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Subject: SA.48190 (2017/N) – Germany – Support scheme for the acquisition of electric buses for urban public transport

Sir, /Madam,

1. PROCEDURE

- (1) By electronic notification dated 19 May 2017, the German authorities notified, according to Article 108(3) of the Treaty on the Functioning of the European Union ("TFEU"), a national scheme under which companies engaged in local bus transport in Germany can receive state support for the acquisition of battery-based electric or plug-in hybrid buses and for the cost to build the required recharging infrastructure.
- (2) By letter of 19 September 2017, the Commission asked the German authorities for additional information concerning the notified scheme. The Commission received the requested information by letter of 20 October 2017.

2. DETAILED DESCRIPTION OF THE SCHEME

2.1. Background, Scope and General Description

- (3) The planned support will be based on the *"Richtlinien zur Förderung der Anschaffung von Elektrobussen im öffentlichen Personennahverkehr"* of the German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety, the draft of which was submitted to the Commission (the "scheme").
- (4) Against the background of the Paris Climate Agreement, Germany has set itself the objective in the climate protection plan (*"Klimaschutzplan 2050"*) to reduce greenhouse gas emissions from transport by 40 to 42% compared to 1990 by 2030.

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The scheme serves as a basis to support the acquisition of plug-in hybrid buses and battery-based buses ("electric buses"¹) in public passenger transport (German "ÖPNV") to replace diesel buses.

- (5) The scheme has the objective to increase the number of electric buses in public transport in Germany. The supported projects are also expected to generally increase the interest in this technology and to thereby further strengthen its market presence. Concretely, the measure is expected to support the acquisition of least 100 to 150 electric buses across Germany. According to the German authorities, electric buses offer – if they are operated with electricity from renewable sources – the advantage of a full reduction of CO₂ emissions, of local pollutant emissions and noise reduction. The scheme is expected to support the conversion of entire bus fleets or bus lines. A specific focus is the use of electric buses in areas where air pollution thresholds are exceeded and where this is attributable to a significant extent to bus transport. The same applies to areas with high noise exposure. The measure is intended to contribute to the implementation of the German *Aktionsprogramm Klimaschutz 2020* and the *Klimaschutzplan 2050* with respect to the measures set out therein in the areas of alternative fuels/alternative propulsion in public transport and electric mobility.
- (6) Currently, approximately 36,000 buses are used in local public transport in Germany, the large majority of which are equipped with a diesel engine. The German Government submitted that currently the relevant bus operators only acquire a small number of electric buses for demonstration and test purposes as a consequence of the high acquisition cost. To comply with the national and European climate and environmental protection goals, it is necessary to operate entire bus fleets or at least bus lines with zero-emission or low emission vehicles. The German authorities argue that this cannot be achieved without state support.
- (7) According to the information provided by the German authorities, the proposed support of up to 150 electric buses will lead to a reduction of greenhouse gas emissions of up to approximately 10,000 t CO₂ equivalents annually. This is based on a reduction potential of 25,000 liters of diesel and thus 65 t CO₂ equivalents per year and bus.² The prospective electrification of 36,000 public transport buses alone would result in a reduction potential of approx. 2.5 million t CO₂ equivalents per year.

2.2. Aid Instrument

- (8) The aid is provided as a project-specific non-repayable investment grant.

2.3. Budget and Duration

- (9) The total budget of the measure is EUR 70 million. EUR 35 million will be made available at federal level from the National Climate Initiative ("*Nationale Klimaschutzinitiative*").
- (10) In addition, the scheme contains a so-called "*Länderöffnungsklausel*". On the basis of this clause, the German States ("*Länder*") can provide an additional EUR 35 million, if they so wish, by setting up their own schemes in parallel. Any funding

¹ The term "electric buses" is used in this decision to describe both plug-in hybrid buses and battery-based electric buses.

² Based on the assumption that one liter of diesel converts into 2.6 kg of CO₂.

that is provided by the *Länder* on this basis will mirror exactly the eligibility conditions and procedures of the aid granted at federal level.

- (11) The scheme will be in place until the end of 2021.

2.4. Beneficiaries

- (12) Eligible recipients of the support are commercial undertakings and public entities providing public passenger transport services (also referred to as "bus operators").

