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**Subject: State Aid SA.48418 (2018/N) – Germany
Bavarian gigabit pilot project**

Sir,

I am pleased to inform you that the Commission has assessed the measure "Pilot project for a gigabit-infrastructure in six pilot regions" (in the following: "Bavarian gigabit pilot project" or "the measure") as notified by Germany and described in this decision and decided not to raise objections. On that basis, the measure is compatible with the internal market pursuant to Article 107(3)(c) of the Treaty on the Functioning of the European Union ("TFEU").

1. PROCEDURE

- (1) Following pre-notification contacts, by letter registered on 8 November 2018 pursuant to Article 108(3) of the TFEU, the German authorities notified the Bavarian gigabit pilot project.

2. CONTEXT

- (2) The Europe 2020 Strategy (EU2020)¹ and the Digital Agenda for Europe (DAE) have underlined the importance of broadband deployment to promote

¹ EUROPE 2020 - A strategy for smart, sustainable and inclusive growth, COM(2010) 2020.

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competitiveness, social inclusion and employment in the EU and defined the aim to bring basic broadband access to all Europeans by 2013 and ensure that, by 2020, (i) all Europeans have access to much higher internet speeds of above 30 Mbps (download) and (ii) 50% or more of the European households subscribe to internet connections above 100 Mbps (download). Key Action 8 of the DAE calls upon Member States "to use public financing in line with EU competition and State aid rules" in order to meet the coverage, speed and take-up targets.

- (3) On 14 September 2016 the Commission adopted the Communication "Connectivity for a Competitive Digital Single Market – Towards a European Gigabit Society" ("Gigabit Communication")². The Commission thereby sets out a new vision where availability and take-up of very high capacity networks enable the widespread use of products, services and applications in the Digital Single Market. This vision is operationalized through three strategic objectives for 2025:

(i) for Europe's growth and jobs, Gigabit connectivity defined as "*cost-effective symmetrical Internet connectivity offering a downlink and an uplink of at least 1 Gbps*"³ for places driving socio-economic developments ("socio-economic drivers"), such as schools, transport hubs, main providers of public services and digitally intensive enterprises;

(ii) for Europe's competitiveness, uninterrupted 5G coverage for all urban areas and all major terrestrial transport paths;

(iii) for Europe's cohesion and building on the DAE targets, access for all European households, rural or urban, to Internet connectivity offering at least 100 Mbps, upgradeable to Gigabit speed.

- (4) With the notified measure Germany intends to bring to the six pilot municipalities in the Free State of Bavaria ("Bavaria") broadband access networks which will be able to provide, in particular, high symmetric speeds ("the target network" or "the target infrastructure"). All six pilot municipalities can be characterised as largely rural. They are already at least partially equipped with broadband networks providing speeds of 30 Mbps download or more (next generation access infrastructures or "NGA" infrastructures). The measure targets grey NGA areas only (these are areas where one NGA infrastructure already exists or is planned to be constructed by private investors within three years) - black NGA areas with two or more NGA infrastructures and white NGA areas without any NGA network are not covered by this measure⁴.
- (5) Germany wants to deploy a target infrastructure which allows for high symmetric speeds (at least 200 Mbps for households and at least 1 Gbps for

² Communication from the Commission of 14.9.2016: Connectivity for a Competitive Digital Single Market – Towards a European Gigabit Society, COM(2016) 587, accompanied by the Commission Staff Working Document of 14.9.2016, SWD(2016) 300.

³ Footnote 19 of the Gigabit Communication

⁴ White NGA areas are already covered by the existing Bavarian scheme (SA.35000 and 38690). With this scheme, Bavaria invests 3 billion Euro in order to deploy NGA-networks to areas where such infrastructure is not provided by the market.

companies⁵). To ensure that the investment with public money brings about a significant improvement in connectivity, the notified measure defines as a general principle that the target infrastructure covered by this measure has to at least double both the download and the upload speeds of the NGA network which exists or is planned by private investors within the next three years (in the following: "available network") within a certain set of thresholds. These thresholds are aimed at defining the customers who are eligible to be connected to the new infrastructure as follows:

- (a) households can only be connected to the target infrastructure (of at least 200 Mbps symmetric) if their available network allows only for less than 100 Mbps download;
 - (b) companies can only be connected to the target infrastructure (of at least 1 Gbps symmetric) if they have access to less than 200 Mbps symmetric (which is the case if they have less than 200 Mbps download or upload or both). However, in case they have less than 200 Mbps only on the upload side, but more than 200 Mbps on the download side their eligibility is restricted: they may only be connected to the target infrastructure if the download speed of their available network does not exceed 500 Mbps (see also below, recital (17) and ff. - "Design of the measure").
- (6) The measure will use a gap funding model for a network operator selected via a competitive tender. The measure foresees that the target infrastructure has to provide the capacity of the mentioned target speeds – moreover, the selected network operators will have to offer internet services providing these target speeds as reliable speeds per subscriber.⁶ The selected network operators will grant open wholesale access to third parties.

3. DESCRIPTION OF THE MEASURE

- (7) **Objectives:** By the measure, Germany wishes to respond to increasing needs, in particular by companies, for very high down- and upload speeds. According to Germany, the accelerating process of the digitalisation and interconnection of business and society influences the innovativeness and competitiveness of Bavaria as an industrial location. This far-reaching transformation is based on very high capacity networks. Many innovative products, services and applications will become widespread only if further substantial investments are made in extending very high capacity networks. In the view of Germany there is a need for State aid in situations where a lack of profitability results in insufficient private investment into such networks.

⁵ Germany submits that for socio-economic drivers as mentioned in the Gigabit Communication (see point 3.1 of the Gigabit Communication), such as schools, transport hubs and main providers of public services, within the notified measure the same targets and eligibility conditions shall apply as for companies. Germany considers that no distinction between digitally intensive enterprises and other companies is appropriate in this case, since the digital intensity of a company changes over time and will as a tendency increase in all sectors. In the following, the term "companies" is considered to include socio-economic drivers.

⁶ See para. 58 of the Broadband Guidelines.

- (8) Germany expects that an important share of households and companies need already now high speeds as targeted by the measure and will increasingly do so in the near future. It refers to the Gigabit Communication (see recital (3)) and its findings regarding a growing need for very high capacity networks ("VHC" networks)⁷ in the coming years as well as to several studies which point towards a growing need in Germany for very high speeds.⁸ Germany assumes that very high capacity networks are and will become necessary for companies and can promote economic growth and employment. It considers that companies will need very high and symmetric speeds for network applications, such as e-commerce, big data, virtual private networks, cloud computing, high definition video communications, industry 4.0, agriculture 4.0, e-health, games, virtual reality and others, which, in particular, also require high upload speeds. This is also the case for Bavaria and for the six pilot regions where companies of different industries are present (for example, metal processing, engineering, retail, IT-services, graphic design and advertising, laboratories) which have communicated their need for the planned target speeds in direct

⁷ A VHC network can be considered as a more performing form of NGA infrastructure and is defined as an electronic communications network which either consists wholly of optical fibre elements at least up to the distribution point at the serving location or which is capable of delivering under usual peak-time conditions similar network performance in terms of available down- 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 (footnote 11 of the Gigabit Communication).

