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**Subject: State Aid SA.48324 (2018/N) – Germany
Mobilfunk Bayern**

Sir,

1. PROCEDURE

- (1) Following pre-notification on 1 February 2018, the German authorities notified the European Commission of a new support scheme to promote the development of public mobile communications networks ("mobile networks") in the German state of Bavaria on 13 June 2018. The Commission requested additional information and clarifications from the German authorities by letters of 4 July 2018 and 11 September 2018. The official German responses to these letters were received by the Commission on 19 July 2018 and 21 September 2018, respectively.

2. DETAILED DESCRIPTION OF THE MEASURE

2.1. Objective and design of the measure

- (2) The Bavarian Mobile Communications Directive (*Richtlinie zur Förderung des Ausbaus der Mobilfunkversorgung im Freistaat Bayern – Mobilfunkrichtlinie – MFR*), a financial support scheme, aims at closing gaps in coverage by mobile networks located typically in sparsely populated and topographically difficult parts of Bavaria. In these areas, the Bavarian government wants to support the

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provision of state-of-the-art public mobile communications services ("mobile services") by subsidizing the required passive infrastructure¹.

- (3) The general objective of the support scheme is to introduce mobility for telephone and internet users in areas of Bavaria in which no mobile services are available ("mobile coverage gaps"). The Bavarian government considers that in addition to the importance of mobile telephony for making and receiving calls when the user is not at a fixed location, rapid developments in cloud technologies and the internet of things together with the use of mobile devices to allow for more flexible working practices as well as for access to services over the internet require that no area in Bavaria shall be left behind without mobile coverage.
- (4) For this reason, the scheme will support the deployment of state-of-the-art mobile networks based at least on LTE technology². Supported mobile networks in the target areas must reach data transmission rates of at least 50 Mbps per antenna sector at the antenna³ and guarantee a latency below 150 milliseconds. Other wireless mobile solutions will not be supported under the scheme.
- (5) The support will be granted by the Bavarian government from the regional Bavarian budget in the form of direct grants. The duration of the support scheme is foreseen to end on 31 December 2022.
- (6) The scheme will provide support exclusively in mobile coverage gaps. This concerns approximately 0.5% of all Bavarian households.
- (7) Supported infrastructure will not be taken into account to meet the coverage obligations arising for Mobile Network Operators ("MNOs") out of spectrum licence conditions and will therefore not be reported as such to the Federal Network Agency (*Bundesnetzagentur*). All MNOs using the supported infrastructure must make a commitment in this regard and confirm it in writing to the Bavarian government. This written confirmation will be sent together with a documentation of (i) the current situation and (ii) the planned situation following construction of the passive infrastructure and activation of stations to the Federal Network Agency (*Bundesnetzagentur*).
- (8) Funding under the scheme must lead to a significant improvement⁴ of mobile coverage. One and the same area may receive funding only once under this scheme. Operation of the passive infrastructure will be guaranteed for at least seven years before it can be sold. Funding may only be granted for projects that have not yet started or that were not already planned to be started.

¹ Passive infrastructure includes e.g. the mast, the foundation, the electricity connection, ducts and access routes. In contrast, antenna systems and other active infrastructure, dark fibre as well as the costs for the acquisition of land or land lease costs can not be supported.

² Long-Term Evolution (LTE) is a standard for high-speed wireless communication for mobile devices and data terminals, developed by the 3GPP (3rd Generation Partnership Project).

³ Data transmission rates at the final consumer may be significantly lower due to the fact that mobile communications networks are "shared media".

⁴ "Significant improvement" means that mobile services will be provided in an area that did not have any mobile coverage so far.

- (9) A long and broad discussion on the introduction of a support programme to close mobile coverage gaps in Bavaria has taken place in public as well as in the Bavarian Parliament prior to the notification of the scheme. To this end the Bavarian government has also issued press releases⁵ communicating details about the planned support scheme to the wider public. All three MNOs currently active in Germany, i.e. Telefónica Germany, Deutsche Telekom and Vodafone Germany, which offer at the same time fixed line telecommunication services, the local authorities' associations in Bavaria (*Gemeindetag, Landkreistag, Städtetag*), undertakings that are specialised in the construction and/or wholesale provision of passive infrastructure for public mobile communications as well as Bavarian trade associations had the opportunity to comment on the scheme. According to the German authorities, the scheme was considered useful and non-discriminatory and all respondents confirmed their willingness to contribute to its implementation. In some specific cases other technology solutions, in particular WIFI and satellite, had been proposed as substitutes for mobile networks in the discussion with local authorities but neither local authorities nor citizens or MNOs considered these technologies as alternatives to mobile networks. Moreover, despite the wide knowledge of the planned support scheme, operators offering other overlapping technologies, such as WIFI and satellite, have raised no concerns as regards the appropriateness of the initiative or the potential crowd-out of private investments. The German authorities committed to verify before the implementation of the scheme that there are no other overlapping technologies which could be affected in the targeted areas.

2.2. Investment and business model

- (10) The scheme provides for two alternative support options:

2.2.1. Lease option

- (11) The state of Bavaria may support local authorities (i.e. municipalities or inter-municipal co-operations if they are organised as legal entities under public law) in the construction of passive infrastructure to be used by MNOs.⁶
- (12) In this support option, the local authorities may either build the passive infrastructure themselves (or put the construction out to tender) allowing all interested MNOs to subsequently lease that passive infrastructure from the local authorities⁷ or they may decide to put the construction and operation of the passive infrastructure out to tender as a public works concession allowing all interested MNOs to subsequently lease that infrastructure from the concession-holder.

⁵ Bayerisches Staatsministerium für Wirtschaft, Energie und Technologie, Pressemitteilung vom 17.11.2017, available at <https://www.stmwi.bayern.de/presse/pressemitteilungen/pressemitteilung/pm/187-2017/>; Bayerische Staatskanzlei, Pressemitteilung vom 09.01.2018, available at <http://bayern.de/wp-content/uploads/2018/01/180109-ministerrat.pdf>.

