

# Response to the consultation on the European Commission's draft Guidelines on State aid for broadband networks

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FTTH Council Europe  
Policy & Regulation Committee



Full fibre for a digital and sustainable Europe

# Introduction

The European Commission adopted its last revision to the guidelines for the application of EU state aid rules to the broadband sector on 19 December 2012. That revision of the guidelines sought to help Member States align their State Aid interventions with the EU Digital Agenda. At that time, the Digital Agenda targets were a very narrow set of connectivity targets (a minimum 30Mbps connections everywhere with at least 50% subscribed to 100Mbps connections or better). However, the Digital Agenda was nearly 10 years ago and in that time greater clarity has emerged in terms of what the network target should be and also how to achieve those targets. A revision to the Guidelines is overdue.

Over the last 10 years, the policy perspective in Europe has shifted considerably. From a point when policy makers considered it likely that it would be necessary to persuade incumbents to make investments via very precise access pricing rules, Europe has pivoted to the capabilities of infrastructure-based competition based on the evidence of certain Member States that pursued such a policy.

When the last State Aid Guidelines were issued, Europe was highly focused on technological neutrality and therefore no technology could be excluded but now, Europe has pivoted to a more pragmatic approach which sets high, multifaceted network targets and lets the market decide what infrastructures can deliver those parameters. The baseline performance is set as at FTTH/B and any network that is equally performant can also be included. However, for the avoidance of doubt, if a technology cannot achieve the aimed-for targets, it is excluded.

When the last State Aid Guidelines were issued, Europe identified only a narrow set of connectivity targets but now Europe has pivoted to a much broader set of targets which of course includes connectivity but the current targets are equally concerned with Human Capital (have citizens the skills?), with the integration of digital technology (are businesses exploiting digital to the extent that they should?) and similarly, is the public sector leveraging digital technologies to deliver public services to citizens. All these elements are reflected in the Digital Economy and Society Index (DESI) which summarises indicators on Europe's digital performance and tracks the progress of EU countries in each of the target areas, which has now also been reinforced by the 4 cardinal points of the EU Digital compass. To deliver on each of these four points, adequate connectivity is a primary requirement - hence the need for FTTH/B or equally performant network infrastructures.

Therefore, a lot has changed in the last ten years in European policy terms and objectives with respect to broadband, and these changes are reflected in the European Electronic Communications Code (EECC) adopted in December 2018 and which was to be transposed and in effect by December 2020.

The FTTH Council Europe sees positive elements in the draft revised State Aid Guidelines, notably in the area of vouchers as there is an expectation that as the availability of connectivity reaches critical mass (and the FTTH Council's own research sees 85%-90% availability across the EU in

the next five years<sup>1)</sup>), resources and attention will shift much more to take-up and adoption than supply side measures. European coverage will be uneven with some countries, such as Germany, having much lower coverage by 2026 (approximately 58% coverage). This raises significant questions about construction capacity constraints and the potential maximum scale of State Aid intervention where large parts of Member States still need investment in infrastructure. There is a significant risk that commercial projects financed by private capital would be crowded out where there is simply not enough construction capacity to meet all network needs in a given timeframe. Worse, large State Aid interventions risk increasing the cost of construction capacity and therefore network build costs, thereby actually increasing the potential intervention area. State Aid interventions need to pay more attention to the size of the task and the available build capacity in a three-year context. .

Generally however, **the FTTH Council believes that there needs to be greater consistency between the State Aid rules and sector specific regulations. Some of the provisions in the State Aid guidelines give the impression of being out of sync or even at odds with provisions in the Code.** This is particularly true of the mismatch between the connectivity objectives of the Code which are no longer identified in simple speed terms but with VHCN (Very High-Capacity Networks) which is a more elaborated target because it encompasses other quality parameters, and the various targets set out in these Guidelines, which do not align with VHCN.

Elsewhere in these draft State Aid Guidelines, it is considered that NRAs and NCAs ought to be heavily involved in the preparation of any State Aid measures. However, in this instance anything which is not VHCN will be at odds with the NRA's primary objectives in the Code (which includes the promotion of investment in, and take-up of, VHCN). In essence, the Code, in the context of DESI, sees a basic level of connectivity equivalent to FTTH/B as a requirement to deliver the services and to participate fully in society. Other investments, even if they amount to a 'step-change' are not sufficient in the sense that they would not be capable of delivering a level of connectivity that would allow full participation in the economy and society and therefore would amount to a waste of public money.

There are a number of other issues with the approach set out in the State Aid guidelines that look to be at odds with the EECC and the broader regulatory framework. For instance, investments by Wholesale Only operators are promoted and are treated favourably in sector specific regulation. In virtually all circumstances, Wholesale-Only operators are exempted from sharing their infrastructures (by way of exceptions that are set out in the EECC and in the BCRD) – but in these Guidelines there is a requirement to grant access even beyond the virtual access remedies, and beyond civil infrastructure in the intervention area. This is an active shift in the policy set out in the current Guidelines where Wholesale-Only operators were actively favoured<sup>2)</sup>. This shift in policy in the draft Guidelines creates inconsistency in the State Aid regime compared to the EECC and there is no rationale to justify such a change in policy.