⁸ Studies by WIK Wissenschaftliches Institut für Infrastruktur und Kommunikationsdienste GmbH:

- December 2016: "Gigabitnetze für Deutschland" (Gigabit networks for Germany) http://www.wik.org/fileadmin/Studien/2017/Gigabitnetze_Deutschland.pdf
- March 2017: "Die Privatkundennachfrage nach hochbitratigem Breitbandinternet im Jahr 2025" (Private demand for high speed broadband internet in 2025) http://www.wik.org/fileadmin/Studien/2017/Die_Privatkundennachfrage_nach_hochbitratigem_Breitbandinternet_im_Jahr_2025_FINAL.pdf
- August 2017: "Ansätze zur Glasfaser-Erschließung unterversorgter Gebiete" (Approaches for deployment of fibre in under-supplied areas) http://www.wik.org/fileadmin/Studien/2017/2017_DIHK_Studie.pdf

Studies by vbw – Die bayerische Wirtschaft

- May 2016: "Position – Ausbau der digitalen Infrastruktur: Aktivitäten des Bundes und Bayerns" (Position – Expansion of the digital infrastructure: activities by the Federal government and Bavaria) <https://www.vbw-bayern.de/Redaktion/Frei-zugaengliche-Medien/Abteilungen-GS/Wirtschaftspolitik/2016/Downloads/160527-vbw-Position-Ausbau-digitale-Infrastruktur-FINAL.pdf>
- February 2018 "Breitbandbedarf der bayerischen Unternehmen 2017 – leitungsgebunden und mobil" (Broadband needs of the bavarian companies 2017 – fixed and mobile): https://www.vbw-bayern.de/Redaktion/Frei-zugaengliche-Medien/Abteilungen-GS/Wirtschaftspolitik/2018/Downloads/180228-Studie-Breitband-vbw-2017_final.pdf

Study by ZVEI – Die Elektroindustrie

- November 2016: "Kurzfassung zur Studie Die Elektroindustrie als Leitbranche der Digitalisierung" (Short version to the study The electronic industry as a sector leading digitalisation) https://www.zvei.org/fileadmin/user_upload/Presse_und_Medien/Publikationen/2016/November/Die_Elektroindustrie_als_Leitbranche_der_Digitalisierung_Kurzfassung_zur_Studie_Innovationsstudie-Elektroindustrie-Leitbranche-Digitalisierung-Kurzfassung-ZVEI.pdf

contacts with the municipalities. Germany moreover stresses the need of high upload speeds as well as of further technical improvements of the broadband networks which will in its view become important for certain applications in the future, such as low latency and high robustness of the network.

- (9) The Bavarian gigabit pilot project aims at a very high capacity infrastructure for six rural pilot regions covering the municipalities Berching, Ebersberg, Hutthurm, Kammerstein, Kleinostheim and Kulmbach. Experiences resulting from the Bavarian gigabit pilot project are supposed to be used at a later stage for a potential new Bavarian-wide scheme which could be introduced later and which would be notified separately to the Commission.
- (10) It is planned to use a gap funding model for this pilot project since all pilot municipalities have already indicated their preference for this model. In this gap funding model, a company will be selected which constructs and operates a network as its owner. However, in a later larger scheme (which will have to be notified separately to the Commission, should it contain State aid within the meaning of Article 107 TFEU) also other investment models will be made possible, in particular the operator's model which foresees that the infrastructure remains in the ownership of the State and only an operator of the network is selected. The network provider and operator in the gap funding model of the present pilot project will be selected on the basis of a competitive tender. However, aid under the notified measure will not be granted to companies against which an open recovery order for illegal aid exists (Deggendorf rule) or which on the basis of the Guidelines on State aid for rescuing and restructuring non-financial undertakings have to be considered as companies in financial difficulties. Funding is subject to revocation if, within seven years from start of operation, the subsidised broadband infrastructure is no longer being used in line with the purpose of the aid (earmarking period).
- (11) The German authorities submit that the public sector intervention is justified in order to address the lack of very high capacity infrastructure which results from the fact that the connectivity which is already needed and expected to be increasingly needed in the foreseeable future is not provided nor planned by market operators. The reason for this can be found in high investment costs and a low profitability of such investments in some regions.
- (12) In the view of the German authorities, this impediment cannot be addressed by other less distortive measures, such as ex-ante regulation or demand stimulation. Germany explains that the national regulator Bundesnetzagentur ("BNetzA") has stated that regulation cannot increase profitability of broadband infrastructure projects if they do not constitute a business case. According to Germany, also demand side measures are no alternative since such a measure might only lead to scattered investments at different points in time and would not suffice in order to achieve a large coverage of the target area. Moreover, it might effectively require a larger amount of aid than it will be the case for the notified measure. According to Germany, also individual leased lines which companies could potentially acquire from existing network operators are no alternative since this possibility would be mostly too expensive, especially for small and medium-sized companies.
- (13) **Legal basis:** The legal basis is the Bavarian financial regulation ("Bayerische Haushaltsordnung") together with its related administrative regulations and the so-called "State aid principles" ("Fördergrundsätze") which set out the conditions for the granting of State aid in the "grey" NGA areas (see recital

- (4)) which are targeted with this measure. Furthermore, the present decision will form part of the legal basis for the notified measure.
- (14) **Budget and financing instruments:** The total aid amount for all six municipalities is 10 million Euro which will be awarded via direct grants to the selected beneficiaries. The funds will come from regional and local public budgets. The measure is notified as a scheme.
- (15) **Duration of the measure:** The measure will enter into force after approval by the Commission and remain in force until the end of 2024. It is planned to conduct the public consultations and the tenders as early as possible. The construction is considered to take up to two years. The notified measure will only be implemented after the Commission's approval, respecting the stand-still obligation.
- (16) **Granting authorities:** The locally competent governments of the Free State of Bavaria⁹ will as granting authorities contribute funds to the six pilot municipalities which will cover a certain percentage of the identified funding gap. The pilot municipalities will after the approval of the measure by the Commission enter into the necessary procedures of mapping, public consultation and tenders in order to identify the beneficiaries of the aid. The funding gap will be covered at 100% by State funds.
- (17) **Design of the measure:** The measure will address grey NGA areas (see recital (4)) only. The target network will be an access network consisting of passive and active elements. The target infrastructure and the target areas for the measure are defined on the basis of speeds which are to be understood as speeds which can be reliably delivered to the customer.
- (18) As target speeds, the target network is supposed to provide at least 200 Mbps symmetric to households and at least 1 Gbps symmetric to companies both in terms of network capacity and as offered internet services. The target infrastructure has to at least double the speeds of the available networks which are in place or planned by private investors within three years.
- (19) The target areas for the measure do not cover all grey NGA areas in the six municipalities but only those which provide speeds below a certain level. They are defined on the basis of the characteristics of the available networks, in particular the available speeds, and - on this basis - the customers eligible to be connected to the new infrastructure. The conditions are set in a way which is supposed to ensure a step change and at the same time limit any potential crowding out of private investments. These conditions differ for households and companies:
- (a) Households may be connected to the target network, if they only have access to an available network allowing for less than 100 Mbps download. Households having access to 100 Mbps download (or more) cannot be connected and do not form part of the target area.
- (b) Companies may be connected to the target infrastructure if they have access to an available network allowing only for less than 200 Mbps symmetric (which is the case if they have less than 200 Mbps download or

⁹ I.e. Governments of Unterfranken, Oberfranken, Mittelfranken, Oberpfalz, Niederbayern, Oberbayern.

upload or both) unless their available network allows for more than 500 Mbps download. According to this criterion, a company having access to a network offering up to exactly 500 Mbps download and only 100 Mbps upload could therefore be connected to the target network whereas a company having access to 600 Mbps download and 100 Mbps upload could not. Having access to a network providing exactly 200 Mbps symmetric (or more) will not allow a company to be connected to the target infrastructure.

