Generation Connectivity: A review of broadband Internet transitions and policy from around the world*’, a Broadband study published by the Berkman Center for Internet & Society of the University of Harvard (October 2009) and posted for public consultation by the FCC (US) in December 2009, at [http://cyber.law.harvard.edu/newsroom/broadband\\_review\\_draft](http://cyber.law.harvard.edu/newsroom/broadband_review_draft). See also OECD, ‘Broadband Growth and Policies in OECD Countries — Main Findings, OECD Ministerial Meeting on the Future of the Internet Economy, Seoul, Korea, 17-18 June 2008, at <http://www.oecd.org/dataoecd/32/58/40629032.pdf>.

## 1.2. Use of public funds

In Europe the electronic communication sector is now fully liberalised and subject to sectoral regulation which has brought about significant improvements in the competitive landscape of the telecommunication markets. In such a context, investments for the roll-out or upgrade of broadband networks are, in principle, the natural consequence of the competitive pressure. However, from the outset it was clear that market-driven private investments alone would not be enough to achieve ubiquitous broadband connectivity and, therefore, the use of additional public funds soon became a necessity.

In fact, as the Commission has underlined in a number of State aid ‘broadband decisions’, in most countries, the topology and morphology of the territory, the demographic characteristics of certain regions and, in some cases, the inadequate competitive pressure<sup>5</sup> are the main reasons why private operators have not and may not be able to make a viable business case to serve with adequate broadband services consumers in rural areas or areas with low population density. The above-mentioned factors are usually present outside densely populated areas, thus causing the costs for the deployment of broadband infrastructures to increase dramatically and leaving a very limited and inadequate broadband offer to citizens and businesses.

Moreover, the welfare loss deriving from such a digital divide cannot be ignored: research shows that the availability of adequate broadband services can bring proportionally greater benefits for rural areas (in terms of employment and GDP growth) than for urban areas<sup>6</sup>.

Thus, many governments around the world have recognised the importance of ensuring the widest possible broadband coverage for their territories. Outside the EU, Japan and South Korea, two of the most advanced countries in terms of broadband penetration, have explored the route of granting ‘soft loans’ to existing operators to accelerate and extend their investment plans for broadband deployment. In the US, within the framework of the current stimulus package, 7.2 billion dollars have already been earmarked to foster broadband development in rural and underserved areas while in Australia, the government has announced its decision to roll out a new, State-funded next generation broadband network worth 43 billion Australian dollars.

In Europe, spending of State resources has to be compatible with the State aid rules of the Treaty to ensure that pursuing a laudable public policy objective does not end up distorting competition and crowding out private investors<sup>7</sup>. In this framework, a significant amount of public funds has been channelled by virtually all EU Member States to broadband development: since 2003, the Commission has assessed and approved almost €2 billion of State aid to be spent in this area, deemed to have generated almost €4 billion of investments<sup>8</sup>. The Commission has only raised concerns on a State aid to broadband measure when private operators already provided similar services or planned to do so in the near future. In such situations, despite the pro-competitive designs of the project, the Commission came to the conclusion that there was no need to use

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<sup>5</sup> For some, a regulatory framework that is more focused on fostering investments than maintaining competition might be able to extend broadband coverage to larger areas (see Koenig and Fechner, ‘*The European Commission’s hidden asymmetric Regulatory Approach in the Field of Broadband Infrastructure Funding*’. EStAL 4/2009). However, such a view is not supported by empirical evidence and omits the fact that the existence of infrastructure (even where monopolistic) cannot maximise consumer welfare, while effective competition is able to do so.

<sup>6</sup> See for instance Lehr, W., Osorio, C., Gillett, S. and Sirbu, M., ‘*Measuring broadband economic impact*’, Final Report Prepared for the US Department of Commerce, Economic Development Administration (February 2006), available at [http://www.eda.gov/imagecache/EDAPublic/documents/pdfdocs2006/mitcmubbimpactreport\\_2epdf/v1/mitcmu\\_bimpactreport.pdf](http://www.eda.gov/imagecache/EDAPublic/documents/pdfdocs2006/mitcmubbimpactreport_2epdf/v1/mitcmu_bimpactreport.pdf).

<sup>7</sup> See in particular Lambros Papadias, ‘*The Application of the State Aid Rules to the Electronic Communications Sector*’, in C. Koenig, A. Bartosch (et al.), ‘*EC Competition and Telecommunications Law, Second Edition*’, International Competition Law Series, Volume 6 (Kluwer Law Publications), pp. 153-226.

<sup>8</sup> The list of Commission decisions on State aid to broadband is available at [http://ec.europa.eu/competition/sectors/telecommunications/broadband\\_decisions.pdf](http://ec.europa.eu/competition/sectors/telecommunications/broadband_decisions.pdf).