⁶ Use of the subsidized infrastructure for other purposes (e.g. the provision of fixed telephony or fixed broadband access services) is not covered by the current Decision.

⁷ In that case the local authorities would consult all interested MNOs already beforehand in order to identify the best location for the required passive infrastructure and to use the planning data of these MNOs accordingly.

2.2.2. Shared use of existing masts option

- (13) The state of Bavaria may support MNOs in upgrading existing masts owned by the state of Bavaria and used only by authorities and organisations with security responsibilities (e.g. police radio networks) in order to enable MNOs to use these masts as part of their mobile networks.
- (14) In both cases, the lease option and the shared use of existing masts option, MNOs will bear the costs of installing any active equipment, the data connections between the supported passive infrastructure and the infrastructure owned by the network providers using the newly established passive infrastructure, the electricity and the maintenance of the active equipment⁸.

2.3. Beneficiaries

- (15) The direct beneficiaries of the measure are (i) Bavarian municipalities or inter-municipal co-operations if they are organised as legal entities under public law, (ii) concession holders and (iii) MNOs. Since mobile services will be made available to local population, indirect beneficiaries will also be business customers, as well as mobile virtual network operators ("MVNOs") using the public infrastructure.

2.4. Budget and amount of State aid

- (16) The overall budget of the scheme amounts to €85 million. €5 million may be granted still in 2018. As from 2019 the scheme provides for annual budgets of €20 million.
- (17) The maximum intensity of the aid provided by the state of Bavaria under the scheme is, as a general rule, limited at 80% of the eligible costs⁹. However, if a local authority is located in a region with particular need for action¹⁰ the maximum intensity of the aid provided by the state of Bavaria may be increased to 90% of the eligible costs. The remaining funds will be provided, as the case may be, by either the local authority, the concession-holder, the MNO renting the newly established passive infrastructure or any other third party.

⁸ The maintenance costs of the passive infrastructure will be borne by the MNOs or the concession holders (in the case of the lease option) and the State of Bavaria (in the case of the shared use of existing masts option).

⁹ Eligible costs are all expenses necessary for the construction or upgrading of the passive infrastructure (active equipment and data connections between the supported passive infrastructure and the infrastructure owned by the MNOs using the newly established passive infrastructure excluded). Any VAT paid by network providers for the upgrading of existing passive infrastructure forms part of the eligible costs only insofar as such VAT paid cannot be deducted from input tax. The revenue surplus of local authorities from letting the passive infrastructure to MNOs over a period of seven years has to be deducted from the eligible costs.

¹⁰ The term "region with particular need for action" (*Region mit besonderem Handlungsbedarf*) comes from the Bavarian Ordinance on the Regional Development Programme (*Verordnung über das Landesentwicklungsprogramm*) and is defined there. A list of all Bavarian municipalities currently falling within this category can be consulted at: https://www.landesentwicklung-bayern.de/fileadmin/user_upload/landesentwicklung/Dokumente_und_Cover/Instrumente/LEP_Lesefassung_2018/LEP_Stand_2018_Ergaenzendes_Material_-_RmbH.pdf.

- (18) The maximum amount of support for each local authority is, as a rule, €500 000.¹¹ In the case of support for inter-municipal co-operations this maximum amount increases by €50 000 for each participating municipality. Projects with eligible costs of less than €25 000 will not be supported.
- (19) Funding under the scheme can be combined with funding under other schemes at federal level or at EU level. In these cases funding by the state of Bavaria under the current scheme will be reduced to the extent necessary for keeping the cumulative aid intensity at maximum 80% (or 90%, if applicable) of the eligible costs.
- (20) Co-financing by third parties, in particular by private companies, is admissible and welcomed. However, the beneficiary's own contribution must in all cases reach at least 10% of the eligible costs.

2.5. Mapping of the target areas and public consultation

- (21) Any funding under the scheme will be based, as a starting point, on a map of mobile coverage in Bavaria. The map has been published by the Bavarian Ministry for Economic Affairs, Energy and Technology on their website (www.mobilfunk.bayern).
- (22) This map identifies all mobile coverage gaps in Bavaria, i.e. areas in which no MNO offers mobile services. These areas, identified in the map as mobile coverage gaps, constitute potential target areas of the scheme. The determination of the final target areas for mobile network development will be done by the Bavarian government only after conclusion of corresponding market consultations.
- (23) Local Bavarian authorities with mobile coverage gaps in their territories, as identified by the map of mobile coverage in Bavaria, can declare their interest in receiving support under the scheme online at www.mobilfunk.bayern.¹²
- (24) On the basis of the submitted declarations of interest by local Bavarian authorities in receiving support under the scheme, the Bavarian government will initiate market consultations for the territory of each local authority that has expressed their interest in receiving support under the scheme. All market consultations will be initiated via the central online portal on the above-mentioned website. In the framework of these market consultations, all MNOs, wholesale providers of passive infrastructure for public mobile communications (jointly referred to as "mobile network providers") and any other interested party will be invited to comment and be requested to inform the Bavarian government within three months of their development plans in the mobile coverage gaps of these territories in the three coming years starting from the date of the initiation of the relevant market consultation. MNOs, in particular, are expected to outline their potential plans concerning the development of a mobile network.

¹¹ The Bavarian Ministry for Economic Affairs, Energy and Technology may grant permission to exceed this limit in exceptional situations.

¹² This declaration contains the pledge by all municipalities concerned to contribute to the provision of the technically most suitable and cost-effective locations.

- (25) In case no such development is planned, MNOs will be requested to indicate further which locations would be best suitable for passive infrastructure in order to close existing mobile coverage gaps and what would be the costs to be expected for each location.
- (26) Local authorities will be informed about the outcome of the market consultation concerning their territory.