(20) *Criteria for the target infrastructure and eligible customers as defined by Germany*

	Existing NGA infrastructures	General principle	Available speeds (existing or planned by private investors in the next 3 years)	Target speeds
Households	Grey NGA	target infrastructure has to provide at least for a doubling of the available download and upload speeds	less than 100 Mbps download	at least 200 Mbps symmetric
Companies (incl. socio-economic drivers)			less than 200 Mbps symmetric – if only the available upload speed is below 200 Mbps, the available download speed may not exceed 500 Mbps	at least 1 Gbps symmetric

- (21) According to the information provided by Germany mainly two different NGA broadband infrastructures are deployed in the target areas: (i) a network based on fibre to the cabinet ("FTTC") making use of the copper network from the cabinet to the customers' premises and using a very high speed digital subscriber line ("VDSL"), partially including vectoring and (ii) a cable network operated using the technology Docsis 3.0.¹⁰ The FTTC infrastructure with VDSL may allow for 100 Mbps (download) and 40 Mbps (upload) if vectoring is used. The exact speeds depend on the distances between the

¹⁰ Only in a few cases individual fibre connections are in place. Those, however, do not form part of the target areas. There are no fixed wireless infrastructures in the pilot municipalities which would allow for more than 30 Mbit/s download on a reliable basis.

cabinet and the end-customer. The cable infrastructure (Docsis 3.0) allows for speeds of at maximum 500 Mbps (download) and 50 Mbps upload per user.

- (22) Germany confirms that - on the basis of the defined set of criteria - areas with available fibre networks (fibre to the building – "FTTB", fibre to the home – "FTTH") are not part of the target areas. According to Germany households with available VDSL networks would on the basis of the above set of criteria not form part of the target areas if they are capable of delivering reliable 100 Mbps download per subscriber. According to Germany, this could be achieved, for example, via vectoring. Companies with available cable networks allowing for reliable download speeds per subscriber of more than 500 Mbps will on the basis of the set of criteria above not form part of the target areas. According to Germany, such high download speeds may potentially be reached not only via FTTH and FTTB, but also via Docsis 3.1.
- (23) **Mapping and public consultation:** The existing infrastructure will be identified mainly on the basis of a national broadband map (the so-called "Broadband Atlas") which is operated by TÜV Rheinland for the Ministry of Transport and Infrastructure. The Broadband Atlas contains information on more than 1 100 infrastructure owners, and has already been used in over 5 000 broadband projects. It covers all NGA infrastructures and shows which reliable speeds can be provided via these networks. The mapping on the basis of the Broadband Atlas is done on premise level on the basis of homes passed which means that it considers homes as having access to a certain infrastructure not only if they are actually connected, but already when the infrastructure is close enough so that they could be easily connected to it. The Broadband Atlas is updated every six months. The public version of it shows the broadband network coverage for different speed levels up to the level ">50 Mbps". TÜV Rheinland has moreover gathered data for coverage with 100 Mbps or more (not published) which were used by Germany for the maps. Moreover, information from the implementation of past or existing schemes was used in order to identify in more detail the existing speed levels (30 up to below 100 Mbps / 100 up to below 200 Mbps / 200 Mbps and more) and on this basis the target areas.
- (24) The German authorities consulted relevant stakeholders about the measure in general in the period between 3 July and 4 August 2017. During this general public consultation, concerns were raised mainly by network operators arguing that the target speeds of the measure were unnecessarily high thereby allowing for unjustified overbuilding of existing infrastructure. It was also argued that the high targets could lead to a *de facto* restriction of the principle of technological neutrality since at this stage only fibre technologies could provide for such high targets. Some respondents requested moreover the application of an operators' model instead of (only) gap funding which might – according to some views – favour the incumbent Deutsche Telekom. The concerns raised during the general consultation were taken into account by the Commission in the present analysis of this measure.
- (25) In addition to this, before launching a tender each one of the six pilot municipalities will undertake an individual public consultation about the existing and planned infrastructure for each respective (preliminary) target area to which reactions can be submitted during a period of one month. To this end, the municipalities will publish the measure on their websites as well as on the central Bavarian online portal, www.schnelles-internet.bayern.de. In this publication telecommunications companies will be asked to indicate their plans

within the next three years for private investments in broadband networks in the target areas. The market will moreover be asked to verify the maps indicating the existing infrastructure including the download and upload speeds which can reliably be reached via this infrastructure. In addition, the municipalities may also contact telecommunication operators directly in writing in order to enquire about existing and planned infrastructures in the target areas.

- (26) The results of the public consultation will be taken into account when defining the ultimate target areas (see below, recital (28)). The results of the public consultation will be published on the same websites as the public consultation.
- (27) In order to enable the municipalities to take planned private investments properly into consideration, the companies which are planning new broadband infrastructure on the basis of private investments must provide a map of the relevant area and indicate on the basis of their technical plans which upload and download speeds they will be able to provide to the different types of end customers in the designated area. The municipalities may ask these companies to submit concrete plans with certain milestones to be achieved at pre-defined dates and a full deployment of the planned infrastructure within three years.
- (28) **Target areas:** The target areas will be located within the six pilot municipalities. After having identified the broadband infrastructures which exist or are planned by private investors within three years in these municipalities on the basis of a mapping of the areas and a public consultation, the exact target areas will be defined by the municipalities. This definition will be based on the respective local demand and on whether eligible customers are present on the basis of the criteria mentioned above (see recitals (19) - (20)). Areas with available networks providing the speeds which were set in order to define the eligibility of households and companies will be excluded from the measure. This means that areas where a network exists which allows for speeds of 100 Mbps download or more for households will be excluded from the target area with respect to its coverage of households. Companies will be excluded from the target areas of the notified measure where a network exists which allows either for at least 200 Mbps symmetric or for more than 500 Mbps download. Only areas will be covered by the measure where such networks neither exist nor are planned to be deployed by private investors within the next three years.
- (29) Only grey NGA areas will be targeted by the measure. Germany indicates moreover that the measure as notified does not provide for expansions of the deployed subsidized new infrastructure on the basis of private investments by the selected network provider or by companies using the subsidized infrastructure via wholesale access for such expansion into black NGA areas. Later private expansions of the subsidized new networks will only be possible in white and grey NGA areas. A step change compared to the infrastructure which existed before the measure or which was planned by private investors at the time of the original public consultation will be ensured also by such private expansions.¹¹ The step change follows the principles set out in this decision

¹¹ For any later private expansion going into areas which had not been included in the original mapping and public consultation, a new mapping and public consultation has to be undertaken thereby ensuring that all those private investments which do not make use of wholesale access to a subsidized network will be taken account of.

including the defined eligibility and target thresholds (see recitals (19) - (20) above) – any private expansion into white NGA areas will ensure a doubling of download speeds and a move from existing or planned basic infrastructure to NGA speeds. Open wholesale access will be granted under the same conditions as for the subsidized network if the private expansion was done by the original beneficiary.