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1) According to the FTTH Council Europe's latest Market Forecasts 2021-2026 available [here](#)

2) See for instance paragraph 80.

# Comments

## Targets identified in the draft State Aid Guidelines and the role of NRAs

The new European Electronic Communications Code (EECC)<sup>3)</sup> is a very significant change in approach from a policy perspective and reflects an understanding that a necessary but not sufficient condition for 5G to succeed in Europe is that fixed VHCN (defined as FTTH/B and its equivalent) needs to be deployed very deep in the 5G mobile network. Investment in fibre networks is therefore a primary objective of the EECC in itself, but also in its supporting role in facilitation of 5G. Even if most policies to promote 5G can be identified in spectrum management, there is an acknowledgement of the importance of latency and other network characteristics to support 5G and also in the context of certain IoT applications, for autonomous driving, factories of the future, etc.

The most significant change to the Regulatory Framework is that investment in VHCN becomes a fundamental objective for NRAs. In the past the sole requirement was ensuring 'efficient investment' – which was quite subjective. NRAs now have the unambiguous stated objective of promoting investment in VHCN.

This primary objective is set out in Article 3 of the Code which adds this new regulatory objective of promoting access to, and take-up of, very high capacity connectivity (fixed and mobile) across the European Union to the existing objectives of promotion of competition, contributing to development of the internal market and promoting the interests of EU citizens.

NRAs and other competent authorities as well as BEREC, the Commission and the Member States shall promote connectivity, access to and take-up of Very High Capacity networks by all EU citizens and businesses.

Very High Capacity Networks (VHCN) in turn are defined in Article 2 as:

*'very high capacity network' means either an electronic communications network which consists wholly of optical fibre elements at least up to the distribution point at the serving location, or an electronic communications network which is capable of delivering, under usual peak-time conditions, similar network performance in terms of available downlink- and uplink bandwidth, resilience, error-related parameters, and latency and its variation; network performance can be considered similar regardless of whether the end-user experience varies due to the inherently different characteristics of the medium by which the network ultimately connects with the network termination point;*

The Recitals of the Code (which explain the Articles) says that VHCNs should be understood in the following way:

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3) Directive (EU) 2018/1972 of the European Parliament and of the Council of 11 December 2018 establishing the European Electronic Communications Code (Recast)Text with EEA relevance.

*Recital 13. The current response towards that demand is to bring optical fibre closer and closer to the user, and future 'very high capacity networks' require performance parameters which are equivalent to what a network based on optical fibre elements at least up to the distribution point at the serving location can deliver. In the case of fixed-line connection, this corresponds to network performance equivalent to what is achievable by an optical fibre installation up to a multi-dwelling building, considered as the serving location. In the case of wireless connection, this corresponds to network performance similar to what is achievable based on an optical fibre installation up to the base station, considered as the serving location. Variations in end-users' experience which are due to the different characteristics of the medium by which the network ultimately connects with the network termination point should not be taken into account for the purposes of establishing whether or not a wireless network could be considered as providing similar network performance. In accordance with the principle of technology neutrality, other technologies and transmission media should not be excluded, where they compare with this baseline scenario in terms of their capabilities. The roll-out of such 'very high capacity networks' is likely further to increase the capabilities of networks and pave the way for the roll-out of future wireless network generations based on enhanced air interfaces and a more densified network architecture.*

**Therefore, the Code sets the connectivity ambition for Europe at VHCN which has as its base performance, which can be achieved over FTTH/B.** However, any equivalently performant network is also VHCN and as required under Article 82 of the Code, BEREC issued Guidelines on what exactly constitutes VHCN and what would be its equivalent<sup>4)</sup>. Unlike the draft State Aid Guidelines, which only refers to upload and download speeds, BEREC must set out the criteria that a network has to fulfil in order to be considered a very high capacity network, in particular in terms of down and uplink bandwidth, resilience, error-related parameters, and latency and its variation.

This is the first major divergence between the State Aid Guidelines and the general approach under telecom regulation. The State Aid Guidelines set targets at paragraph 52 and paragraph 99 (and related paragraphs) which are very limited and which are not in line with the targets in the EECC. Furthermore, section 5.2.3.5 of the Guidelines on the Role of NRA and NCA in the preparation of the State Aid instruments does not appear to take into account Article 3 of code and the primary objectives of the NRA in terms of the EECC – which should limit any State Aid scheme to VHCN.