2.6. Competitive selection procedure

2.6.1. Lease option

- (27) Local authorities supported under the lease option will conduct transparent and non-discriminatory public procurement procedures in accordance with the applicable public procurement rules either for the construction of the passive infrastructure or for a public works concession that comprises planning, construction and operation of the passive infrastructure. In both cases, the newly constructed passive infrastructure will be owned by the supported local authorities for at least seven years. The supported passive infrastructure will be designed in such way that it can be used by all interested mobile communications network providers.

2.6.2. Shared use of existing masts option

- (28) The Bavarian government will publish a notice asking MNOs to express their interest in sharing the use of existing masts owned by the state of Bavaria and used only by authorities and organisations with security responsibilities. Those MNOs that do express their interest in response to the published notice will be invited to bid for the shared use of the masts.
- (29) In their bids, MNOs will specify the static requirements and technical specifications for upgrading the masts in question. The MNO in charge of the upgrade will be chosen by the Bavarian government in a transparent and non-discriminatory public procurement procedure in accordance with the applicable public procurement rules.
- (30) The upgraded masts will remain in the ownership of the state of Bavaria. The upgrade must make possible their use by all MNOs.

2.6.3. Economically most advantageous offer

- (31) Local authorities take care that selected locations for new passive infrastructure are suitable to as many MNOs as possible since the possibility to use the passive infrastructure will be simultaneously offered to all three MNOs under equal conditions.
- (32) The MNO offering the economically most advantageous offer will be selected. The upgrade must make possible data transmission rates of at least 50 Mbps per antenna sector at the antenna and latency not above 150 milliseconds.

2.7. Use of existing infrastructure

- (33) All existing mobile masts in Germany can be viewed from the Federal Network Agency's (Bundesnetzagentur) site data base at

<http://emf3.bundesnetzagentur.de/karte/>. Mobile network providers will indicate any new passive infrastructure planned within the coming three years in the framework of the market consultations carried out by the Bavarian government¹³. The state of Bavaria wants to use the existing infrastructure of masts used by its security authorities to the extent possible.

2.8. Wholesale access

- (34) Access to the supported passive infrastructure will be open to all interested MNOs and will be designed to be used by all MNOs active on the German market. All MNOs may lease the passive infrastructure under fair and non-discriminatory conditions from either the local authorities, the concession-holders or, as the case may be, the state of Bavaria. Local authorities will contractually oblige concession-holders in this regard. In case of a sale of the passive infrastructure after expiry of the earmarking period of seven years, in the lease option, the sales contract will include an obligation on the buyer to allow for continued non-discriminatory leasing of the passive infrastructure also in the future.
- (35) The Commission further notes that Germany has transposed Directive 2014/61/EU¹⁴ into German law¹⁵, and in particular its Articles 3(2) and 3(4) which ensure that any network operator, within the meaning of that Directive, will meet all reasonable requests for access to its physical infrastructure under fair and reasonable terms and conditions, including price, with a view to deploying elements of high-speed electronic communications networks and that disputes regarding access to such physical infrastructure can be referred to the competent national dispute settlement body.¹⁶

2.9. Wholesale access pricing

- (36) The exact rental fee to be paid by MNOs will for each project be subject to negotiation between the MNOs and the local authorities/concession-holders/state of Bavaria and may therefore be different for each project. However, interested MNOs will always pay the same rental fee for each location. That is to say, whilst rental fees may be different for different locations, they are always equal for all interested MNOs.

2.10. Claw-back and monitoring mechanism

- (37) The correct use of the funds will be monitored by the Bavarian government. In case of improper use of the funds those funds will be recovered in accordance with the general principles of administrative law.

¹³ See above in section 2.5.

¹⁴ Directive 2014/61/EU of the European Parliament and of the Council of 15 May 2014 on measures to reduce the cost of deploying high-speed electronic communications networks, OJ L 155, 23.5.2014, p. 1.

¹⁵ Gesetz zur Erleichterung des Ausbaus digitaler Hochgeschwindigkeitsnetze (DigiNetzG) vom 4. November 2016, Bgbl. 2016 Teil I Nr. 52, S. 2473.

¹⁶ Cf. Sections 77d(1) and (2) and 77n(1) of the Telekommunikationsgesetz (TKG) vom 22. Juni 2004.

- (38) The Bavarian government will monitor in particular the tendering processes and the construction of the passive infrastructure as well as the improvement of the mobile coverage in the target areas concerned.
- (39) Finally, the state of Bavaria will implement a claw-back mechanism with regard to concession-holders who build and operate supported passive infrastructure under public works contracts with local authorities that will be applicable to projects with eligible costs of €1 million or more.
- (40) The claw-back mechanism will be linked to unanticipated gains by the concession-holders which are obliged to present to the local authorities as part of their bid in the competitive selection process sufficient information regarding expected gains from their activities as concession-holders. If, after seven years, the actual gains of concession-holders exceed the expected gains by more than 30%, the excessive gains have to be paid to the respective local authority.

2.11. National Regulatory Authority

- (41) The Federal Network Agency (*Bundesnetzagentur*) has been informed of the planned support scheme and was given the possibility to comment on it but did not submit any comments by the time the measure was notified.

3. ASSESSMENT OF THE MEASURE:

3.1. Existence of aid

- (42) According to Article 107(1) of the Treaty on the Functioning of the European Union (TFEU), "[s]ave as otherwise provided in the Treaties, 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."
- (43) It follows that in order for a measure to qualify as State aid, the following cumulative conditions have to be met: (i) the beneficiary of the measure has to be an 'undertaking', (ii) the measure has to be granted through State resources and be imputable to the State, (iii) the measure has to confer an economic advantage, (iv) which is selective, (v) and has an effect on trade and competition.

3.1.1. Undertaking

- (44) Undertakings within the meaning of Article 107(1) TFEU are entities engaged in an economic activity, regardless of their legal status and the way in which they are financed.¹⁷
- (45) Depending on the support option used, the direct beneficiaries of the scheme are local authorities or concession holders (lease option) and MNOs (shared use of existing masts option).