- (30) **Opinion of the NRA:** The NRA (Bundesnetzagentur – "BNetzA") was consulted on the planned measure and raised no objections. BNetzA has recommended using for the contracts between the municipalities and the selected network provider the template cooperation agreement which has been coordinated with BNetzA for the currently running Bavarian scheme for white NGA areas. Germany follows this recommendation and will consult with BNetzA each individual contract with any selected network operator before signing.
- (31) **Beneficiaries:** The selected companies which will deploy and operate the network will be direct beneficiaries of the aid. The measure will, moreover, enable third party operators to provide retail broadband services to end users by using wholesale access to the new infrastructure. These operators may obtain an indirect economic advantage by receiving access to wholesale services which would not be available under normal market conditions and therefore would have to be considered as indirect beneficiaries.
- (32) **Selection process:** The deployment and operation of the networks will be awarded in transparent and non-discriminatory tender procedures organized by the pilot municipalities. The public procurement provisions in Section 1 of the Communication by the Federal Ministry of Economic Affairs and Technology regarding the Regulation on Public Procurement and Contracts for Services - Part A (Vergabe- und Vertragsordnung für Leistungen (VOL/A)) will be applied correspondingly. Germany confirms that compliance with the principles of EU procurement rules will be ensured. The pilot municipalities may split the overall area into different lots. They will consult the market regarding the need for smaller lots and will provide for those in case a need is signalled by the market.
- (33) According to Germany, the tender procedures will be published on the websites of the pilot municipalities with a link to the central Bavarian website www.schnelles-internet.bayern.de which in turn is linked with the central federal website for broadband tenders www.breitbandausschreibungen.de. The tender will specify the respective target areas as well as the requirements for the target network which will consist of the minimum speeds to be provided as internet services to households and companies. It will also indicate the wholesale access obligations and refer to the draft cooperation contracts which are available to each bidder on demand. The pilot municipality will also publish its intended selection of the preferred bidder.
- (34) The aid is supposed to be awarded to the bidder with the lowest funding gap calculated over a period of seven years (the period of seven years is derived from the obligation to grant wholesale access to the active infrastructure). The municipalities may also define further awarding criteria which have to be published before-hand including the weights which will be attributed to them. The funding gap will have to be the most important criterion. In case bids may be made for smaller lots as well as for the total target area, the assessment will be done in a first phase for bids for each defined lot and for the total target area

separately. Then a comparison will be made in order to assess whether a combination of different bids for individual lots or the most successful bid for the total target area will lead to the lowest funding gap.

- (35) In case a competitive selection process does not generate a sufficient number of bidders (only one or two), the pilot municipality will involve the Bavarian Broadband Centre (Bayerisches Breitbandzentrum) for an examination of the funding gap proposed by the winning bidder and for the further negotiations. Under this pilot measure, the Bavarian Broadband Centre will use the services of an external auditor for the assessment of the bid.
- (36) According to Germany, after the selection procedure the respective pilot municipality will enter into a cooperation agreement with the selected network operator obliging the latter to deploy the relevant infrastructure. Following the recommendation by BNetzA (see recital (30)), a model cooperation agreement which was coordinated with BNetzA in the framework of the scheme on white NGA areas will be used. Before concluding the cooperation agreement, its final version will be submitted to BNetzA for consultation whose opinion is binding for the pilot municipality. If BNetzA does not provide an opinion, the agreement may be concluded after five weeks unless BNetzA has signalled during this period its intention to comment.
- (37) **Technological neutrality:** No specific technology will be defined in the tender procedure - the principle of technological neutrality will be respected.
- (38) **Step change:** The measure is supposed to take place in grey NGA areas with one NGA infrastructure.¹² White¹³ and black NGA areas are excluded.
- (39) Germany considers that a step change results from the large difference between the speeds provided by the available infrastructure and the target speeds which also ensures that the target speeds provide at least for a doubling of both the download and the upload speeds as compared to the available infrastructure (see recitals (18) - (20)).
- (40) Germany moreover indicates that the target infrastructure will provide access to a range of new or extended applications for private customers in the field of virtual private networks, cloud computing, e-health, e-learning as well as games and for companies in the field of e-commerce, big data, cloud computing, video communication, industry 4.0 and e-health. Germany emphasizes in particular the importance of higher upload speeds for these applications which will be provided by the target infrastructure to households and companies. While no technology will be excluded, the most likely technology for the target infrastructure will be based on fibre (FTTB, FTTH) which in addition will provide for further improvements as compared to the existing technologies, such as a better robustness and low latency which is of particular importance for real time applications. However, also upgraded cable

¹² In all target areas, basic internet services are provided via the historic copper network of Deutsche Telekom. Moreover, a basic mobile LTE network exists in all pilot municipalities.

¹³ See footnote 4.

networks are expected to provide speeds up to the defined target speeds in the foreseeable future.¹⁴

- (41) The German authorities confirm that State aid under this measure can only be granted in case of a step change and that this requires in addition significant investments (such as the deployment of new fibre elements) and that the target speeds cannot be reached by a mere modernization of active network components or other upgrading measures.
- (42) ***Use of existing infrastructure:*** Existing infrastructures can be seen in the Infrastructure Atlas provided by BNetzA. As it contains sensitive information, the Infrastructure Atlas is subject to restrictive conditions governing the access to and the forwarding of its information. Network operators are, however, able to access it for planning purposes.
- (43) In order to make the greatest possible use of synergies and reduce the profitability gap as much as possible, the pilot municipalities must refer in the call for tender to the Infrastructure Atlas, and indicate any works of their own that they intend to carry out, as well as any upcoming civil engineering works (allowing cables to be laid during road works, for example) in the target area. They moreover explicitly request to use existing infrastructure as far as possible for the construction of the new infrastructure.
- (44) All network operators taking part in the selection procedures that have their own passive infrastructure in one of the six pilot areas must confirm when submitting their bid that they have provided the information on that infrastructure to the BNetzA for inclusion in the Infrastructure Atlas every year by 1 July, and that they are prepared in principle to make their passive infrastructure available to other network operators taking part in the relevant selection procedure. Where infrastructure is deployed in the target areas of the pilot municipalities after the deadline of 1 July, the bidder must confirm that it has informed the relevant municipality of that infrastructure during the public consultation, so that the municipality can refer to it in the call for tenders. On demand the municipality will provide to any participant in the tender further information on infrastructure which was deployed after the deadline of 1 July and which is not yet included in the Infrastructure Atlas.
- (45) ***Wholesale access:*** Germany indicates that the selected network providers must offer effective and full unbundling, and have to grant wholesale access on the basis of all products as defined in Annex II to the Broadband Guidelines. Such access will be granted for the new subsidized infrastructure as well as for the selected bidder's existing infrastructure in the respective target area. Germany confirms that open wholesale access has to be provided by the selected network providers for a duration of at least seven years, access to passive infrastructure will be granted for an unlimited time. In case ducts are constructed, those will be large enough to cater for several (at least three) cable networks and to host point-to-multipoint as well as point-to-point solutions. If a network operator offers also retail services, wholesale access will be provided at least 6 months before the launch of such services. The access

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See study by WIK Wissenschaftliches Institut für Infrastruktur und Kommunikationsdienste GmbH, December 2016: "Gigabitnetze für Deutschland" (Gigabit networks for Germany) http://www.wik.org/fileadmin/Studien/2017/Gigabitnetze_Deutschland.pdf, page 23.

obligations are independent of any change in ownership, management or operation of the subsidised infrastructure.

- (46) **Wholesale access pricing:** Germany explains that the selected network operators have to use as benchmarks regulated wholesale access prices or published average wholesale access prices that apply in comparable, more competitive areas of Germany or the European Union. In case those are not available, they have to set the wholesale access prices according to the principles of cost orientation and the method prescribed by the regulatory framework for the sector. The wholesale network access price shall also take into account State aid granted to the network operator and local cost structures. If there is no regulated price, and in the event of conflicts regarding the wholesale access price or the conditions for wholesale access between the network operator and an access seeker, the price and conditions are to be established by the pilot municipalities on the basis of an opinion by an expert appointed by the respective pilot municipality in consultation with the granting authority. The pilot municipality must ask BNetzA for its opinion regarding the price and the conditions that it intends to establish on the basis of the expert opinion. Regardless whether the parties agree on the price and conditions or whether there is a conflict, in any case both the draft wholesale access contract as well as at a later stage its final version have to be submitted to the national regulator whose opinion is legally binding for the network operator. If the national regulator does not provide any opinion within five weeks, the contract can be concluded unless the national regulator has indicated its intention to comment. The network operator provides its wholesale access prices as soon as they are defined to the granting authority which publishes them on www.schnelles-internet.bayern.de.
- (47) **Monitoring and claw-back mechanism:** After the open and non-discriminatory selection procedure the respective pilot municipality will enter into a cooperation agreement with the selected network operator obliging the latter to deploy the relevant infrastructure. It is therefore in a first step the respective municipality's task to verify that the target speeds are provided for the full target area and the full duration of at least seven years (earmarking period).
- (48) Before any aid can be granted, the municipality must receive the approval by the granting authority and has to submit for this purpose the necessary documents establishing that the conditions for the grant are fulfilled (this includes, *inter alia*, the decision by the municipality council about the implementation of the deployment plan, the financing plan, the mapping of the existing infrastructure, the results of the public consultation the updated maps, the results of the selection procedure, the decision by the municipality council for a beneficiary and a map of the exact area covered, a credible account of the profitability gap and a description of the technical indicators (technology, speeds, number of connections etc.)). The granting authority will in particular check the winning bid and verify that the required target speeds will be provided. After the finalisation of the deployment of the network, a special assessment ("Verwendungsnachweisprüfung") will verify whether the aid was used in compliance with the above requirements.
- (49) Germany explains that, for projects with a funding gap of more than EUR 4 million, the municipality must verify with the network operator upon expiry of the earmarking term of seven years, whether the demand for broadband services in the target area exceeds the demand that the network operator