There appears to be a lack of consistency between what has been put forward under draft State Aid guidelines and the Code. VHCN is a clear and justified objective. The Code is clear but it appears this proposal doesn't follow the same logic as to what public bodies should be trying to achieve. This is particularly problematic as NRAs are included in the analysis and preparation of the State Aid application – according to the Code, the NRAs should act against anything that is not VHCN (because achieving VHCN is a primary objective).

There also appears to be a tension between the primary form of intervention where it is acknowledged that there may be a market failure justifying an intervention where there are no plans to de-

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<sup>4)</sup> These guidelines are available here [https://berec.europa.eu/eng/document\\_register/subject\\_matter/berec/download/0/9439-berec-guidelines-on-very-high-capacity-n\\_0.pdf](https://berec.europa.eu/eng/document_register/subject_matter/berec/download/0/9439-berec-guidelines-on-very-high-capacity-n_0.pdf) and measure

ploy networks capable of delivering 1Gbps (from paragraph 52) whereas the lower 'step-change' interventions (from paragraph 98) are not described in market failure terms and are unlikely to meet the same threshold (for instance, a network today that delivers 50Mbps per second would not represent a market failure per paragraph 52, but could represent a 'step-change' in a white area per paragraph 99). State Aid should only intervene where it corrects a market failure – there should not be an intervention to make 'bad' a bit better (the State Aid risks being wasted in that context<sup>5)</sup>).

**The FTTH Council Europe believes that to fulfil the objectives of the Code, any publicly funded network must be VHCN and that with the related quality parameters, it should be the only recognised network threshold.**

## Geographic Mapping, information exchange, credibility of forward plans and sanctions for misleading information

The EECC also requires national regulators to examine the state of broadband networks and investment plans so that their interventions and analyses are based on a good understanding of local specificities. Under Article 22, NRAs are obliged to identify 'digital exclusion areas' without high-capacity networks and may organise calls for interest to deploy networks there. Regulators may take action and impose penalties under Article 29 against operators who deviate from their declared plan in these areas.

This could potentially lead to narrower geographic market definitions which in turn could enable SMP regulation to be imposed in narrower areas (see in particular Article 64(3)). The most likely objective is to enable State Aid funds to flow more freely or at least, to identify areas to which State Aid might be directed. A major concern for investors is that State Aid is deployed in markets where there are construction capacity constraints. In effect, an intention to cover an entire geography might be constrained in the next three to five years to 75% because there is not enough capacity to build out further. State funding in that context might drive up the construction costs without any perceptible change in outcomes since building capacity may be more or less fixed over the period with more funding chasing the same capacity. Such an outcome (higher network cost driven by inappropriate State Aid interventions) would imply that the intervention area would increase in an ever expanding vicious circle where State funds drive up costs forcing private investments to retreat further and further.

The draft State Aid guidelines at section 5.2.2.4.2 on geographic mapping makes no mention of Article 22 of the code and neither instrument considers capacity constraints. There is a clear discrepancy in terms of what might be measured – with the State Aid approach measuring several levels of connectivity whereas the EECC is focused on VHCN. However, the EECC is also seeking to encourage investment to plug gaps in the identified digital exclusion zone and very

<sup>5)</sup> See for instance the South Yorkshire intervention (SA.20674 ( N157/2006 )) which was one of the largest State Aid interventions in broadband which was overtaken by better technology before it ever launched, stranding the entire investment: <https://www.silicon.co.uk/cloud/south-yorkshire-broadband-close-125127>

often it may well be an Article 22 procedure which initiates a State Aid procedure. Geographic surveys under Article 22 refer to such surveys being required *inter alia* for State Aid assessments: *"The geographical survey shall include a survey of the current geographic reach of broadband networks within their territory, as required for the tasks of national regulatory authorities and/or other competent authorities under this Directive and for the surveys required for the application of State aid rules"*. BEREC's guidelines on the application of Article 22 make a number of references to how Article 22 could relate to State Aid assessments, but note that ultimately, responsibility for the application of State Aid rules rests with the European Commission<sup>6)</sup>. Ignoring the dual provisions in the Draft Guidelines raises the risk of conflict and confusion (which in turn undermines the confidence to invest). The FTTH Council believes that the different perspective of the NRA conducting surveys under Article 22 and the likely time delay between an Article 22 analysis and any State Aid procedures means that the current mapping and bespoke analysis conducted today in a State Aid submission should continue. For the sake of clarity for potential investors, despite what the Article 22 (1) may say regarding the survey of existing networks and intended future networks<sup>7)</sup>, these State Aid Guidelines should make clear that Article 22 surveys will not be used in State Aid assessments given the possible differences in timing and the focus of the survey.