State aid as such intervention ran a high risk of duplicating existing services and crowding out investments by electronic communication operators<sup>9</sup>.

### 1.3. Ongoing developments

Recently, two major developments have pushed even more to the forefront the need for more targeted and accelerated planning and design of public investment in broadband network deployments.

First, in the context of the current financial and economic crisis, investments in broadband infrastructure are considered effective measures that can bring about a short-term recovery and produce long-term economic advantages. With this in mind, both the European Commission and Member States have agreed to accelerate broadband deployment<sup>10</sup>.

Second, a major technological shift is currently underway in the electronic communications sector: operators are starting to upgrade or deploy very high speed, NGA networks. Industry experts expect a similar revolutionary effect from the deployment of NGA networks to what happened with the first generation deployment of broadband networks. Yet, as mentioned already, the deployment of NGA networks requires a significant amount of investment, with estimates ranging between a minimum of €30 billion<sup>11</sup> and a maximum of €300 billion<sup>12</sup>.

Faced with these challenges, the Commission undertook in 2009 different forms of intervention.

First of all, as a form of direct funding, in the framework of the European Recovery Plan and with the aim of achieving 100% high speed internet coverage for all citizens by 2010, the Commission injected up to €1.02 billion into the European Agricultural Fund for Rural Development (EAFRD) for deployment of broadband infrastructures in rural areas<sup>13</sup>. A total amount of over €1 billion was subsequently allocated to the European governments to be invested in anti-crisis measures, with a special focus on broadband networks<sup>14</sup>.

Secondly, as explained above, public funding in the electronic communications sector is in principle additional to private operators' own investments. Therefore, it is fundamental that the regulatory environment in which market actors operate is clear and predictable, on the one hand, and conducive to innovation and investments, on the other. To this end, the Commission has been working on two major regulatory documents that will have significant effects on the sector.

The first is the draft NGA Recommendation<sup>15</sup> addressed to the national regulatory authorities. Once adopted, it will provide guidance about the most appropriate remedies to regulate access to

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<sup>9</sup> See for instance Commission Decisions in Cases C 35/2005 *Broadband development Appingedam*, OJ L 86, 27.3.2007, p. 1, and NN 24/2007 *Prague Municipal Wireless Network*, OJ C 141, 26.6.2007, p. 2. Also Gaál, Papadias and Riedl, *Municipal wireless networks and State aid rules: Insights from Wireless Prague*. Competition Policy Newsletter, 2007/3.

<sup>10</sup> Communication from the Commission to the European Council, COM(2008) 800, and Brussels European Council, 19-20 March 2009, Presidency Conclusions.

<sup>11</sup> See for instance New Street Research: *Fibre: Anxieties, delusions and bluffs. Diverse approaches to local loop upgrades*, 13 March 2009.

<sup>12</sup> The costs of rolling out a Europe-wide NGA network have been estimated by McKinseyAnalysis to be around €250-300 billion.

<sup>13</sup> See Regulation (EC) No 473/2009 of 25.5.2009 amending Regulation (EC) No 1698/2005 on support for rural development by the European Agricultural Fund for Rural Development (EAFRD) and Regulation (EC) No 1290/2005 on the financing of the common agricultural policy, OJ L 149, 9.6.2009, p. 3.

<sup>14</sup> The Regulation cited in the preceding footnote gave Member States the choice of investing the EAFRD funds in broadband or in other rural development initiatives. According to the information available at the time of writing, only one third of those funds has been ultimately invested in broadband, while the remainder has been channelled to other policies, especially for support to the dairy sector.

<sup>15</sup> At the moment of writing, still in the consultation phase. The draft NGA Recommendation will be adopted most probably in the course of 2010.

fibre-based NGA networks which are replacing the copper telephone loops deployed in the past by fixed line incumbents.

The second major regulatory initiative by the Commission, which is the main subject of this article, is the so-called Broadband Guidelines<sup>16</sup> that were adopted on 30 September 2009 ('the Guidelines'). In essence, the Guidelines aim to provide (i) guidance to public authorities on how to design an effective and pro-competitive scheme for funding basic broadband and NGA networks, and (ii) clarity for all stakeholders about the role of State aid in this strategic sector.

## **2. Broadband Guidelines**

### **2.1. Objectives**

The most important policy objective of the Guidelines is to accelerate the deployment of basic broadband and in particular of NGA networks while at the same time maintaining and strengthening competition in the electronic communications markets. It is important to highlight here that the contribution of public authorities to this goal does not necessarily involve the use of State aid, which should always be considered as a tool of last resort, if less distortive means are not available. To make this point very clear and to give comprehensive guidance to public authorities on what can be done to accelerate deployment of broadband networks in a pro-competitive fashion, the Guidelines sketch out a number of different types of public intervention that facilitate broadband development. They are briefly outlined in the paragraphs below.