estimated in its offer to tender. If the actual demand for services of the network operator exceeds the originally assumed level by more than 30% (turnover) and there has been no equivalent retail price reduction, then the network operator must refund the profit made on the turnover exceeding this 30% to the granting authority. The municipality applies the claw-back mechanism under supervision of the granting authority.

- (50) The granting authority and the Bavarian court of auditors have comprehensive examination rights. They may require additional documents from the municipality as well as – in the framework of the clawback mechanism - from the selected beneficiary.
- (51) **Transparency:** The objectives of the measure, the full text of the final aid scheme, the implementing provisions, the granting authority, the beneficiaries of the aid, the form and amount of State aid granted to each beneficiary, the date of granting, the type of undertaking, the region (at NUTS level II) and the principal economic sector in which the beneficiary has its activities (at NACE group level) will be published on the relevant Commission internet site¹⁵, on www.breitbandausschreibungen.de and www.schnelles-internet.bayern.de. Such information will be published after the decision to grant the aid has been taken, will be kept for at least 10 years and will be available to the general public without restrictions. Maps indicating the areas of ongoing projects can moreover be found at www.bayernatlas.de.
- (52) **Reporting:** Germany undertakes to annually submit to the Commission the reports provided for by Article 26 of Council Regulation (EU) 2015/1589¹⁶ and maintain for at least 10 years from the date of award of the aid (individual aid and aid granted under the scheme) detailed records containing the information and supporting documentation necessary to establish that all compatibility conditions are met, and provide them, on a written request, to the Commission within a period of 20 working days or a different period as may be fixed in the request.
- (53) Germany, moreover, commits to provide a report to the Commission pursuant to paragraph 78 (k) of the Broadband Guidelines every two years starting from the date when the network is put into use, for the duration of the aid measure. Such information will include: the information made public in line with transparency obligations pursuant to paragraph 78 (j) of the Broadband Guidelines, the date when the network is put into use, the wholesale access products, the number of access seekers and service providers on the network, the number of houses passed and take-up rates.

¹⁵ <https://webgate.ec.europa.eu/competition/transparency/public/search/home>

¹⁶ Council Regulation (EU) 2015/1589 of 13 July 2015 laying down detailed rules for the application of Article 108 of the Treaty on the Functioning of the European Union (OJ L 248, 24.9.2015, p. 9).

4. ASSESSMENT OF THE MEASURE

4.1. Existence of aid within the meaning of Article 107(1) of the TFEU

- (54) The notified measure constitutes State aid within the meaning of Article 107(1) TFEU, as also confirmed by Germany during the notification.
- (55) According to Article 107 (1) TFEU, "*any aid granted by a Member State or through State resources in any form whatsoever which distorts or threatens to distort competition by favouring certain undertakings or the production of certain goods shall, in so far as it affects trade between Member States, be incompatible with the internal market.*" It follows that in order to be qualified as State aid, the following cumulative conditions have to be met: 1) the measure has to be granted out of State resources and it is imputable to the State, 2) it has to confer a selective economic advantage to undertakings, 3) the measure must distort or threaten to distort competition, 4) the measure has to affect trade between Member States.
- (56) **State resources:** The measure is financed by regional and local German State funds and is granted pursuant to the legal basis as indicated in recital (13) above. Therefore, the measure uses State resources and is imputable to the State.
- (57) **Selective economic advantage:** The measure attributes a selective economic advantage to individual companies – directly to the selected network providers and indirectly to the third-party operators if wholesale access is provided below market price.
- (58) The measure supporting the deployment of a broadband access network is selective in nature in that it targets undertakings that are active only in certain regions and certain segments of the overall electronic communications services market (provision of broadband services), to the exclusion of other electronic communications services (such as internet service providers or network providers offering basic technologies allowing for speeds only below 30 Mbps download) and other economic activities beyond the sector of telecommunications.¹⁷ It does not concern general infrastructure (e.g. general civil engineering works regarding for example roads) which would be open on a non-discriminatory basis to all potential users, but is limited to electronic communication operators.¹⁸ Moreover, the scheme is set up with the aim of improving broadband coverage towards very high capacity networks in selected six underserved (grey) municipalities in Bavaria only – other regions of Bavaria will not profit from a comparable advantage. The measure is therefore sector-specific.
- (59) As concerns the identification of the particular legal framework against which selectivity can be assessed, it is noted that the construction and operation of broadband networks is an economic activity conducted by commercial

¹⁷ See also Judgment of the Court of 15 June 2006 Joined Cases C-393/04 and C-41/05 Air Liquide Industries Belgium [2006] ECR I-5293, paragraph 31.

¹⁸ See also N 383/09 – Germany – Amendment of N 150/08 Broadband in the rural areas of Saxony. See also Commission Decision 2003/227/EC of 2 August 2002 on various measures and the State aid invested by Spain in "Terra Mítica SA", a theme park near Benidorm (Alicante) (OB L 91, 8.4.2003, p. 23—37).

operators on the basis of private investments in the market. The market has even been liberalized in the past and a regulatory regime was set up in order to open the market for competition. In such a framework, economic activities normally do not receive subsidies. Within this reference framework, the granting of aid – as under the notified scheme – to some selected individual companies reduces the costs of those direct beneficiaries as compared to companies investing into broadband networks and services merely on the basis of private funds.

- (60) The broadband network operators which operate purely on the basis of private funds and do not receive this aid are in a comparable factual and legal situation as the beneficiaries since they operate in Bavaria under the same technical, commercial and legal conditions in the field of broadband networks and services only on the basis of private funds. There are no factual or legal differences between the target areas and the rest of Bavaria which would call for a different treatment of the beneficiaries of the measure.
- (61) It is the very purpose of the measure to give - in line with national and European targets - an advantage to selected beneficiaries in order to improve broadband network coverage in certain Bavarian regions. There is therefore no justification for the advantage on the basis of the nature of the reference framework as defined above (see recital (59)).
- (62) ***Distortion of competition:*** The markets for electronic communications services are open to competition between operators and service providers, which generally engage in activities that are subject to competition and trade between Member States. By favouring certain operators and service providers, the notified measure is therefore liable to distort competition.
- (63) Moreover, the intervention of the State can alter existing market conditions, in that a number of customers could now choose to subscribe to the services provided by the direct beneficiary or the various access seekers instead of by existing, possibly more expensive alternative market-based solutions.
- (64) ***Effect on trade:*** Insofar as the intervention may affect network operators and service providers from other Member States, the measure has an effect on trade. Therefore, the fact that an improved broadband service and additional wholesale capacity becomes available can distort competition and affect trade between Member States.
- (65) ***Conclusion:*** In consideration of the above, the Commission concludes that the notified measure constitutes State aid within the meaning of Article 107 (1) TFEU. Therefore, it is necessary to consider whether the measure can be found to be compatible with the common market.