**The FTTH Council Europe believes that it is important that guidance is given on how the provision in the EECC on geographic mapping, verification of information and sanctions for misleading authorities, and which overlap with provisions the State Aid Guidelines, will interact and relate to each other. The FTTH Council believes that the different perspective of the NRA conducting surveys under Article 22 and the likely time delay between an Article 22 analysis and any State Aid procedures means that the current mapping and bespoke analysis conducted today in a State Aid submission should continue.**

## Provisions concerning the reuse of existing infrastructures

Section 5.2.4.3 regarding the use of existing infrastructure – makes a number of important assumptions about the efficacy of this mechanism. It is important to note firstly that the deployment technologies and processes for deploying new networks change over time (as does the position of houses and populations).

As a mechanism itself, the sharing of passive infrastructures can have significant drawbacks (for reasons such as delays in access, lack of mapping, lack of space etc.) in a very extensive reuse of existing infrastructures. Equally significant is a range of other improvements which reduce network installation costs for new builds that have been developed or that are on the drawing table.

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6) [https://berec.europa.eu/eng/document\\_register/subject\\_matter/berec/download/0/9027-berec-guidelines-to-assist-nras-on-the-c\\_0.pdf](https://berec.europa.eu/eng/document_register/subject_matter/berec/download/0/9027-berec-guidelines-to-assist-nras-on-the-c_0.pdf)

7) ....*"The geographical survey shall include a survey of the current geographic reach of broadband networks within their territory, as required for the tasks of national regulatory authorities and/or other competent authorities under this Directive and for the surveys required for the application of State aid rules."*



Reusing existing infrastructure might not therefore be the cheapest or environmentally friendly way to deploy.

The guidelines also refer to the Broadband Cost Reduction Guidelines but seem to ignore a large number of provisions in the code, for instance Article 61 of the Code extends the possibility to impose a general obligation on all operators who control non-replicable wires and cables connecting end-users to the network to give access to the entire loop to competitors where replication of such network elements is economically inefficient or physically impracticable.

There is considerable regulatory oversight by the Commission and BEREC on the use of these measures and the Commission will be able to block the measures of NRAs when deemed unsuitable if BEREC agrees (referred to as the 'double lock veto' mechanism).

In particular Article 61 (2) generally grants access to inbuilding wiring and up to the first concentration point (for telecom operators and everyone else) and this should have a big impact on reducing deployment costs. The text goes on to permit regulators to go beyond the first concentration point in the case where there is an insufficient number of end-users for access to be viable or to require, in extremis, a virtual access remedy to be offered.

A more nuanced approach would make sense even if the objective, lowest cost, is valid. A better measure may be to look at the total lifetime costs of a project – by lowering deployment costs through the reuse of infrastructure, operators may take on much higher access management and operational maintenance costs. In this case it may make sense to deploy their own passive infrastructures.

**The State Aid Guidelines need to moderate the requirement to reuse existing infrastructures in Section 5.2.4.3. Reuse may make sense but it also may not be the best means, either in terms of cost or impact on the environment, to roll out a new VHCN network.**

## Minimum cost obligations can be counterproductive

Minimum cost makes sense but it is really problematic when we consider the possibility to make huge savings by anticipating future needs – there needs to be a caveat in section 5.2.4 on proportionality of the aid measures.

A convergence (5G/FTTH) cost model<sup>8)</sup> developed by the FTTH Council estimates how much of the 5G costs attributed to the fixed network can be saved by having a combined and inclusive roll-out of fibre at the start of the network deployment (or viewed differently the results can tell us what the additional FTTH network costs would be to be ready to supply 5G whenever it is deployed). FTTH/B is a necessary but not sufficient condition for 5G deployments.

FTTH/B is not only more supportive of 5G, FTTH/B availability is a requirement – the FTTH/B deployed needs to have specified abilities to support 5G (pTp or a dedicated PON or WDM PON).

8) *Fibre for 5G: the story of convergence*, 2019 available [here](#)



A planned and coordinated deployment approach can deliver much greater benefits in terms of reduced costs – however, these cost savings may be offset entirely by delays caused by co-ordination so a case by case approach will need to be adopted.

A cost model developed by the FTTH Council in 2019 (greenfield deployments where 5G network parameters are known) and revised in 2020<sup>9)</sup> (deployments where 5G network parameters are not known) to look at estimates of how much of the 5G costs attributed to the fixed network can be saved by having a combined and inclusive roll-out of fibre at the start of the network deployment (or viewed differently the results can tell us what the additional FTTH network costs would be to be ready to supply 5G whenever it is deployed).

The costs are affected by the form of cell deployment and three categories are estimated, high, mid and low cell density (details in the report). In the case of low cell density deployments, the savings are very dramatic since the cost of deploying additional fibres to the selected sites can be quite low. While not as dramatic for High Cell Density, they savings are still impressive and should give all parties serious pause to consider how such savings might be achieved.