### **2.2. Administrative/regulatory measures**

First of all, administrative and regulatory measures can foster broadband investments and competition without the use of taxpayers' money. Such measures, combined with a longer-time planning horizon, could make the difference between countries having an effective and comprehensive broadband strategy as opposed to relying only on a patchwork of State aid schemes.

Measures promoting the use of existing infrastructures by easing access rights, requiring that network operators coordinate their civil works and/or share part of their infrastructure, providing open non-discriminatory access to public facilities, could help to reduce investment costs for operators and encourage them to invest. Administrative measures are particularly important for NGA development (according to some estimates, civil works account for up to 50-80% of the total investment costs).

Moreover, in those areas where the deployment of only one infrastructure might be viable on market terms, it is of utmost importance for Member States and regulatory authorities to ensure at least effective, service-based competition. To this end, in-house wiring, unhindered access of competitors to passive and active elements of broadband infrastructure and other similar regulatory measures can ensure that competition can take place and be sustained even if only one infrastructure is in place.

### **2.3. Non-aid measures: Market Economy Investor Principle**

A second type of intervention involves the use of public funds but is not considered to fall under the State aid rules. Public authorities may indeed decide to invest in a broadband project under market conditions, as clarified in the landmark Commission Decision on the Citynet Amsterdam

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<sup>16</sup> *Community Guidelines for the application of State aid rules in relation to rapid deployment of broadband networks*, OJ C 235, 30.9.2009, p. 7.

network<sup>17</sup>. As underlined in this decision, the conformity of a public investment with market terms has to be demonstrated thoroughly and comprehensively, either by means of the 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 risks linked to the investment under the same terms and conditions as the public investor.

#### 2.4. Non-aid measures: Compensation for Services of General Economic Interest

In some Member States public authorities have decided to entrust a broadband operator with the obligation to provide a broadband network as a public service or a ‘*service of general economic interest*’ (SGEI)<sup>18</sup>. Public authorities may thus decide to compensate the entrusted company for the losses it suffers from having to provide such service in economically and unprofitable areas.

For public intervention of this kind to be exempted from the application of State aid rules, it must meet the strict conditions established by the EU courts, in particular in *Altmark*<sup>19</sup>. Furthermore, according to the case law, the Commission has to assess whether a Member State has committed a manifest error in defining the public service (i.e. the SGEI) in the first place.

These established principles have been spelled out in relation to broadband in the Guidelines<sup>20</sup> and have been further clarified in a subsequent decision concerning deployment of an NGA network in a French *département*<sup>21</sup>. The electronic communication sector is fully liberalised and very competitive, subject to the existing regulatory framework. Therefore special care has to be taken to limit the possibility of undue distortions of competition and to preserve the market incentives to invest and to compete. Hence, the Guidelines specify that operating a broadband network as a public service can only be justified if the entrusted operator deploys a passive, neutral and open broadband infrastructure that provides universal coverage in the territory concerned — including all citizens and businesses established in unprofitable areas.

It is important to stress here that the undertaking entrusted with such an SGEI has to roll out and operate the broadband network throughout the whole territory of a country/region, i.e. in both profitable and unprofitable areas. However, to comply with the *Altmark* requirement of absence of overcompensation, it is imperative that the public authorities grant compensation only to cover the costs related to roll-out in the unprofitable areas where the entrusted operator is obliged by law to provide universal broadband coverage at a loss.

#### 2.5. State aid measures

Coming to the analysis of actual State aid measures, the Guidelines are divided into two main sections. Based on the Commission’s approach to previous cases in this area (more than 55 Commission decisions)<sup>22</sup>, the first section summarises the rules according to which subsidies can be granted for roll-out of *basic* broadband networks. The second section, also partly building on past experience, tackles the challenges posed by the specificities of *NGA network* deployment.

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<sup>17</sup> Commission Decision of 11 December 2007 in Case C 53/2006 *Citynet Amsterdam — investment by the city of Amsterdam in a fibre-to-the home (FTTH) network*, OJ L 247, 16.9.2008, p. 27.

<sup>18</sup> See Commission Decisions in Cases N 381/2004 *Projet de réseau de télécommunications haut débit des Pyrénées-Atlantiques*, France and N 382/2004 *Mise en place d’une infrastructure haut débit sur le territoire de la région Limousin (DORSAL)*, France.