4.2. Legality of the aid measure

- (66) By notifying the measure before its implementation, the German authorities have fulfilled their obligation according to Article 108(3) TFEU.

4.3. Compatibility of the aid

- (67) The Commission has assessed the compatibility of the notified measure according to Article 107(3)(c) TFEU which states that: "*aid to facilitate the development of certain economic activities or of certain economic areas, where such aid does not adversely affect trading conditions to an extent*

contrary to the common interest" shall be considered to be compatible with the internal market. In its assessment, the Commission has taken into account the Broadband Guidelines, which contain a detailed interpretation of Article 107(3)(c) TFEU as it applies to that area of State aid law.

- (68) As explained in paragraph 33 of the Broadband Guidelines, in order to be considered compatible with the internal market every aid measure must comply with the following cumulative conditions:
- a. The aid must contribute to the achievement of objectives of common interest
 - b. Absence of market delivery due to market failures or important inequalities
 - c. The aid must be appropriate as a policy instrument
 - d. The aid must have an incentive effect
 - e. The aid is limited to the minimum necessary
 - f. Negative effects must be limited
 - g. The aid measure must be transparent
- (69) If those conditions are fulfilled, the Commission balances the positive effects of the aid measure in reaching the objective of common interest against the potential negative effects.

4.3.1. The aid contributes to the achievement of objectives of common interest

- (70) The Broadband Guidelines make explicit reference to the Digital Agenda, especially with respect to the achievement of objectives of common interest¹⁹. The Gigabit Communication was adopted in 2016 – three years after the Broadband Guidelines. The present decision takes into account the Gigabit Communication in the assessment under the Broadband Guidelines since the Gigabit Communication builds upon and complements the Digital Agenda.
- (71) As set out above (see recital (2)), the Europe 2020 Strategy (EU2020) and the DAE have stressed the importance of broadband deployment to promote competitiveness, social inclusion and employment in the EU. In addition, the Gigabit Communication confirms the importance of internet connectivity for the Digital Single market and the need for Europe to deploy now the networks for its digital future (see recital (3)). While the 2010 connectivity objectives defined by the DAE remain valid up to 2020, the Gigabit Communication sets out further targets in order to respond to technological developments and future needs which call for complementary longer term objectives up to and beyond 2025: European households should have access to Internet connectivity offering at least 100 Mbps (download) which is upgradeable to 1 Gbps and socio-economic drivers (including, in particular, digitally intensive companies

¹⁹

See paragraph 36 of the Broadband Guidelines.

and providers of public services) should have access to speeds up to 1 Gbps symmetric.

- (72) Germany expects that the accelerating process of digitalisation and interconnection of business and society requires very high capacity networks. It points out that German industry increasingly voices its growing need for better connectivity (see recital (8)). Germany moreover considers that high transmission rates, for example for the growing expansion of cloud and streaming services, are increasingly significant also for private demand. Germany also bases its expectations on the Gigabit Communication and its findings regarding needs of households and companies in the field of broadband connectivity in the coming years. Germany considers that there is a need for State aid in view of insufficient private investment into such networks in certain regions including the six pilot municipalities.
- (73) The Bavarian gigabit pilot project can be considered as a step towards fulfilling the objectives of the Gigabit Communication both with respect to the need to deploy very high capacity networks as well as with respect to the target speeds set within the strategic objectives:
- (a) The target speeds set by Germany for the target infrastructure go in line with the definition of very high capacity networks since the high symmetric connectivity targets defined in the Bavarian gigabit pilot project correspond most closely to networks either consisting of fibre at least up to the distribution point at the service location or being capable of delivering a similar network performance (see footnote 7) and which can be considered as upgradeable to Gigabit connectivity.
 - (b) The target infrastructure is supposed to provide at least 200 Mbps symmetric to households who have access to infrastructures (existing or planned by private investors in the next three years) allowing only less than 100 Mbps download. The number of households with access to networks capable of providing 100 Mbps and upgradeable to Gigabit speeds will therefore be increased by the measure. This goes in line with the target set out by the Gigabit Communication that all European households should have access to Internet connectivity offering at least 100 Mbps (download), upgradeable to Gigabit speed, by 2025.
 - (c) Moreover, the Bavarian gigabit pilot project will provide Gigabit connectivity to eligible companies which include also socio-economic drivers²⁰. This goes in line with the target defined by the Gigabit Communication stipulating that socio-economic drivers will need access to 1 Gbps (symmetric).
- (74) Thus, the measure under examination will contribute to the achievement of the objectives of the Gigabit Communication and is therefore in line with the common interest.

²⁰

See footnote 5

4.3.2. Absence of market delivery due to market failures or important inequalities

- (75) In its Communication on State Aid Modernisation (SAM)²¹, the Commission notes that State aid policy should focus on facilitating well-designed aid targeted at market failures and objectives of common European interest. State aid measures can, under certain conditions, correct market failures, thereby improving the efficient functioning of markets and enhancing competitiveness.
- (76) Taking into account the Gigabit Communication, Germany considers that the target infrastructure is necessary in order to respond to fast growing connectivity needs by industry and households. The target infrastructure will – according to Germany – shape the innovativeness and competitiveness of Bavaria as an industrial location.
- (77) Germany has conducted a general public consultation regarding the planned Bavarian gigabit pilot project in order to request the market's view on the planned measure. Detailed public consultations about the exact target areas will be conducted by the relevant municipalities in order to verify the maps and to enquire about investment plans by private investors during the next three years. Areas with available networks providing the speeds which were set in order to define the eligibility of households and companies (see recitals (19) - (20)) will be excluded from the measure. The measure will only cover areas in which such networks neither exist nor are planned to be deployed by private investors within the next three years.
- (78) During the general public consultation, concerns were raised claiming that the target speeds are artificially high and do not correspond to current or foreseeable market demand. However, it is the responsibility of the Member States to define their respective needs and targets. The targets in this case were defined on the basis of foreseeable demand for the years up to 2025 and beyond as assessed by the German authorities on the basis of several studies and reports as well as the Gigabit Communication. As set out above (see section 4.3.1.1.), the targets can be considered as being in line with the common interest.
- (79) The measure can therefore be considered as addressing a market failure.

4.3.3. Appropriateness of State aid as a policy instrument

- (80) Germany explains that the lack of private investments for a Gigabit infrastructure is difficult to address by other less distortive measures, such as ex-ante regulation or demand stimulation. The national regulator has confirmed that regulation cannot increase profitability of broadband infrastructure projects if they do not constitute a business case. As to demand side measures, the German authorities consider that those might lead to scattered investments at different points in time and would not suffice in order to achieve a large coverage of the target area. Individual leased lines are due to high costs normally no viable alternative to a new subsidized network.

²¹ Communication from the Commission – EU State Aid Modernisation (SAM), COM(2012)0209 final; <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52012DC0209&from=EN>

- (81) In view of the considerations indicated above (recital (80)), it can be concluded that the Bavarian gigabit pilot project is an appropriate State aid measure.

4.3.4. The aid has an incentive effect

- (82) The measure will only cover areas where no infrastructure is provided or planned by private investors within the next three years which would allow for 100 Mbps download or more for households and 200 Mbps symmetric for companies. It follows from this that the investment would not be made within the same timeframe without the aid, which therefore has an incentive effect. Moreover, by granting access to the subsidized network to third party operators, the measure facilitates market access for third parties.
- (83) Therefore, in line with paragraph 45 of the Broadband Guidelines, the aid provides a direct and appropriate investment incentive for the selected network providers and for third party beneficiaries.