¹⁷ Judgment of the Court of Justice of 10 January 2006, *Cassa di Risparmio di Firenze SpA and Others*, C-222/04, ECLI:EU:C:2006:8, paragraph 107.

- (46) Under the lease option, local authorities will receive public funds in order to establish passive infrastructure for mobile networks, which they will own and let to all interested MNOs or make available to a selected concession-holder under a concession contract. The concession-holder will let it to MNOs. The construction of passive infrastructure for mobile networks with a view of its future commercial exploitation constitutes an economic activity. In that role, the local authorities and the concession-holders are thus considered undertakings within the meaning of Article 107(1) TFEU.
- (47) Under the shared use of existing masts option, a selected MNO will receive public funds for upgrading existing masts owned by the state of Bavaria in order to allow those masts to be used for the provision of mobile services to end users on a commercial basis, which equally constitutes an economic activity. Those selected MNOs are thus likewise considered undertakings within the meaning of Article 107(1) TFEU.

3.1.2. *State resources and imputability*

- (48) State resources include all resources of the public sector¹⁸, including resources of intra-State entities (decentralised, federated, regional or other)¹⁹ and, under certain circumstances, resources of private bodies. In cases where a public authority grants an advantage to a beneficiary, the measure is by definition imputable to the State, even if the authority in question enjoys legal autonomy from other public authorities.
- (49) In the case at hand the measure is financed by the government of the state of Bavaria, an intra-State entity and public authority at regional level. The measure at stake is therefore considered to be granted through State resources and to be imputable to Germany.

3.1.3. *Economic advantage*

- (50) An advantage, within the meaning of Article 107(1) TFEU, is any economic benefit which an undertaking could not have obtained under normal market conditions, that is to say in the absence of State intervention.²⁰
- (51) Supported local authorities, concession-holders and MNOs will be granted a direct investment in the amount of up to €500 000 (as a general rule) for the establishment of new passive infrastructure or of up to 80% of the eligible costs of upgrading existing masts owned by the state of Bavaria. This enables MNOs as well as local authorities and concession-holders as operators of the new passive infrastructure to provide services in the target areas on conditions that would otherwise not be available.

¹⁸ Judgment of the General Court of 12 December 1996, *Air France v Commission*, T-358/94, ECLI:EU:T:1996:194, paragraph 56.

¹⁹ Judgment of the General Court of 6 March 2002, *Territorio Histórico de Álava and Others v Commission*, Joined Cases T-92/00 and 103/00, ECLI:EU:T:2002:61, paragraph 57.

²⁰ Judgment of the Court of Justice of 29 April 1999, *Spain v Commission*, C-342/96, ECLI:EU:C:1999:210, paragraph 41.

- (52) It is hence considered that local authorities, concession-holders and MNOs supported under the scheme are granted an advantage by the state of Bavaria which would not have occurred in normal market conditions.

3.1.4. Selectivity

- (53) To fall within the scope of Article 107(1) TFEU, a State measure must favour 'certain undertakings or the production of certain goods'. In the case at hand the measure is aimed at local authorities in Bavaria with mobile coverage gaps in their territories as well as at MNOs in Germany, i.e. currently Telefónica Germany, Deutsche Telekom and Vodafone Germany, and the potential concession holders, such as, for instance, wholesale providers of passive infrastructure for public mobile communications and special construction companies, as the only potential recipients.
- (54) The measure thus targets
- (i) only undertakings that are active in the telecommunications industry and, more particular, MNOs, to the exclusion, in principle, of other electronic communications network and service providers, such as, e.g. satellite and fixed line communications operators, when these cannot provide the full mobility services;
 - (ii) undertakings that are specialised in the construction and/or wholesale provision of passive infrastructure for public mobile communications, to the exclusion of other construction companies active rather in the general industrial or other sectors of the construction industry.
- (55) Furthermore, the measure does not concern general infrastructure which would be open on a non-discriminatory basis to anyone but is limited to infrastructure used for the provision of mobile services.
- (56) As concerns the identification of the particular legal framework against which selectivity can be assessed, it is noted that the construction and operation of passive infrastructure for mobile networks is a liberalised economic activity usually conducted by commercial operators on the basis of private investments in the market. In such a framework, economic activities normally do not receive subsidies.
- (57) In the context of this particular legal regime the measure has the effect of conferring an advantage on the above-mentioned MNOs and specialised construction companies or wholesale providers of passive infrastructure for public mobile communications over other companies in the electronic communications market and construction industry, respectively, which are, in the light of this legal regime, in a comparable factual and legal situation.
- (58) This advantage cannot be justified on the basis of the framework system since the outcome of the market consultations (see above in section 2.5.) identifies the target areas of the support scheme as areas where no company wants to make an investment in passive infrastructure for mobile networks.
- (59) The measure is therefore selective.

3.1.5. *Effect on trade and competition*

- (60) As regards the construction of infrastructure, the Commission considers that an effect on trade between Member States or a distortion of competition is normally excluded in cases where at the same time (i) an infrastructure typically faces no direct competition, (ii) private financing is insignificant in the sector and Member State concerned and (iii) the infrastructure is not designed to selectively favour a specific undertaking or sector but provides benefits for society at large.
- (61) The present case concerns the development of passive infrastructure to be used for the provision of mobile services in areas in the state of Bavaria without any mobile coverage. When looking at the mobile communications sector in Germany in general, it must be concluded that there is significant private financing of the development of passive infrastructure for the provision of mobile services all over the country.
- (62) Furthermore, the intervention of the state of Bavaria alters the existing market conditions by making possible the provision of mobile services. A number of citizens and companies located in the aid scheme's target areas may subscribe to the services provided by MNOs to the detriment of other potential market-based solutions, such as local wireless access and satellite communications services. Therefore, there is a potential distortion of competition.
- (63) Besides, the markets for electronic communications networks and services are open to competition between operators, which generally engage in activities that are subject to trade between Member States. Two of the three MNOs in Germany belong to groups of companies with headquarters in another Member State. Furthermore, if a local authority decides to tender a public works contract or grant a concession, the construction and operation of the passive infrastructure may be delivered by a company from another Member State having cross border activities.
- (64) It must therefore be considered that the support scheme in question is capable of distorting competition and has an effect on trade between Member States.