2.5. Eligible Costs

- (13) The support will be granted as investment aid to cover the additional costs of acquiring low emission electric buses compared to diesel buses (EURO VI standard).
- (14) On the basis of the scheme, the German authorities support the purchase or lease of standard transport buses with diesel-electric or battery-electric propulsion by bus operators for the purpose of public passenger transport. The following items are eligible for support:
- a. diesel-electric hybrid buses with external charging (plug-in hybrid buses);
 - b. battery buses which are operated purely electrically without additional power generation;
 - c. recharging infrastructure (only in connection with the purchase of buses according to a. and b.).

2.6. Aid Intensity

- (15) The maximum aid intensity for the purchase of battery buses is 80% of the eligible additional investment costs of an electric bus compared to a diesel bus. For the purchase of plug-in hybrid buses, the maximum aid intensity is 40% of the additional investment costs. For the construction of recharging infrastructure the maximum aid intensity is 40% of the total investment costs.
- (16) The aid intensities laid down in the scheme are maximum levels. To ensure the efficient use of the available state support, the actual level of support, which under no circumstances may exceed the respective maximum aid intensity, is ultimately determined on the basis of the total cost of ownership calculation (hereinafter also referred to as "TCO") requested from applicants during the application process. The TCO has to be provided to justify the eligible costs and the requested aid intensity. It must include the cost (if any) related to recharging infrastructure and has to take into account, *inter alia*, that the additional investment costs are partly offset by the lower operating costs of electric buses (electricity versus fuel, lower maintenance costs, etc.) compared to conventional diesel buses.

2.7. Granting Conditions

- (17) The scheme applies to the purchase of a bus fleet or bus line consisting of plug-in hybrid and/or battery-electric vehicles, provided that
- a. the vehicles are new,
 - b. the fleet includes more than five vehicles,
 - c. they are used in public transport,
 - d. the use of renewable energy sources is ensured,

- e. the (non-binding) offer of a vehicle manufacturer is presented, and
 - f. applicants demonstrate the need for support on the basis of a profitability calculation over the total useful life of the vehicles (TCO calculation).
- (18) In addition, in order to receive support for the purchase of plug-in hybrid buses, vehicles must meet the following minimum standards, to be demonstrated by a manufacturer's certificate included in the application:
- a. CO₂ emissions are reduced by at least 35% compared to a similar bus without hybrid technology;
 - b. the diesel engine meets the Euro VI standard. In addition, the vehicles must be equipped with a closed particle filter system;
 - c. the noise emissions amount to a maximum of 75 dB (A) at an engine power ≤ 150 kW or 77 dB (A) at an engine power > 150 kW (type approval test values).³
- (19) Applications which include the conversion of entire bus fleets or bus lines in areas where permissible air pollutant levels are exceeded⁴ or in areas with increased traffic noise⁵ will be given preference if a significant contribution to improving air quality and/or reducing noise levels is shown.
- (20) The corresponding transport services may not be discontinued for a period of five years from the start of operations of the acquired assets. A transfer of the assets during this period is only possible if their appropriate use is ensured.
- (21) The eligibility conditions are designed in such a way that no vehicle manufacturer is favored or disadvantaged. The criteria do not include any vehicle-related specifications with respect to purely electric buses. With regard to the support of plug-in hybrid buses, only vehicles meeting the minimum requirements referred to at point (18) above will be eligible for support. These criteria have been chosen intentionally since the design of the state support has to ensure that only those vehicles are used which meet certain minimum requirements with regard to greenhouse gas emissions, air pollution and noise emissions. Taking into account the overall technical standard in the market, the German authorities are of the view that currently all relevant vehicle manufacturers can meet these standards.

2.8. Granting Procedure

- (22) The aid will be granted following a transparent, non-discriminatory procedure on the basis of the criteria set out in section 2.7 above. The granting of the aid takes place in a two-stage process. Following the publication of the scheme (and the corresponding instructions for applicants), an unlimited number of interested parties can submit a project outline describing the project including the envisaged reduction in CO₂ emissions and providing details on the planned costs (Phase 1).
- (23) All project outlines received in Phase 1 are then assessed by the relevant authority (Federal Ministry for the Environment, Nature Conservation, Building and Nuclear

³ The German authorities have committed to change the dB (A) values to 73 db (A) for buses with an engine power up to 150 KW and to 76 dB (A) for buses with an engine power of more than 150 KW before the scheme enters into force to reflect the requirements of Regulation (EU) No 504/2014.

⁴ According to the 39th directive on the implementation of the German anti-emission law regarding air quality standards and maximum emissions (referred to as "39. Verordnung zur Durchführung des Bundes-Immissionsschutzgesetzes Verordnung über Luftqualitätsstandards und Emissionshöchstmengen" and "39. BImSchV").