4.3.5. Proportionality - Aid limited to the minimum necessary

- (84) The German authorities have designed the measure in a way to minimise the State aid involved and the potential distortions of competition arising from the measure. In that respect, as provided by paragraph 78 of the Broadband Guidelines, the Commission notes the following elements:

Detailed mapping and coverage analysis and public consultations:

- (85) As set out above (see recital (23)), the detailed mapping for the target areas will be done by the six pilot municipalities on the basis of the Broadband Atlas which indicates reliable speeds. The mapping will be done on premise level identifying the NGA-coverage on the basis of "homes passed". The correctness of the data for the target areas will be verified via public consultations during which market participants will be asked to confirm the data on the existing infrastructure including the download and upload speeds and to indicate their planned infrastructure investments for the next three years. In the definition of the ultimate target areas the results of the public consultations will be taken into account. The measure will only cover areas where the available networks provide speeds below the eligibility criteria (see recital (19) - (20)) and only grey NGA areas.
- (86) On this basis, the Commission can conclude that the mapping and the public consultations follow the provisions in paragraphs 78 (a) and (b) of the Broadband Guidelines.

Competitive selection process and most economically advantageous offer:

- (87) As described above (see recital (32) and following), the six pilot municipalities will apply a tender procedure in order to select a network provider and operator for the target infrastructure in their respective target areas (gap funding method). The tender procedures will follow the principles of EU procurement rules and will be published on the websites of the pilot municipalities with a link to the central Bavarian website www.schnelles-internet.bayern.de which in turn is linked to the central federal website for broadband tenders www.breitbandausschreibungen.de. The pilot municipality will also publish its intended selection of the preferred bidder.

- (88) The tender will specify certain minimum requirements (target speeds to be provided as internet services) and the wholesale access obligations and will refer to the State aid principles (Fördergrundsätze) for this measure. The municipalities will check with the market before-hand whether there is a need for smaller lots and will provide for such a possibility in case of demand.
- (89) The tender procedure ensures that aid will be awarded to the bidder with the lowest funding gap. This criterion will be the most important one, even if additional award criteria which have to be published before-hand (including their weighing) are used by the municipalities. The assessment of bids for individual lots and bids for the overall target area will be done on the basis of the same criteria.
- (90) In case a competitive selection process does not generate a sufficient number of bidders (only one or two), the cost calculation proposed by the winning bidder is put to examination by the Bavarian Broadband Centre which in the framework of this measure uses the services of an external auditor for the assessment.
- (91) After the selection procedure, the respective pilot municipality will enter into a cooperation agreement with the selected network operator – the involvement of the BNetzA is ensured (see recital (36)).
- (92) It can be concluded that the planned competitive selection process ensures open, transparent and non-discriminatory tenders and is in line with paragraph 78 (c) and (d) of the Broadband Guidelines.

Technological neutrality:

- (93) The measure does not specify any technology (see in particular recital (37) for the tenders). During the general public consultation, companies have voiced concerns that the high target speeds might *de facto* restrict technological neutrality since at this stage only fibre technologies are able to reach these targets.
- (94) The fact that the targets set by Germany at present seem to speak mostly for fibre infrastructures (FTTB, FTTH) does not infringe the principle of technical neutrality. First, potential alternative existing technologies may be proposed by the bidders and even completely new solutions which might evolve can participate as long as they meet the target speeds. Second, the principle of technological neutrality has to be seen in the light of the targets to be achieved. As set out above (see recital (78)), the targets were comprehensibly defined on the basis of several studies as well as the Gigabit Communication and can be considered as being in line with common interest. Under the principle of technological neutrality, Member States only have to ensure that all those technologies may participate which are capable to provide the targeted speeds. Moreover, it is worth noting that other technologies, such as further technological upgrades of cable infrastructure and 5G-infrastructure, are as well expected to meet the high target speeds in the foreseeable future.
- (95) On this basis, the Commission can conclude that the principle of technological neutrality is respected and in line with paragraph 78 (e) of the Broadband Guidelines.

Use of existing infrastructures:

- (96) In the notified measure, pilot municipalities must refer in the call for tender to the Infrastructure Atlas, and indicate any intended works of their own as well as any upcoming civil engineering works (see recital (43) above). Moreover, all network operators participating in the tenders must confirm that the information on their existing networks within the target areas is correctly reflected in the Infrastructure Atlas. They also have to confirm that they are in principle ready to make their passive infrastructure available to other network operators participating in the tender (see recital (44)).
- (97) Germany thereby will allow for a use of existing infrastructure as required by paragraph 78 (f) of the Broadband Guidelines.

Wholesale access conditions and pricing:

- (98) As set out above (see recital (45)), wholesale access to the new subsidized infrastructure as well as to the selected bidder's existing infrastructure in the respective target area will have to be granted by the respective selected bidder for at least seven years in general and for passive infrastructure unlimited in time. The wholesale products will correspond to those listed in Annex II to the Broadband Guidelines.
- (99) Any ducts financed under the measure will be large enough to cater for several cable networks, access will be granted at least 6 months before the launch of any retail services of the beneficiary and access obligations will apply irrespective of any change in ownership, management or operation of the subsidised infrastructure.
- (100) As described in recital (46), Germany will oblige the selected network operators to set the wholesale access prices according to the principle of cost orientation or the method prescribed by the sectoral regulatory framework if it is not possible to use regulated wholesale access prices, or any published average wholesale access prices that apply in comparable, more competitive areas of Germany or the Union. The prices will take into consideration the State aid granted to the network operator and local cost structures.
- (101) In the event of conflicts between the network operator and the wholesale access seeker, the price and conditions are to be established by the pilot municipalities on the basis of an expert opinion appointed by the respective pilot municipality. The national regulator BNetzA has to be consulted on the draft wholesale access agreement. The network operator provides its wholesale access prices as soon as it is defined to the granting authority which publishes them on www.schnelles-internet.bayern.de.
- (102) The Commission therefore considers that the wholesale access conditions and pricing are in line with paragraphs 78 (g) and (h) of the Broadband Guidelines.

Monitoring and claw-back mechanism:

- (103) As set out above (see recitals (47) - (49)), Germany requires that the municipality must submit the relevant documents to the granting authority establishing that the conditions for the grant are fulfilled. Both the granting authority and the Bavarian court of auditors have the right to require further

documents from the municipality as well as – in the framework of the clawback mechanism - from the selected beneficiary.

- (104) It will be in the responsibility of the pilot municipality to ensure that the selected beneficiary implements the project as defined in the cooperation agreement between municipality and network operator. As set out above (see recital (36)), the pilot municipalities will use the cooperation agreement as coordinated with the BNetzA and will consult the agreement with the BNetzA before signing.
- (105) In this context it is noted that pursuant to paragraph 78 (i) of the Broadband Guidelines, Member States should implement a clawback mechanism only if the aid amount of the project is above EUR 10 million. As this aid amount is not achieved for the notified measure EU law does not require a clawback mechanism.
- (106) It can be concluded that the conditions of paragraph 78 (i) of the Broadband Guidelines are fulfilled.

Reporting:

- (107) Reporting is required under Article 26 of Council Regulation (EU) 2015/1589 as well as pursuant to paragraph 78 (k) of the Broadband Guidelines. As described in recitals (recital (52) - (53)), Germany commits to submit to the Commission the required reports on all existing aid schemes including the Bavarian gigabit pilot project as required by Article 26 of Council Regulation (EU) 2015/1589 and paragraph 78 (j) of the Broadband Guidelines.