3.1.6. *Conclusion*

- (65) The Commission concludes that the notified support scheme constitutes State aid within the meaning of Article 107(1) TFEU.

3.2. **Compatibility**

- (66) According to the EU Guidelines for the application of State aid rules in relation to the rapid deployment of broadband networks²¹ and in line with earlier Commission decision-making practice²², all currently available mobile networks are considered basic broadband networks. Therefore, the Commission has assessed the compatibility of the scheme pursuant to Article 107(3)(c) TFEU and

²¹ Communication from the Commission - EU Guidelines for the application of State aid rules in relation to the rapid deployment of broadband networks, OJ C 25, 26.1.2013, p.1(hereafter the "Broadband Guidelines").

²² See e.g. SA.39089 & SA.39090, *Mobile telephony in mountainous areas of Bolzano (Favogna, Mazia, Alpe Guazza and Passo Rombo) - Italy*, point (42).

in analogue application of the Broadband Guidelines, where appropriate. The Broadband Guidelines contain a detailed interpretation of Article 107(3)(c) TFEU in this area of State aid law.

- (67) In the assessment under Article 107(3)(c) TFEU the Commission ensures that the positive impact of the aid measure in reaching an objective of common interest outweighs its potential negative side effects, such as distortions of trade and competition. This exercise is conducted in two steps.
- (68) First, every aid measure has to comply with the below necessary conditions. Failure to comply with one of the following conditions will result in declaring the aid incompatible with the internal market.
- Contribution to the achievement of objectives of common interest;
 - Absence of market delivery due to market failures or important inequalities;
 - Appropriateness of State aid as a policy instrument;
 - Existence of incentive effect;
 - Aid limited to the minimum necessary;
 - Limited negative effects
 - Transparency.
- (69) Second, if all necessary conditions are met, the Commission balances the positive effects of the aid measure in reaching an objective of common interest against the potential negative effects.

3.2.1. Contribution to the achievement of objectives of common interest

- (70) The supply of mobile voice and data services forms part of the fundamental needs of a modern society. That is why the objectives of common interest pursued by the Commission in its Digital Single Market Strategy²³ include the promotion of access to, and take-up of, both fixed and wireless high speed and very high speed broadband connectivity by all Union citizens and businesses. It is the Commission's ambition that there should be access to mobile services throughout the territory, in all places where people live, work, travel and gather.²⁴
- (71) Many Europeans own a smartphone but cannot use its full potential because of major gaps in mobile coverage or poor service quality.

²³ Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions – A Digital Single Market Strategy for Europe, COM(2015) 192 final.

²⁴ Cf. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions – Connectivity for a Competitive Digital Single Market: Towards a European Gigabit Society, COM(2016) 587 final.

- (72) This holds true also for the aid scheme's potential target areas as identified in the map of the Bavarian Ministry for Economic Affairs, Energy and Technology.²⁵ People living, working or travelling in these areas of Bavaria currently do not have access to ubiquitous mobile services, which causes complications in nearly all areas of society and the economy. For instance, mobile coverage gaps pose obstacles to the work of emergency doctors who regularly have to use their mobile phones when in the car. The abrupt termination of telephone conversations when driving into an area without mobile coverage can have serious consequences for patients. Other examples include cardiac pacemakers, which can nowadays be digitally monitored, provided they are reliably connected to the internet. Without access to mobile services, the functionality of emergency services in case of road accidents or accidents in remote areas (such as mountains) may be affected.
- (73) The Commission acknowledges that by providing financial support for the construction of passive infrastructure for mobile networks to be used by MNOs in areas where such networks are currently not available, the Bavarian government pursues genuine objectives of common interest as stipulated in the Digital Single Market Strategy, the Radio Spectrum Policy Programme²⁶ and the Digital Agenda for Europe as well as in the communication Connectivity for a Competitive Digital Single Market: Towards a European Gigabit Society.
- (74) At the same time, the notified aid scheme has the potential to reduce regional inequalities and the digital divide. Uniformity of living conditions is a major objective of German and Bavarian public policy. Likewise it is an objective of the Union's regional policy to have a European Union where people in all regions can realise their full potential and can work on a lasting improvement in the economy and quality of life for everybody, wherever they live.

3.2.2. *Absence of market delivery due to market failures or important inequalities*

- (75) A market failure exists if markets, left to their own devices, without intervention fail to deliver an efficient outcome for society. This may arise, for instance, when certain investments are not being undertaken even though the economic benefit for society exceeds the cost.
- (76) The three MNOs currently active on the German market do not find it profitable to invest in remote or less densely populated areas of Bavaria where potential demand is low.
- (77) However, such investment would be very beneficial for society, bringing economic benefits as it would help to provide a significant amount of Bavarian households (up to 0.5%) who currently do not have any mobile coverage with mobile telephony and data transmission services. The areas concerned would become interesting for enterprises and economic activity, too. Finally, the problems posed, amongst others, by the lack of a mobile service in emergency situations would equally be reduced.

²⁵ See above at para. (21).

²⁶ See fn. 30.