The overall results where the parameters of the 5G network deployment are known can be seen in the table below:

	High Cell Density	Medium Cell Density	Low Cell Density
High Dense Area	74% -- 5,6%	75% -- 3,8%	96% -- 0,4%
Medium Dense Area	75% -- 7,2%	83% -- 3,2%	93% -- 0,8%
Low Dense Area	65% -- 6,6%	81% -- 2,7%	85% -- 1,9%

For instance, this means that the cost of the fixed network to support a 5G deployment in a low density area with low cell density by 85% if it is done as part of the initial FTTH deployment rather than as a stand alone project. Put another way, in this scenario, the cost of anticipating a 5G support solution would only add 1.9% to the FTTH network cost whether it was ultimately used or not.

Where the 5G network parameters are not known, significant saving can still be achieved by creating spare capacity in the network for future use. That study found that by creating spare capacity at the point of FTTH deployment, the increase in costs was limited but the potential savings were large (particularly once spare capacity increased beyond 24%). See the table below

Spare Capacity in FTTH Build	0% Spare (kEUR)	12% Spare (kEUR)	24% Spare (kEUR)	48% Spare (kEUR)
FTTH with spare	8510	8513	8524	8543
FTT5G (NPV-5Y)	1256	1030	444	372
Total NPV	9766	9543	8968	8915

Significant (future) savings can be made based on today's investments if future developments are anticipated, which is a way to manage fibre/5G demand uncertainty in a phased rollout. This should be reflected in the Guidelines.

9) *Fibre for 5G: the story of convergence (update 2020)* available [here](#)

**The FTTH Council Europe would like to see section 5.2.4 dealing with the Proportionality of the aid measure to reflect future savings that can be made from 5G/fibre convergence, with limited extra costs in today's networks**

## The Treatment of Wholesale Only Operators under the draft State Aid Guidelines

The treatment of Wholesale Only Operators under the draft State Aid Guidelines is not consistent with the treatment of these operators (who are defined under Article 80 of the EECC).

The aforementioned Article 61 (3) goes on to say that Wholesale only operators do not have to grant access provided they make “available a viable and similar alternative means of access to end-users is made available to any undertaking, provided that the access is offered on fair, non-discriminatory and reasonable terms and conditions to a very high capacity network.”

This is at odds with Sections 5.2.4.4 and 5.2.4.4.1 in particular which oblige them to provide a full range of access products regardless of the form of the operator in question.

Any State Aid regime should be cognisant of the ex-ante regulatory regime in place and should seek to sit alongside that regime. While the current regulatory framework for communication networks focuses on the imposition of access obligations on SMP operators, with the new rules NRAs have to examine whether obligations on civils are a proportionate means to promote competition and end-user interests, before imposing access obligations (see Article 68). This ought to encourage more network investment (by lowering deployment cost and creating doubt about access in the future) and creates an alternative obligation which may not need to be replicated by State Aid provisions.

NRAs also have extensive abilities to use either the general remedies described earlier to impose obligations on access to, and use of, civil engineering including building cables, antennae, poles and ducts, or where appropriate there are a number of SMP specific obligations set out in Articles 72 and 73 which can also be applied. These obligations include many different access products but importantly it includes access to Unbundled Loops and/or access to virtual access products.

However, several exceptions apply in relation to Wholesale-Only operators which include the presence of an existing commercial offer in line with Article 61, the technical and economic viability of granting access (given the dominant network architecture is PtMP this is not likely), the impact on future network development (adverse for future developments) and the level of investments, the risks borne by the initial investor etc (high and mitigates against any access). This again highlights the extent of the discrepancy between the treatment of Wholesale-Only operators under the code and under the draft State Aid guidelines.

Wholesale-only operators benefit generally from a lighter regulatory treatment under Article 80 even when they hold SMP. In practice they enjoy an exemption from access obligations to civil infrastructure and from extended symmetric regulation.

In general, even in instances where a Wholesale Only operator obtains a position of SMP in a market, only two obligations are likely to apply to these Wholesale Only operators (Articles 70 and 73) Article 70 is a non-discrimination obligation while Article 73 deals with access to specific network elements (prices can be set for access in extremis). For example Article 72 on access to civil engineering of an SMP operator does not apply. This is a recognition of the potentially beneficial role of wholesale only models in fostering VHCN connectivity, in particular in challenge and rural areas. However, this beneficial role of Wholesale-Only operators is not reflected in these draft State Aid Guidelines.

The current Guidelines do favour a Wholesale-Only operator model so the proposal in this draft is an active shift in the policy but this shift is policy is not justified or clarified and again emphasises the disconnect between the EECC and the draft State Aid Guidelines. The Draft State Aid Guidelines for wholesale-only operators should retain those aspects that recognised the nature of Wholesale-Only operators and in particular that (a) additional points should be granted to bidders proposing a wholesale-only model in the context of tenders for white and grey areas and (b) that the wholesale-only business model is mandated for public funding in black areas.

At the same time, “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”. This should also be maintained in the new guidelines.