4.3.6. Limited negative effects and step change

- (108) Given the design of the measure and its compliance with the conditions of paragraph 78 of the Broadband Guidelines, the Bavarian gigabit pilot project is unlikely to have a crowding out effect on comparable private investments.
- (109) The new subsidized infrastructure will create only limited negative effects on competition due to the fact that it provides a step change and that it is ensured via a public consultation that no private investor was planning to deploy a comparable infrastructure or an infrastructure with speeds going beyond the eligibility criteria in the affected target areas.
- (110) Germany submits (see recital (38)) that in line with paragraph 51 of the Broadband Guidelines the planned networks will ensure a "step change" in that the selected bidder makes significant new investments in the broadband network and the subsidised infrastructure brings significant new capabilities to the market in terms of broadband service availability and capacity, speeds and competition.
- (111) Significant investments already result from the high target speeds which can most likely not be met without any significant investments. Germany will also define in its legal basis that the aid can only be attributed to projects which envisage significant investments, such as the deployment of new fibre lines.
- (112) Germany defines for the present measure that the target infrastructure has to double the down- and upload speed of the available NGA-network. The infrastructure will effectively bring significant new capabilities to the market in terms of speeds both to the eligible households as well as to the eligible

companies based on the large difference between available speeds and target speeds:

- Households - The move from below 100 Mbps download to at least 200 Mbps symmetric for households means a significant increase in speed. For households which are connected to an FTTC+VDSL infrastructure, the upload speeds are typically significantly lower than the download speeds. The target infrastructure will therefore multiply the available upload speeds together with an important increase (more than doubling) in download speed.
 - Companies - For companies who have less than 200 Mbps both for download and upload, the move to 1 Gbps symmetric represents a multiplication of both speeds. For companies having access to higher download speeds (up to 500 Mbps), but fulfilling the eligibility threshold due to an upload speed below 200 Mbps²², the target infrastructure provides a doubled download and multiplied upload speed.
- (113) Those increased speeds ensure that advanced and extended applications can be used by households and companies. The target infrastructure will allow households and companies to use on an advanced basis applications, such as cloud computing, home office and applications in the field of virtual reality, for which, in particular, a future demand of high upload speeds is expected.²³
- (114) The target speeds also ensure that the new infrastructure does not provide only limited improvements to below 100 Mbps download which, in any case, would fail to meet the objectives of the Gigabit Communication, namely to move towards very high capacity networks and towards at least 100 Mbps download (upgradeable to 1 Gbps) for all households in Europe.
- (115) Any potential risk of crowding out of private investments is contained by the design of the measure. Black NGA areas, where more than one NGA networks exist and where therefore sufficient demand for very high capacity is expected to occur in the future, are excluded from the measure. While the measure relates to grey areas with one other NGA network being already available, the most recent investments done into the most performing existing networks are to a large extent protected from overbuilding. Based on the eligibility criteria and target speeds set by Germany, the target infrastructure will connect households, unless they already have access to reliable 100 Mbps download. Existing technologies in this range, including those which were in recent years upgraded to this speed level, are therefore not part of the target area. More importantly, no potential very high capacity infrastructure (such as FTTH/B or Docsis 3.1) will be overbuilt by the measure. The target infrastructure will not connect companies, which have access to an infrastructure offering more than 500 Mbit/s download on a reliable basis (which could - as set out by Germany - be achieved, for example, by upgrading a cable network to the Docsis 3.1

²² Upload speeds regularly do not exceed download speeds. In case this would occur, the same reasoning would apply for companies having access to upload speeds of 200 Mbps or more, but only to download speeds below 200 Mbps.

²³ See Staff Working Document to the Gigabit Communication, SWD (2016) 300, in particular Figure 15 on page 17 and Table 1 on page 18.

standard). Areas with existing fibre networks (FTTB / FTTH) or fibre networks being planned by private investors within the next three years are not covered by the measure neither, since such fibre networks regularly allow not only more than 100 Mbps download, but even 200 Mbps symmetric or can easily be upgraded to this level.²⁴

- (116) The selection procedure ensures an open, transparent and non-discriminatory procedure. The weighing criteria ensure that the most economical offer is selected. The split of the target areas in smaller lots in case demand for this is signalled by the market ensures that also smaller network operators may participate in the tenders and further limits any negative effects on competition. Open wholesale access will allow third party telecommunication operators to enter the market and offer services at retail level.
- (117) The Commission therefore concludes, that the conditions for a step change are fulfilled and that the negative effects on competition are on this basis limited.

4.3.7. Transparency

- (118) As set out above (recitals (51) - (52)), Germany commits to comply with the transparency obligations of the Broadband Guidelines as amended by the Commission Communication 2014/C 198/02 and to publish the relevant information relative to the measure on the relevant Commission internet site²⁵ as well as on www.breitbandausschreibungen.de and www.schnelles-internet.bayern.de for a duration of at least 10 years. It will be made available to the general public without restrictions. Germany also commits to submit to the Commission annual reports, as required under Article 26 of Council Regulation (EU) 2015/1589 as well as reports on the implementation of the measure every two years from the date the network is put in use in line with the requirements set in the paragraph 78 (k) of the Broadband Guidelines.

4.3.8. Overall balancing: Positive effects expected to outweigh potential negative effects

- (119) The objective of the measure is to provide access to very high capacity broadband infrastructure in six small municipalities where no such private investment is planned. The measure is designed in a way that its targeted infrastructure contributes to the achievement of the objectives of common interest since it aims at putting in place very high capacity networks as required in the Gigabit Communication while providing a step change. Both households and companies will dispose of a new infrastructure which allows for the use of extended applications and which can respond to increasing demand for higher speeds in the coming years. The targeted infrastructure is not provided by the market - neither via existing nor via planned private investments as verified by the public consultation. It thus addresses a market failure.
- (120) Germany has designed the measure under examination in such a way as to minimise the potential distortion of competition arising from the measure

²⁴ Apart from that, FTTB and FTTH infrastructures could be regarded as easily upgradeable to 1 Gbps symmetric which would exclude them as target areas for interventions in grey NGA areas.

²⁵ <https://webgate.ec.europa.eu/competition/transparency/public/search/home>

which focusses on grey NGA areas and excludes any coverage of black NGA areas. The mapping and public consultation ensure that no comparable private investments are crowded out.

- (121) On balance, the measure is in line with the objectives of Article 107 (3) (c) TFEU as it facilitates the development of wholesale and retail broadband services in the pilot municipalities, where such aid does not adversely affect competition to an extent contrary to the common interest.
- (122) The Commission therefore considers that the notified measure will support the objectives of the Gigabit Communication notably the deployment of very high capacity networks in the pilot municipalities and is objectively justified addressing the market failure in the targeted areas.

4.3.9. Conclusion

- (123) The Commission concludes that the Bavarian gigabit pilot project meets the compatibility criteria set out in the Broadband Guidelines. Hence the aid involved is compatible with the internal market in line with Article 107 (3) (c) TFEU.

5. DECISION

- (124) The Commission therefore finds that the notified measure "Bavarian gigabit pilot project" is compatible with the internal market pursuant to Article 107 (3) (c) TFEU and has accordingly decided not to raise objections to the notified measure.
- (125) The German authorities are reminded that, pursuant to Article 108(3) of the TFEU, they are obliged to inform the Commission of any plan to extend or amend the measure.

If this letter contains confidential information which should not be disclosed to third parties, please inform the Commission within fifteen working days of the date of receipt. If the Commission does not receive a reasoned request by that deadline, you will be deemed to agree to the disclosure to third parties and to the publication of the full text of the letter in the authentic language on the Internet site: <http://ec.europa.eu/competition/elojade/isef/index.cfm>.

Your request should be sent electronically to the following address:

European Commission,
Directorate-General Competition
State Aid Greffe
B-1049 Brussels
Stateaidgreffe@ec.europa.eu

Yours faithfully
For the Commission

Margrethe VESTAGER
Member of the Commission