<sup>19</sup> Case C-280/00 *Altmark Trans GmbH and Regierungspräsidium Magdeburg v Nahverkehrsgesellschaft Altmark GmbH* [2003] ECR I-7747.

<sup>20</sup> In paragraphs 20 to 30.

<sup>21</sup> Commission Decision of 30 September 2009 in Case N 331/2008 *Réseau à très haut débit en Hauts-de-Seine*.

<sup>22</sup> For reference, see footnote 8.

Some preliminary remarks are valid for both types of projects. Where an open access infrastructure is funded, the selection of the beneficiary via a public procurement process achieves the goal of minimising the amount of aid involved and the advantage for the recipient, but does not exclude the measure from the scope of State aid rules<sup>23</sup>. Except where public authorities initiate a public procurement procedure to satisfy their own needs<sup>24</sup>, the presence of an advantage for the selected bidder cannot be ruled out at the outset and therefore the measure has to be scrutinised in the light of the State aid rules. Furthermore, because of the specificities of the network industries, an indirect advantage can also be identified. Third party electronic communication operators can use the subsidised infrastructure through the open access provision, and thus extend their scope of activity, which would not have been possible without the aid measure. Business users located in the targeted areas may also benefit from the provision of broadband services that would not have been possible without State intervention.

### 2.5.1. State aid to basic broadband networks

The section on aid to basic broadband networks summarises the Commission's past policy in this area and formalises the conditions required for a State aid measure to be declared compatible under the Treaty provisions<sup>25</sup>. Although not codified, these have been known for some time thanks to the Commission's extensive practice in this area<sup>26</sup>.

The Commission has introduced a simplified approach to determine the necessity of the State aid measure, distinguishing among areas where broadband infrastructure does not exist or is unlikely to be developed in the near term (*white areas*), areas where only one broadband network operator is present (*grey areas*) and areas where at least two or more broadband network providers are present (*black areas*). Such a simplified approach allows the Commission's policy in this area to be communicated more clearly and easily, but it has to be highlighted that the basic concept that aid must be used to remedy a market failure and to pursue cohesion objectives as outlined in the State aid Action Plan has not changed despite these simplified labels<sup>27</sup>.

The Broadband Guidelines also codify the necessary conditions with which an aid measure has to comply in order to be found compatible with the Treaty. While such conditions have always been required in prior Commission decisions, the Guidelines make it clear that these are indispensable features of the design of an aid scheme which does not distort competition to an unacceptable extent<sup>28</sup>.

In particular, a *detailed mapping and coverage analysis* analysing the currently available broadband infrastructures<sup>29</sup> is essential to prove the necessity of the aid in the targeted areas. The maps thus

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<sup>23</sup> A different view is taken in the article by Nicolaidis and Klies, *Where is the advantage?* EStAL, 4/2007. However, through the tender procedure, the selected operator receives financial support to provide services in areas where it would be much more expensive on market terms. Although a (competitive) tender procedure tends to reduce the amount of aid required and to avoid excessive profits, it does not eliminate the advantage for the winning bidder and does not rule out potential overcompensation (which is channelled back via the claw-back mechanism). See also the discussion in the following section.

<sup>24</sup> See for instance Commission Decision in Case N 46/2007 *Welsh Public Sector Network Scheme*, UK, OJ C 157, 10.7.2007, p. 3. See also Tosics and Gaál, *Public procurement and State aid control — the issue of economic advantage*. Competition Policy Newsletter, 2007/3.

<sup>25</sup> See in particular Lambros Papadias, *The Application of the State Aid Rules to the Electronic Communications Sector*, in C. Koenig, A. Bartosch (et al.), 'EC Competition and Telecommunications Law, Second Edition', International Competition Law Series, Volume 6 (Kluwer Law Publications), pp. 153-226.

<sup>26</sup> See for instance Hencsey et al., *State aid rules and public funding of broadband*, Competition Policy Newsletter, 2005/1 and Papadias et al., *Public funding for broadband networks — recent developments*, Competition Policy Newsletter, 2006/3.

<sup>27</sup> *State Aid Action Plan — Less and better targeted State aid: a roadmap for State aid reform 2005-2009*. COM(2005) 107 final.

<sup>28</sup> See paragraph 51 of the Guidelines.

<sup>29</sup> Such as technology, services offered, prices, access conditions, patterns of past upgrades.

drawn have to be put up for *public consultation with existing operators*. Best practices show that good visibility of the project characteristics, via the publication of the list of targeted areas and the authorities' objectives on a webpage<sup>30</sup>, allows appropriate fine-tuning of the project and proper finalisation of the maps. Electronic communication operators will indeed be put in a position to represent any existing<sup>31</sup> or (credibly) planned offer of broadband services similar to those envisaged by the public authorities<sup>32</sup>.