**The FTTH Council Europe believes that the State Aid Guidelines should reflect the treatment afforded to Wholesale Only operators in the EECC and the BCRD.**

## Technological Neutrality

In Section 5.2.4.2, the interpretation of ‘technological neutrality’ seems out of date – a ‘blind’ approach to technological neutrality can be harmful to the market. It is suggested that a public intervention ‘must not favour or exclude any particular technology’. Over time, sectoral regulators realised that in markets where market failures (the presence of dominant firms abounded), that technology choice could be driven as much by strategic considerations as economic and technical considerations. In addition, there was a realisation that the evolution of connectivity to a general utility that supported not just economic activity but was essential to the full participation of citizens in society. A baseline level of connectivity that requires fibre to the home or fibre to the building was set (in addition to other technologies with a similar level of performance<sup>10)</sup>). The interpretation of technology neutrality together with the lower performance thresholds associated with ‘step change’ interventions, is at odds with the Code. In the Code, there is a recognition that policy makers have set network targets and network characteristics that must be achieved – the

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10) That equivalence and its measurement are clarified by BEREC [https://berec.europa.eu/eng/document\\_register/subject\\_matter/berec/download/0/9439-berec-guidelines-on-very-high-capacity-n\\_0.pdf](https://berec.europa.eu/eng/document_register/subject_matter/berec/download/0/9439-berec-guidelines-on-very-high-capacity-n_0.pdf)

Code sets FTTH/B as the baseline performance capability and anything comparable. The need for a VHCN solution relates to the realistic future needs of end users in terms of capacity and is entirely consistent with the need for a true form of technological neutrality.

In the last number of years there was a realisation that the concept of technological neutrality was actually encouraging cheaper deployments which were inadequate to the needs of end-users. Dominant firms will pick the best technologies for themselves. That is not necessarily going to coincide with the best interests of the sector, the best interest of consumers or the best interest of the economy and society generally.

The FTTH Council is in favour of technological neutrality. However this means that appropriate targets must be set and only then let the technologies fall where they may. The Commission should also carefully monitor markets that exhibit 'market-failure' in the form of economically dominant entities as they are unlikely to make appropriate technology choices in the absence of regulatory interventions. Almost every physical access market in Europe has a dominant entity, itself a market failure, and because of regulation and competition law, those entities face restrictions in terms of its business choices but they do not face restrictions in terms of technology choices. With the adoption of the EECC, the sector specific regulation makes a level of performance defined as VHCN the target. These draft Guidelines permit 'step change' targets which would be vastly less performant to be funded by public funds even where basic digital participation in the economy and society would be denied. At their limit, funding for 30Mbps downlink and 3Mbps uplink would be permitted for fixed networks (paragraph 90). While the Draft Guidelines refer to the Commission targets (that by 2025 all households have access to 100Mbps, upgradeable to 1Gbps) the implications of that for technologies that can deliver only 30Mbps seems to be missed, in practice any intervention that meets these thresholds must be FTTH/B.

**The FTTH Council Europe would like to see Section 5.2.4.2 modified to better reflect the current approach and interpretation to technological neutrality as set out in the Code. The network objective of the Code (achieving VHCN), or the network objective of the Gigabit Society Communication, (100Mbps upgradeable to 1 Gbps) will necessarily exclude certain technologies. Section 5.2.4.2 should drop the 'step change' category and only intervene where there is no viable VHCN network planned in the future.**

## Creating and reinforcing a Digital Divide in Europe.

The notion of a 'lower level of connectivity' being acceptable and getting down to approximately 30-300 Mbps (paragraphs 96 and 102) is really problematic and risks institutionalising a digital divide that the Commission should be working to act against. VHCN is needed for education/business/citizen services (looking at the move toward the broader DESI measurements), and upgrading networks to better characteristics but which would still not be sufficient to ensure full participation from end-users in the economy and society risks being counterproductive, and worse, creating a second digital divide.

80% of the EU is rural and home to 30% of the population, yet many rural areas have gradually been left behind while urban centres develop, providing better access to public services and offering a broader range of opportunities<sup>11)</sup>. As this gap grows, rural communities can begin to suffer from depopulation, as people of all ages move to better resourced, often urban areas, in search of quality education, employment opportunities and healthcare, among others. As rural populations and economies shrink, so does investment in public services and infrastructure, and so the rural-urban gap further widens.

The choice to live in a rural or urban area should not be made on the basis of access to essential services or opportunities. Europe has the ability to make these services available everywhere. Indeed, many rural areas are dynamic and growing. The crux of the matter, however, is that reliable, high-speed broadband is the prerequisite for accessing the modern services that can bridge the digital – and opportunity – divide between rural and urban areas.