- (78) Yet, it has to be considered that all households and businesses in the aid scheme's target areas do already have fixed telephone connections and also basic broadband access via these fixed telephone lines.
- (79) As far as mobile voice services are concerned, the mere existence of fixed telephone lines in the aid scheme's target areas does not imply that there is no market failure or no important inequalities.
- (80) Future applications of the Gigabit society rely heavily on a powerful mobile infrastructure that is available on a balanced geographical basis. At the same time, the closure of mobile voice services gaps constitutes a general objective of infrastructure policy in the EU. The closure of mobile voice services gaps does therefore bring along significant economic benefits for society regardless of whether or not fixed telephone lines already exist in the respective areas.
- (81) As regards mobile data services, not all users of broadband can be adequately served with only fixed broadband networks in their homes. As mentioned above for mobile voice services, existing and future applications of the Gigabit society rely heavily on a powerful mobile infrastructure that is available on a balanced geographical basis. New forms of economic activity and ways of working require mobile data services. In the aid scheme's target areas, such needs currently cannot be satisfied. This applies for the households and businesses (such as farming) located in these areas but in particular also for citizens and business users who travel through or stay in these areas temporarily.
- (82) It can therefore be concluded that the notified measure addresses a market failure in sparsely populated and topographically difficult parts of Bavaria where MNOs will not invest in establishing passive infrastructure for the provision of mobile networks and services that would be required for closing the existing mobile coverage gaps. By subsidising the construction of such passive infrastructure, the notified aid scheme has the potential to lower barriers of entry in these geographical markets and to foster competition.

3.2.3. *Appropriateness of State aid as a policy instrument and the design of the measure*

- (83) So that the aid measure is properly designed, it is required that State aid is an appropriate policy instrument to address the problem. Alternative instruments include ex ante regulation and demand-side measures.
- (84) Regulatory measures to promote further mobile coverage of the German territory have been put in place at the occasion of recent spectrum auctions. The spectrum auction in 2015 provided for coverage requirements that need to be fulfilled by 31 December 2019. Network providers who have been assigned spectrum need to assure that 98% of all German households will be served with 4G by that date, including at least 97% of households in each state. Compliance with these conditions will however not provide full geographical coverage.
- (85) Hence, meeting the coverage requirements resulting from spectrum licence awards will not close all mobile coverage gaps in Bavaria as up to 3% of all Bavarian households will not be served with 4G coverage still on 1 January 2020, including the 0.5% of Bavarian households without any mobile communications coverage to date. MNOs have confirmed that they are not planning to invest in the

construction of the passive infrastructure for mobile communications equipment that would be required to provide mobile services in the aid scheme's potential target areas.

- (86) Since the problem of mobile coverage gaps in the scheme's potential target areas will most probably remain even after fulfilment of all existing regulatory coverage requirements by MNOs, the aid scheme seems to be an appropriate tool in order to reduce the number and size of mobile communications gaps in Bavaria.
- (87) Furthermore, the aid scheme stipulates that MNOs must not report subsidized infrastructure to the Federal Network Agency (*Bundesnetzagentur*) under their coverage obligations arising out of their spectrum licence conditions. To this end, all MNOs using infrastructure supported under the aid scheme must make a commitment to not report that infrastructure under their coverage obligations and confirm their commitment in writing to the Bavarian government. This written confirmation will be sent together with a documentation of (i) the current situation and (ii) the planned situation following construction of the passive infrastructure and launch of the station, to the Federal Network Agency (*Bundesnetzagentur*). This mechanism ensures that the aid scheme will in fact complement the existing mobile coverage which results from the coverage spectrum licence obligations imposed on MNOs.
- (88) As regards demand-side measures, these are not appropriate means to solve the problem as the required passive infrastructure in the potential target areas does not yet exist and its construction would not be profitable for network providers due to the low population density in these areas.
- (89) The Commission therefore considers the aid scheme to be an appropriate policy instrument for closing mobile coverage gaps in the state of Bavaria.

3.2.4. *Existence of incentive effect*

- (90) It needs to be examined whether the network investment concerned would not have been undertaken within the same time frame without any State aid.
- (91) The three MNOs active on the German market confirmed that they are not planning to invest in passive infrastructure for mobile communications equipment in the scheme's potential target areas during the next three years as such investment would not be profitable for them. Also, the design of the scheme ensures that MNOs may not report the supported infrastructure under their obligations arising from their licence conditions.
- (92) The Commission therefore considers the aid scheme to have an incentive effect.

3.2.5. *Aid limited to the minimum necessary*

- (93) In assessing the proportional character of the notified measure, the Commission has highlighted a number of necessary conditions to minimise the State aid involved and the potential distortions of competition.

3.2.5.1. Detailed mapping and analysis of coverage

- (94) It should be clearly identified which geographic areas will be covered by the support measure.
- (95) The scheme will provide support exclusively in public mobile communications network "dead zones". All potential target areas have been identified in a map displaying the mobile coverage in Bavaria (see at www.mobilfunk.bayern). The final target areas will be identified following market consultations in territories of local authorities who have expressed their interest in receiving funding under the scheme in the framework of which MNOs will inform the Bavarian government about possible locations for passive infrastructure.²⁷
- (96) The Commission considers this to be sufficient to clearly identify which geographic areas will be covered by the support measure.

3.2.5.2. Public consultation

- (97) It should also be given adequate publicity to the main characteristics of the measure and to the list of target areas by publishing the relevant information of the project and inviting to comment.
- (98) The main characteristics of the aid scheme have been made available to all three MNOs currently active in Germany, i.e. Telefónica Germany, Deutsche Telekom and Vodafone Germany, which offer at the same time fixed line telecommunication services, the local authorities' associations in Bavaria (*Gemeindetag, Landkreistag, Städtetag*), undertakings that are specialised in the construction and/or wholesale provision of passive infrastructure for public mobile communications as well as Bavarian trade associations who all had the opportunity to comment on the scheme. According to the German authorities, the scheme was considered useful and non-discriminatory and all respondents confirmed their willingness to contribute to its implementation. In some specific cases other technology solutions, in particular WIFI and satellite, had been proposed as substitutes for mobile networks in the discussion with local authorities but neither local authorities nor citizens or MNOs considered these technologies as alternatives to mobile networks. Moreover, despite the wide knowledge of the planned support scheme, operators offering other overlapping technologies, such as WIFI and satellite, have raised no concerns as regards the appropriateness of the initiative or the potential crowd-out of private investments. The German authorities further committed to verify before the implementation of the scheme that there are no other overlapping technologies which could be affected in the targeted areas.
- (99) Moreover, a long and broad discussion on the introduction of a support programme to close mobile coverage gaps in Bavaria had taken place in public prior to the notification of the scheme (see above at para. 9 for more details).
- (100) With a view to the final target areas, these will be published on the central online portal www.mobilfunk.bayern as a result of the market consultations that will be carried out as explained above.