A sine qua non condition for granting State aid is the obligation for the aid recipient to provide *open wholesale access*, regardless of the presence of significant market power<sup>33</sup>. In return for receiving taxpayers' money, the selected operator must give back part of the benefit thus received in the form of increased competition — as opposed to the case where it would have invested solely its own resources. The Commission's experience has shown that the strict condition of requiring open access on the subsidised network has resulted in higher take-up rates and more, better and cheaper services for the consumers located in the targeted areas.

Linked to the obligation of open-access provision is the necessity of *price benchmarking* on the subsidised network. The aim of a State aid scheme should be to help replicate market conditions where competition could not flourish by itself. Therefore, broadband services on the subsidised networks should be offered at prices similar to other, non-subsidised areas. Furthermore, the prices should also follow the general trends of a decline in price observed in competitive areas: in the absence of this, the aid beneficiary might benefit from unjustifiable supra-competitive profits and competition would be hindered.

To allow the market to propose the most adequate solution to cover the target areas and to minimise the amount of State expenditure, aid should always be awarded on the basis of an open, transparent and non-discriminatory *tender procedure*. However, bids requesting the lowest aid amounts should not necessarily be preferred, as this might flatten the offers to the minimum quality of service level and might disproportionately favour operators with existing infrastructure already in place. For this reason, the Guidelines specify that aid should be awarded to the *most economically advantageous offer*, based on clear and predefined selection criteria, thereby offering more possibilities for public authorities to differentiate between the proposals.

Importantly, public authorities *must not favour a priori any technological solution*: the public consultation and the tender procedure should favour the emergence of the technological platform (or combination of platforms) that market operators consider the most suitable. To the extent possible, public authorities should encourage *the use of existing infrastructures*: this condition is particularly important for NGA networks, where civil engineering costs could reach 50-80% of the investment costs, so that this condition could help to reduce significantly the aid amount.

Although an open tender procedure minimises *ex ante* the requested subsidy, *ex post* the selected operator could still turn out to have been overcompensated. The bidders in an open tender procedure request aid based on their anticipated business plan, by assessing the potential revenues, investment and operational costs to roll out and run the subsidised network. However, in reality in such a fast-moving industry it is difficult to anticipate precisely such financial variables in a medium-long time horizon. To ensure that, due to higher-than-expected take-up of broadband services in the targeted areas, the subsidised networks do not generate extra profit for the aid recipients (i.e. profits higher than the average rate of the industry)<sup>34</sup> a *claw-back mechanism*

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<sup>30</sup> See for instance Commission Decisions in Cases N 172/2009 *Broadband development in Slovenia* or N 596/2009 *Digital divide Lombardia*, Italy.

<sup>31</sup> See for instance Commission Decision in Case N 183/2009 *RAIN project*, Lithuania.

<sup>32</sup> Supported, for instance, by a business plan and a detailed schedule for roll-out in the near future.

<sup>33</sup> See Article 14 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, 24.4.2002, p. 33.

<sup>34</sup> See for example the State aid scheme devised in Case N 508/2008 *Northern Ireland* and funded with the money clawed back from the previous aid recipient.

should allow public authorities to recover part of these extra profits (if any) and reinvest them in further expansion of the broadband infrastructure. However, to leave enough incentives for the selected operator to achieve as high take-up rates on the subsidised network as possible, not all the extra profit should be claimed back, but a portion of it, for instance proportionally to the original aid intensity<sup>35</sup>.

The application of these cumulative conditions ensures that State aid is well targeted and the amount is reduced to the minimum necessary, prevents crowding-out of private investments and promotes competition in areas where there was none before. Member States' experience with schemes approved by the Commission shows that full compliance with these conditions, far from constituting an unnecessary administrative burden, guarantees that State aid will produce the largest possible economic and social benefits for citizens and businesses located in the targeted areas.

## **2.5.2. State aid to NGA broadband networks**

### *The planned transition to NGA networks*

To date, with broadband coverage having increased in most Member States, public authorities are gradually turning their attention towards support for next generation access networks that can deliver services at very high speeds and support a host of advanced digital converged services. These are essentially fibre-based or advanced upgraded cable access networks that are destined to replace completely or to a large extent existing copper-based broadband networks or current cable networks<sup>36</sup>. To the extent that next generation networks involve a wholly different network architecture, one that is based on optical fibre technology capable of providing higher quality broadband services that could not be supported by today's broadband networks, it is very likely that in the future there will be marked differences between areas that will be connected to ultra-fast broadband networks capable of handling advanced cloud-based services and delivering a huge amount of converged digital content, and areas that will remain cut off from such services<sup>37</sup>, a situation that could give rise to a new form of digital divide. In other words, in the not too distant future, the need for broadband connectivity will no longer be translated in terms of establishing a mere electronic communication connection with other users or sources of information, but in terms of enjoying symmetrical two-way digital communication connectivity within a mesh type of network architecture with no edges or centres where content delivery will flow in all possible directions.