The pandemic switch to remote living caused a paradigm shift, wherein a huge swathe of the population at large became remote citizens, virtually overnight. The market for remote services has grown overnight, the demand is undeniable, and a commensurate wave of investment and innovation is swiftly following. The resulting solutions were life changing for many – a lifeline in lockdown – yet more and better solutions are still to come.

As we increasingly embed them into our daily lives and make that level of close access the norm for all citizens, irrespective of geography, we drive the mainstreaming and accessibility of remote services. In so doing, we support the widespread adoption of innovation needed to digitally bridge the gap between rural and urban access to opportunities.

Harnessing the pandemic-born step change in remote services has far-reaching potential for both the immediate and long-term sustainability and flourishing of rural communities. This, in turn, will have important consequences for society as a whole. Greater cohesion and an understanding of our interdependence, coupled with a blanket levelling-up of our social and economic circumstances, will contribute significantly to our resilience in the face of the challenges we expect in the coming decades.

However, in order to achieve these possibilities citizens need more a basic level of connectivity that equates to VHCN. The step-change option risks becoming a kind of trap that institutionalises the digital divide between urban and rural communities.

**The FTTH Council Europe believes VHCN should be the level of connectivity for all EU Citizens. Any lesser connectivity risks creating a digital divide.**

## Demand side measures

Section 6 on the assessment of take-up is an important and welcome addition to the State Aid guidelines. The FTTH Council notes that the extensive work and effort that has been done on

11) <https://digital-strategy.ec.europa.eu/en/news/harnessing-innovation-unlock-potential-rural-and-remote-areas>

the supply side of VHCN (via the EECC, the State Aid framework, CEF2 and so on) has a weaker equivalence on the demand side of network supply. The biggest issue with VHCN in the coming 5 years is that take-up is not keeping pace with rollout and availability.

In general, there are two main areas of concern regarding VHCN network coverage and these can be described as (a) areas with unfavourable characteristics for FTTH/B deployment and take-up and (b) Member States which were having different policies favouring copper upgrades rather than a transition to FTTH/B and for which fibre deployment is now progressing at a lower path. The response to both areas are largely the same, that is, the adoption of appropriate policies and the effective implementation of those policies.

The EECC has re-orientated the general approach towards FTTH/B and away from copper upgrades. In addition, there is growing evidence that appropriate policies can drive FTTH deployments. Countries that were already pursuing policies consistent with the EECC and enabling deployments such as Spain, Portugal and Sweden have FTTH/B rates of 80-90%. However, some countries did not facilitate FTTH/B because they had a different perspective on technology evolution, pursued a different policy path now have much lower VHCN deployments, with some large European countries with as low as 10% FTTH/B availability.

Nevertheless, forecasts<sup>12)</sup> conducted by IDATE for the FTTH Council Europe predict that fixed FTTH/B coverage will reach approximately 85% by 2026. However, this masks significant differences between Member States with Germany's 4.8% of homes passed in 2020 compared to Spain's 62.3%. The coverage gap will narrow with Germany's 59% of homes passed in 2026 and 83.2% in Spain. In order to avoid uneven results, some countries will need to do more to facilitate FTTH roll out and to implement other instruments such as the BCRD more effectively (dealing with permits for instance and infrastructure sharing) if they are to catch up. It is estimated that VHCN will be available to more than 90% of EU citizens 5 years from now. One key issue then will be one of take up and the guidance given in section 6 will be very useful in State Aid applications.

However, another key issue as countries invest in FTTH is that there are significant questions about construction capacity constraints and the potential maximum scale of State Aid intervention in that context. The forecasted FTTH/B network deployment in Germany for instance, moving from 4.8% of households to 59% in the space of 5 years is extraordinary. Serious questions then arise about whether it is a lack of capital, or the absence of a business case that prevents full FTTH coverage or whether it is a capacity constraint. If it is a capacity constraint - under the drafted State Aid guidelines more than 50% of Germany could be declared susceptible to a State Aid intervention. This would drive up prices for existing capacity but would not change the level of deployment. It is absolutely necessary to link any forward-looking period (currently 3 years) to the amount of network needed and the likely construction capacity. Otherwise, the State Aid Guidelines risk achieving the opposite of their intention and displace and crowd out private investment.

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12) <https://www.ftthcouncil.eu/Portals/1/FTTH%20Council%20Europe%20-%20Forecast%20for%20EUROPE%202020-2026%20AFTER%20COVID19%20-%20FINAL%20Published%20Version.pdf?ver=p8LTSV2cCpbNwByeC3RjWQ%3D%3D>

The environmental benefits of moving to fibre networks are well-known. In a study<sup>13)</sup> for the European Commission, it is noted that “The replacement of copper networks by more energy-efficient fibre networks fits within the environment objective of incentivising the deployment of electronic communications networks with a reduced environmental footprint”. The Polish authorities for example estimate that replacing “the existing copper internet networks with fibre-optic networks results in a several-fold reduction in the energy consumption of telecommunications networks, in particular, it reduces the amount of energy needed to transmit the same data volume several times (a five-fold reduction according to estimates), the production of which in Poland is based on coal. 74% of the dismantled copper cable components can be reused for non-telecommunications products and services, and the remaining components are recycled”. Other studies have made similar findings, also showing that fibre networks use vastly less energy than their copper equivalents and indeed, enhanced copper using VDSL and other techniques normally increase the energy use of the copper network.