²⁷ See also above in section 2.5.

(101) Since all potential target areas are known already before such market consultations, the Commission considers this approach to be sufficient to ensure proper publicity.

3.2.5.3. Competitive selection process and most economically advantageous offer

(102) A competitive selection process should ensure that there is transparency for all investors wishing to bid for the implementation/and or management of the subsidized projects and the aid granting authority shall establish qualitative award criteria on which the submitted bids are assessed.

(103) In the lease option of the aid scheme, the direct beneficiaries of the aid can be local authorities which are not chosen by way of a competitive selection process. However, the Commission considers that the requirements of the Broadband Guidelines²⁸ are fulfilled as (i) local authorities as the owners of the supported passive infrastructure for mobile networks limit their activities on the predefined target areas and do not expand to other commercially attractive regions, (ii) local authorities limit their activities to maintaining the passive infrastructure (or even transfer responsibility in this regard to MNOs or the concession-holders) and to grant access to it, but do not engage in competition on the retail level with the MNOs, and (iii) local authorities have an accounting separation between the funds used for the operation of the passive infrastructure and the other funds at their disposal.

(104) The passive infrastructure supported by the aid scheme under the lease option will be accessible and offered for lease to all MNOs active in Germany on fair and non-discriminatory conditions. For the details it is referred to section 2.6. above.

(105) In the shared use of existing masts option of the aid scheme, the network provider for the upgrading will be chosen in a fair, transparent and non-discriminatory selection procedure in line with the applicable rules on public procurement.²⁹

(106) The Commission considers the requirements with regard to the competitive selection process and the most economically advantageous offer fulfilled.

3.2.5.4. Technological neutrality

(107) The aid scheme aims to ensure the availability and use of mobile services in currently uncovered areas in Bavaria where none of the three MNOs active in Germany is planning to invest in the required passive infrastructure.

(108) As compared to other possible wireless networks, LTE based mobile networks offer a superior performance for the combination of the essential qualitative criteria of voice and data transmission as well as unrestricted mobility. Namely, the LTE technology fulfils the following requirements: (i) it enables operators to provide services of advanced voice communication and high-speed (Gb/s) data transmission, (ii) it allows the use of a single device widely available for receiving both types of services, (iii) it allows a wider range of roaming

²⁸ Cf. footnote 96 of the Broadband Guidelines.

²⁹ Cf. section 2.6. above.

possibilities and (iv) it can operate on the basis of increasingly more available (also re-farmed) spectrum allocations.³⁰

- (109) In addition to that, one important objective of the aid scheme is to close existing mobile network coverage gaps with the envisaged high performance. This can be achieved in the most cost-efficient way by using LTE.
- (110) As regards other possible technologies, these seem generally not to be able to offer an access equivalent in terms of its characteristics and quality to the access provided by mobile networks in view of the requirements of the Bavarian government.
- (111) Wireless WIFI technologies are, as a general rule, not equivalent as they do not provide full mobility. LTE technology networks offer much more coverage and wider reach than WIFI solutions, which force users to depend upon hotspots in each area and to switch after a short distance to another hotspot and possibly provider. With LTE technology on the other hand, users will be assured of seamless wide-area connectivity. In other words, whilst users would have to log in to a new WIFI network once they are leaving their current network, connectivity with LTE technology is not interrupted when moving into another antenna sector.
- (112) WIFI networks are also inferior in terms of online security, which is particularly important for business users. Whilst LTE networks offer enhanced privacy, security, and safety, WIFI solutions cannot offer this, especially not on mobile devices. Finally, WIFI solutions have a much higher latency and varying quality of the services offered.
- (113) As regards satellite technology solutions, whilst being a full mobile solution from the technological point of view³¹, satellite technology has become in practice rather a substitute for fixed-line telecommunications services since the devices are of larger size and weight than mobile devices which makes them unsuitable for the use as mass market mobile device in the gigabit society. Moreover, in addition to their much higher latency, mobile satellite services and devices are generally also much more expensive than LTE services and devices which raises issues of affordability.
- (114) In light of the above considerations and taking into account the geographical, economic and demographic context in which the measure will be implemented as well as the specific features sought after against the background of an approaching gigabit society, the Commission considers mobile communications technology using LTE technology for data transmission services to be the only suitable technological solution pending the deployment of more advanced mobile network solutions. In any event, the German authorities committed to check

³⁰ The envisaged deployment of LTE corresponds to the requirement laid down in Article 6(3) of the Commission's Radio Spectrum Policy Programme (Decision No 243/2012/EU of the European Parliament and of the Council of 14 March 2012, establishing a multiannual radio spectrum policy programme, OJ L 81, 21.3.2012, p.7) to foster network upgrades to the latest most efficient technology.

³¹ Mostly used in areas not covered by mobile communications services, for example on oceans, in deserts and other regions without human settlement.

before executing any support plan that there is no operator of alternative technologies, such as WiFi or satellite, which could be affected by the scheme.

3.2.5.5. Use of existing infrastructure

- (115) It should be encouraged to have recourse to any existing infrastructure so as to avoid unnecessary and wasteful duplication of resources and to reduce the amount of public funding.
- (116) As it is explained above in section 2.6.2., pursuant to point 7.4 of the aid scheme, the Bavarian government has to enquire from mobile network providers whether they are interested in sharing the use of existing masts owned by the state of Bavaria that are currently used only by authorities and organisations with security responsibilities. That enquiry will be done in parallel to the market consultations explained in more detail above in section 2.5., i.e. before the final determination of the target areas. The option of upgrading existing masts will thus be duly considered in each single project before a final decision is made.
- (117) The Commission considers that this approach allows for finding the best and most cost-efficient solution and for avoiding unnecessary duplication of infrastructure.