Thus, for most public authorities, the issue is no longer how to bridge the existing or remaining 'digital divide' between rural and urban areas. Rather, their objective is now how to ensure availability of NGA networks in as wide as possible a geographical area, be it urban or rural<sup>38</sup>.

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<sup>35</sup> See for example Commission Decisions in Cases N 323/2009 *Asturias* and N 596/2009 *Lombardy*.

<sup>36</sup> As also noted in the Guidelines, at this stage of technological and market development, neither satellite nor mobile network technologies appear to be capable of providing very high speed symmetrical broadband services, although in future the situation may change especially with regard to mobile services (the next major step in mobile radio communications, 'Long Term Evolution', may theoretically reach, if and when adopted, increased peak data rates of 100Mbps downlink and 50Mbps uplink).

<sup>37</sup> If today the differences between an area where only narrowband internet is available (dial-up) and an area where broadband exists mean 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' area. In both cases, the material change is one of bandwidth available and of the type of broadband services supported by the two types of network infrastructures compared. The large majority of today's broadband services cannot exceed a maximum theoretical speed of 20-25 Mbps, nor can they offer symmetrical speeds, a feature which is essential for business users. Next generation networks offer speeds that range from a minimum of 50 Mbps to 1000 Mbps or 1 Gbps in both directions (upload/download).

<sup>38</sup> Existing ADSL-based broadband networks limited to speeds ranging from an average of 2 to possibly 20 Mbps are no longer considered by a number of public authorities capable of satisfying users' needs for very high speed



The aim is to avoid future prolonged and persistent differences between regions and geographical areas with regard to the availability of very high speed broadband networks. In a number of lower population density areas, not necessarily remote and rural, market forces alone may not deliver such services or may deliver them much later than they are available elsewhere. This is because to date the current business economic model is said to discourage deployment of NGA networks not only in sparsely populated areas, but also in urban zones<sup>39</sup>.

For public sector, local or regional authorities, direct public intervention may thus be warranted in order to ensure that areas which are deemed by network operators to be ‘unprofitable’ will not suffer a permanent new digital, NGA divide. Moreover, regions and/or municipalities, where envisaged NGA investments by existing broadband network operators would take some years to arrive because they are financially less attractive than investments made first in certain major urban zones, may well decide to invest by themselves or provide financial support to private operators in order to obtain NGA connectivity at an early stage and thus ensure that economic opportunities are leveraged as quickly as possible.

It is against this background that a number of principles have been laid down in the Broadband Guidelines to account for the need to support and encourage rapid State-supported deployment of NGA networks in the EU.

#### *Types of public intervention*

As mentioned above, the Guidelines recognise that Member States may choose different degrees of market intervention in order to foster or to accelerate broadband and, especially, NGA deployment. Member States may adopt less intrusive measures to encourage network operators to bring forward their investment plans<sup>40</sup> or other measures that not only ease the administrative and other technical obstacles in deploying NGA networks in densely populated areas, but lower the capital costs of such deployments. Public authorities may thus ease access to capital by offering a credit line or a credit guarantee or even grant tax breaks or other tax advantages to encourage NGA roll-out. However, what is expected to happen is that public authorities will most likely decide either to tender out the construction and management of publicly-owned infrastructure or provide direct financial support for the deployment of a privately-owned NGA network. Any of the above-mentioned types of State intervention is likely to fall under Article 107(1) of the TFEU and will have to be notified and assessed under Article 107(3) of the TFEU.

#### *The State aid assessment*

As explained in section 2.5.1, the Guidelines start from the premise that the current distinction between ‘white’, ‘grey’ and ‘black’ areas is still relevant for assessing the compatibility of measures aiming to support the rapid deployment of NGA networks. They introduce however a more

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connectivity for the years to come. The main reason is that ADSL networks have an important limitation when it comes to very high speeds, and that is the required distance from users’ premises. This means that outside major cities, users cannot and will not benefit from the converged triple-play digital services that will require in the future substantial and most likely symmetrical bandwidth.