There is therefore an important environmental benefit from shutting down copper networks where fibre is sufficiently available in a market or put differently, maintaining a copper network where there is fibre available presents a cost to society as well as to the copper network operator (whether SMP or not). This environmental cost is an externality that cannot be easily internalised by the market. Demand side measures that promote the take up of fibre and thereby the deployment of fibre networks will accelerate this transition.

The FTTH Council would like to see the previous points made about technological neutrality also reflected in this section of the Guidelines as at paragraph 97 there is still a reference to a technological neutrality whose interpretation seems at odds with the current European policy direction.

**The FTTH Council would like to see demand side measures focused clearly on stimulating take-up of VHCN connectivity.**

## Treatment of Mobile and Fixed Wireless Networks

The FTTH Council notes that the draft State Aid Guidelines suggests for the first time that mobile networks can be financed under certain conditions by State Aid. The FTTH Council is uncertain as to whether this is either necessary or appropriate given the range of other instruments that can be deployed (and which have been deployed in the past). The main instrument used in the past has been coverage requirements and obligations associated with spectrum awards (with a knock-on impact on spectrum pricing in most instances). This new approach may act against the Commission’s stated policy<sup>14)</sup> to promote 5G deployments by encouraging Member States to design auctions that extract maximum revenues and seeking to use State Aid interventions to

13) *Summary Report of Best Practices Outcome of phase 1 of the work of the Special Group for developing a common Union Toolbox for connectivity pursuant to the Commission Recommendation (EU) 2020/13071, 16/10/2020-20/12/2020, p. 191.*

14) <https://digital-strategy.ec.europa.eu/en/library/commission-recommendation-common-union-toolbox-reducing-cost-deploying-very-high-capacity-networks>



achieve coverage targets.

The requirement for mobile and fixed wireless networks receiving State Aid to support an equivalent suite of access remedies to those imposed on fixed networks is not explicitly stated in the Draft Guidelines. The Draft Guidelines should make clear that any network receiving State Aid assumes the same access remedies regardless of the technology deployed.

**The FTTH Council questions whether State Aid for mobile networks is necessary or appropriate.**

**The State Aid Guidelines should make explicit that the same access obligations will apply to any network receiving State Aid regardless of the technology used.**

## Dealing with overbuilding and strategic investments

At Paragraph 59 – in mixed white-grey areas there is a suggestion that State Aid could be deployed even where this could result in up to 10% overbuilding. The FTTH Council believes that there are better ways to deal with such circumstances or in instances where strategic investments are made with the advent of State Aid considerations. In the German market for instance, when there is aid but there are pockets of deployments overlapping that aid area, the intervention is increased to the point necessary to allow Aid to be used only for those households not serviced. Allow overbuilding, even at 10%, undermines that market financed investment and could have adverse impacts beyond the Aid area. To overbuild intends a duplication, which consists of a huge amount of time, financial and human resources. By allowing a full overbuild to reach and develop an undersupplied household (as described as example in the Guidelines) the taken investments for existing infrastructure are devalued. The FTTH Council believes that overbuilding of privately financed deployments should be avoided in every instance. The provision of the least preferable and therefore undersupplied households needs to be provided in a different way.

# Regarding the FTTH Council Europe

The FTTH Council Europe is an industry organisation with a mission to advance ubiquitous full fibre based connectivity to the whole of Europe. Our vision is that fibre connectivity will transform and enhance the way we live, do business and interact, connecting everyone and everything, everywhere. Fibre is the future-proof, climate-friendly infrastructure which is a crucial prerequisite for safeguarding Europe's global competitiveness while playing a leading global role in sustainability.

The FTTH Council Europe consists of more than 160 member companies.

Please visit our website for more information: [www.ftthcouncil.eu](http://www.ftthcouncil.eu)

## About the Policy & Regulation Committee

The Policy and Regulation Committee is the cornerstone of the FTTH Council's strategy on Public Affairs. It brings together all members interested in shaping the Council's positions on public policy and regulation, and is under the supervision of the Executive Board and fully aligned with the vision and mission of our organisation.

Public vision and action are essential to progressing towards a sustainable and digital European society. We encourage policy makers to facilitate, through regulation, a fair and competitive market and to support investments in areas where the private business case does not exist.

For more information about our positions on policy and regulation, please visit the [dedicated section](#) of the website.

You can also access all publications from this committee by filtering "Policies and regulation" category in our [Knowledge Center](#).

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