3.2.5.6. Wholesale access and pricing

- (118) Third parties should have effective wholesale access to a subsidised infrastructure and wholesale access prices should be made under market conditions.
- (119) As explained above in sections 2.8. and 2.9. all mobile network providers currently active in Germany will have fair and non-discriminatory access to the subsidized passive infrastructure. The rent for using the passive infrastructure is in all cases subject to negotiation with the respective lessor (local authority/concession-holder/state of Bavaria).
- (120) Any revenue surplus from the ongoing operation of the passive infrastructure (rental income minus current costs) over seven years in the case of a local authority renting the infrastructure out to MNOs is to be deducted from the aid amount.
- (121) The Commission considers this mechanism to be in line with the requirements in paragraph 78 (g) and (h) of the Broadband Guidelines.

3.2.5.7. Monitoring and clawback mechanism

- (122) Granting authorities shall closely monitor the implementation of aid schemes during the entire duration of the projects.
- (123) A claw-back mechanism is not necessary in case of publicly-owned, wholesale only infrastructures managed by local authorities with the sole purpose of granting fair and non-discriminatory access to all operators, in line with the Broadband Guidelines.³² Therefore, the state of Bavaria does not intend to apply a claw-back mechanism to local authorities owning supported passive infrastructure

³² See paragraph 78(i) and footnote 113 of the Broadband Guidelines.

and renting it out to MNOs or making it available to concession-holders under a public works concession.

- (124) However, the state of Bavaria will implement a claw-back mechanism with regard to concession-holders who build and operate supported passive infrastructure under public works contracts with local authorities that will be applicable to projects with eligible costs of €1 million or more.³³ For the details of this claw-back mechanism it is referred to section 2.10. above.
- (125) It will therefore be guaranteed that in larger projects concession-holders cannot generate unreasonably excessive profit by making use of the publicly funded passive infrastructure.
- (126) The Bavarian government will carry out an ongoing monitoring of the measure (see above at section 2.10).

3.2.5.8. Transparency and reporting

- (127) The competent Bavarian authorities shall publish on a central website at least the following information on the state aid scheme: the full text of the approved aid scheme and its implementing provisions, names of the aid beneficiaries, aid amounts, aid intensities and used technologies. Such information shall be published after the granting decision has been taken and shall be kept for at least ten years and shall be available for the general public without restrictions. Aid beneficiaries are obliged to provide entitled third parties with comprehensive and non-discriminatory access to information on their infrastructure deployed under the aid scheme.
- (128) Furthermore, for the duration of the aid scheme, the Bavarian government should consolidate key information on the individual aid projects and report every two years to the European Commission.³⁴
- (129) The government of the state of Bavaria has confirmed that these requirements regarding transparency and reporting will be respected.³⁵

3.2.6. *Limited negative effects*

- (130) It follows from the above assessment regarding market failure that the aid scheme does not crowd out any private investment. In particular, the aid is confined to areas in Bavaria that are characterized by mobile communications network gaps, i.e. areas without any mobile voice and mobile data services coverage.

³³ In order not to put a disproportionately high burden on small, local projects, the Broadband Guidelines consider a minimum threshold for the clawback mechanism as justified and refer to the amount of €10 million, see para. 78(i) of the Broadband Guidelines.

³⁴ Such information should at least include: besides the information already made public on the central website, the date when the supported infrastructure is put into use, the number of mobile network providers using it, the number of houses covered by the mobile communications networks, take-up rates.

³⁵ See point 9.3 of the Bavarian Mobile Communications Directive (*Richtlinie zur Förderung des Ausbaus der Mobilfunkversorgung im Freistaat Bayern – Mobilfunkrichtlinie – MFR*).

- (131) The subsidised passive infrastructure will enable the provision of competitive and affordable mobile services to end-users by competing mobile operators and bring about significant new mobile network capabilities in terms of availability and capacity.
- (132) By enabling all mobile operators active on the German market to offer their services in a competitive fashion, similarly to the profitable areas in other parts of the state of Bavaria, the notified measure avoids the creation of local monopolies which would result from use of the passive infrastructure by only one mobile services provider. The aid scheme therefore has pro-competitive effects.
- (133) In the light of these arguments, it can be concluded that negative effects of the aid scheme, if any, are limited.

3.2.7. *The overall balancing exercise*

- (134) A carefully designed State aid scheme should ensure that the overall balance of the effects of the measure is positive.
- (135) As a result of the aid scheme, local authorities in Bavaria will build passive infrastructure with a view to addressing persistent gaps in the deployment of mobile networks or MNOs will upgrade existing masts with the same effect. Such infrastructure would not be built or upgraded without the aid. The aid scheme will reduce the number of mobile communications "dead zones" in Bavaria and provide additional households and businesses in Bavaria with mobile coverage. This will reduce important inequalities in Bavaria. Moreover, the aid scheme contributes to the achievement of the Commission's ambition to provide access to mobile services, including mobile voice and broadband access throughout the EU territory, namely in all places where people live, work, travel and gather. This, in turn, contributes to the completion of the Digital Single Market.
- (136) As regards the data transmission services that will be enabled in the aid scheme's target areas, these promise the delivery of additional broadband access capacity that permits mobility of users on the market as well as better choice for consumers, higher quality and innovation. Hence, consumers' access to online resources in these areas will be strongly improved.
- (137) Furthermore, by granting access to the supported passive infrastructure to all MNOs that express an interest, the aid scheme aims at creating additional competition in the target areas. The overall impact on competition is deemed to be positive. The Commission cannot identify any negative effects on competition.
- (138) The overall balance of the effects of the aid scheme is positive.

4. CONCLUSION

The Commission has accordingly decided not to raise objections to the aid on the grounds that it is compatible with the internal market pursuant to Article 107(3)(c) of the TFEU.

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

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Yours faithfully
For the Commission

Margrethe VESTAGER
Member of the Commission