<sup>39</sup> In essence, the key issue for NGA network deployment today is mainly costs and to a lesser extent density of population as was the case up to now. Recent examples from early FTTx deployments show that rolling out an FTTx network is still a very expensive and risky investment, save in areas of dense population/business and where operators have already built a substantial base of broadband customers that can be convincingly and gradually migrated to NGA networks. In particular, it is often said that the cost of deploying NGNs and fibre networks is too high relative to the revenue that can be expected so that an insufficient number of private sector providers would enter the market. In the most extreme cases, it may be uneconomic for *any* private operator to offer high-speed broadband service.

<sup>40</sup> Member States may decide, for instance, to lower the costs for or ease the acquisition process of rights of ways, require that network operators coordinate their civil works and/or share part of their infrastructure, or even require that any new construction or building has a fibre connection in place. Measures may also be adopted either by the NRAs or other public authorities to provide for equal and non-discriminatory access to poles or sharing of ducts owned by utilities or existing network operators.

refined approach to take account of the specificities of such networks and of the expected temporal co-existence of NGA networks alongside current basic broadband networks. In this respect, proponents of rapid NGA deployment are in favour of a more forward-looking assessment on the grounds that existing xDSL and basic cable networks are in essence intermediate technologies destined to be displaced in the near future by fibre or advanced cable technologies. In particular, if it is true that to date some advanced basic broadband networks (i.e. ADSL 2+) can up to a certain point support some of the type of broadband services that are also likely to be offered over NGA networks (i.e. basic triple play services), this is more a case of a temporal substitution that is bound to disappear as demand for and supply of new broadband services that require speeds and bandwidth in excess of the upper physical limits of today's basic broadband infrastructures starts taking hold.

This means that a State-assisted migration path towards NGA deployment may be resisted by existing xDSL and/or cable operators that see real risks for their business in this 'intermediate technology' approach, especially if these operators plan to deploy their own NGA infrastructure at some point in time. The Guidelines have tried to take account of and deal with these market interactions. What the Guidelines have however clearly rejected is the proposition that in an area where there is already a basic broadband infrastructure and where none of the existing operators plans to migrate towards an NGA infrastructure, support for the rapid deployment of NGA should not be allowed.

*'White NGA areas'*. If in a given area there is no NGA broadband infrastructure whatsoever, then this is clearly a 'white NGA area'. The Commission will continue viewing favourably any measures promoting deployment of NGA networks in such areas, provided that a set of now well-accepted conditions is respected<sup>41</sup>. The same definition is used for an area where only one basic broadband infrastructure exists ('old grey area') but no NGA network has yet been built or is expected to be built in the near future. Translating in concrete terms the Commission's stated objective to support the *rapid* deployment of NGA networks, the Guidelines have defined the term 'in the near future' as corresponding to a period of three years. In this respect, what matters most is that the investments planned by private investors should be such as to guarantee that at least *'significant progress in terms of coverage will be made within the three-year period, with completion of the planned investments foreseen within a reasonable time frame thereafter'*<sup>42</sup>.

A more nuanced approach is envisaged for areas where there are at least two basic competing broadband networks (traditional, 'old black areas'). In those areas, the starting point is that current competition should normally lead to the deployment of NGA networks as a means to further intensify the current competitive process and obtain a first mover advantage. However, a public authority could rebut this presumption by demonstrating that such investments are unlikely to take place in the coming three years and that State intervention is warranted<sup>43</sup>.

*'Grey NGA areas'*. In areas where one operator has deployed or is in the process of deploying an NGA network, State intervention may be justified only if it can be shown that the existing NGA infrastructure cannot meet users' demands and that other less intrusive regulatory measures cannot create conditions conducive to effective competition<sup>44</sup>.

*'Black NGA areas'*. As is the case with traditional basic broadband networks, in areas where there are two or more NGA networks there should be no need for State intervention.

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<sup>41</sup> Guidelines, paragraph 51. See above at page 3 *et seq.*

<sup>42</sup> Guidelines, point 68.

<sup>43</sup> This will be the case for instance if by looking into the historical pattern of network investment it emerges that operators may have refrained from upgrading their networks and improving the quality and type of services offered; see Guidelines, paragraph 78.

<sup>44</sup> Guidelines, paragraph 74.

### *How to limit the distortion of competition: the core requirements*

Although State measures aiming to support the rapid deployment of NGA networks will have to comply with the well-defined set of general, ‘compatibility-driven’ conditions, mentioned above, three additional provisions have been included in the Guidelines that are specific to NGA deployments.

*First*, aid beneficiaries should ensure effective wholesale network access for at least seven years. This means that after that period, unless an NRA makes a finding of SMP, the access obligation will no longer be in force<sup>45</sup>. The seven-year period should be enough to enable existing xDSL operators to start migrating their client base to NGA services from the outset while giving them enough time to plan and carry out their own NGA investments.

*Second*, public authorities should from now on formally involve and consult NRAs on setting out the access regime and access conditions. Indeed, it is important to ensure that the nascent NGA market evolves in a coherent manner and those regulatory choices are not undermined or contradicted by parallel public sector intervention.

*Third*, having learnt the lessons from the opening of the basic broadband market, the Guidelines require that whatever the type of network architecture chosen (point to point, G-PON<sup>46</sup>) there should be ‘*effective and full unbundling*’. In this respect, the Guidelines show a clear preference for so-called ‘multi-fibre’ deployments, the latter being the most likely to ensure long-term effective and sustainable competition.

### **3. Outlook**

The Commission has decided to review the Guidelines no later than three years from their publication. This is an important safeguard that reflects the fact that the broadband market is characterised by constant and rapid evolution and technological innovation. Regulators in the EU and elsewhere are still struggling to devise the most appropriate regulatory regime for NGA networks given the inherent uncertainties associated with risky and long-term investments.

From a State aid point of view, it seems that the Guidelines will accelerate broadband investments and provide public authorities and private investors with a workable framework to determine where private and public investments are most appropriate. Within three months of the adoption of the Guidelines, the Commission was able to endorse a record number of ten State aid broadband decisions, in comparison with an average of ten broadband decisions per year<sup>47</sup>. There are three main reasons behind this success: first, due to the high interest in broadband investments and the additional funding made available by the European Commission<sup>48</sup>, Member States have notified a record number of projects to the Commission for State aid approval. Second, thanks to the clear framework defined by the Broadband Guidelines, the quality of the State aid notifications has increased significantly. Third, due to the existence of a clear legal basis, together with the introduction of additional procedural simplifications<sup>49</sup>, the

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<sup>45</sup> If NRAs do not have the power to lift the access obligation imposed by virtue of Article 107(3) during the seven-year period in question, there is nothing to prevent them from imposing whatever additional obligations they deem appropriate (during and after that period) on the ground that the undertaking in question has significant market power (SMP).

<sup>46</sup> Gigabit capable passive optical networks

<sup>47</sup> See MEMO/10/31 *State aid: Commission processes record number of broadband projects following new Broadband Guidelines*. Available at <http://europa.eu/rapid/pressReleasesAction.do?reference=MEMO/10/31&format=HTML&aged=0&language=EN&guiLanguage=en>.

<sup>48</sup> See also footnote 14.

<sup>49</sup> In clear-cut cases (such as aid to basic broadband) where the measure is fully in line with the provisions of the Broadband Guidelines, the Commission is able to adopt a decision within one month from the notification thanks

Commission was able to go ahead with the State aid assessments and endorsements in a shorter timeframe.

That said, it remains to be seen how the Guidelines will influence public authorities' overall policy: it is not clear yet whether Member States will opt for publicly-owned open access NGA networks or channel their support towards operator-owned infrastructures. What is clear, however, is that the Guidelines have already influenced the thinking of jurisdictions outside the EU and have been cited as an example of a successful attempt to define the borderline between State intervention and private investment in this area<sup>50</sup>.

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to the introduction of a new simplified procedure. For further details, see *Commission Notice on a Simplified procedure for the treatment of certain types of State aid*, OJ C 136, 16.6.2009, p. 3. The new simplified procedure was applied to adopt a Commission decision in Case N 607/2009 *Rural Broadband Reach Scheme — Ireland*, OJ C 28, 4.2.2010, p. 4.

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On 14 July 2009, the US Federal Communication Commission announced that Harvard University's Berkman Center for Internet and Society would conduct an expert review of existing literature and studies about broadband deployment and usage throughout the world to inform the FCC with a view to adoption of a National Broadband Plan. In October 2009, the Berkman Center for Internet & Society published the first draft of its independent review for the FCC, entitled '*Next Generation Connectivity: A review of broadband Internet transitions and policy from around the world*', which was further discussed in December 2009 in a public workshop held by the FCC. According to the Berkman Study, '*one of the most interesting aspects of these guidelines is their effort to limit the range of what is offered publicly, and use it, to the extent possible, to provide a platform over which competitive, market-based services higher up in the stack will be offered. This part of the EC opinion therefore serves as a particularly interesting window into current European thinking about integrating the natural-monopoly attributes of at least some broadband markets with the possibility that at least some layer of services will be competitive, riding on top of a shared platform. It also provides a window into current thinking about access, competition, and transposition of the first generation transition with the next generation transition*', available at [http://www.fcc.gov/stage/pdf/Berkman\\_Center\\_Broadband\\_Study\\_13Oct09.pdf](http://www.fcc.gov/stage/pdf/Berkman_Center_Broadband_Study_13Oct09.pdf), page 168.