⁵ Based on the German noise action plans ("Lärmaktionspläne") based on the law on emissions (referred to as "BImSchG").

Safety) according to the criteria contained in the scheme and in the accompanying instructions for applicants. The score for each project is (amongst others) determined by the expected cost and the level of CO₂ reduction that can be achieved. On this basis, eligible projects are selected and ranked by order of the score achieved.

- (24) At the second stage (Phase 2), the applicants with eligible projects are invited - in descending order starting from the first rank - to submit a formal application for support. The total number of applicants so invited will depend on the size of the highest-scoring projects, taking into account the available budget.
- (25) The support will be implemented on the basis of a granting decision.

2.9. National Legal Basis

- (26) The State support is granted on the basis of the "*Richtlinien zur Förderung der Anschaffung von Elektrobussen im öffentlichen Personennahverkehr*" a draft of which has been submitted to the Commission.

2.10. Cumulation

- (27) The German authorities have committed to ensure that support under this scheme cannot be cumulated with other funding for the same eligible costs in a manner that would lead to the applicable aid intensities being exceeded. In particular, on the basis of point 5.3 of the scheme, any parallel support provided by the *Länder* will only be granted if a need for such additional support exists and will be subject to the same procedures and granting conditions, including aid intensities.

3. ASSESSMENT OF THE SCHEME

3.1. Existence of State Aid

- (28) By virtue of 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.*"
- (29) Therefore, in order to determine whether the scheme at stake contains state aid elements within the meaning of Article 107(1) TFEU, it must be established whether a) the measure confers a selective economic advantage on the undertakings concerned, b) this advantage is financed through State resources, c) this advantage distorts or threatens to distort competition and, finally, d) the measure affects trade between Member States.
- (30) The Commission considers that the implementation of the notified scheme allows transport operators to be relieved of a part of the costs which they would normally have to bear themselves, thereby conferring a direct advantage on them. This advantage is financed through state resources as the necessary financial means come from the German State budget.
- (31) In addition, the scheme strengthens the position of those companies benefiting from the scheme in Germany as compared to their competitors in other EU Member States. Therefore, the measure has potentially distortive effects on competition and it is likely to affect trade between Member States.

- (32) In view of the above, the notified measure constitutes state aid within the meaning of Article 107(1) TFEU with respect to transport operators.

3.2. Legality of the Measure

- (33) The aid will only be granted under the scheme following state aid approval by the Commission. The German authorities have fulfilled their obligation under Article 108(3) TFEU by notifying the scheme before putting the aid into effect.

3.3. Compatibility of the Measure

- (34) The aid provided for the purchase of electric buses constitutes an environmental protection measure as it aims to improve air quality by reducing pollutant emissions from public transportation buses in Germany, going beyond Euro VI standards. Thus, for its compatibility assessment the Commission's "Guidelines on State aid for environmental protection and energy"⁶(hereinafter the "EEAG") apply.
- (35) Conversely, the part of the notified scheme concerning aid for the construction of recharging infrastructure does not fall within the definition of energy infrastructures set out at paragraph (31) of the EEAG, but constitutes road transport infrastructure.
- (36) Under point 15(b) of the EEAG, aid for such infrastructure is excluded from the scope of the EEAG. Hence, this part of the notified scheme will be assessed under Article 107(3) (c) TFEU.

3.4. Compatibility of the Measure Regarding the Purchase of Electric Buses

- (37) The EEAG, Section 3, identify a number of environmental and energy measures for which state aid under certain conditions may be compatible with the internal market under Article 107(3)(c) TFEU. One of these measures is state aid "for going beyond Union standards (including aid for the acquisition of new transport vehicles)".⁷ The measure is compatible with the TFEU if the compatibility criteria assessed in the following are met.

3.4.1. Contribution to an objective of common interest (3.2.1 EEAG)

- (38) Based on the EEAG⁸, the general objective of environmental aid is to increase the level of environmental protection compared to the level that would be achieved in the absence of the aid.
- (39) The Europe 2020 strategy⁹ (including the Clean Power for Transport and Clean Mobility packages) focuses on creating the conditions for smart, sustainable growth to support the shift towards a resource efficient, competitive low carbon economy. To that end, a number of headline targets have been set, including targets for climate change and energy sustainability: (i) a 20 % reduction in Union greenhouse gas emissions when compared to 1990 levels; (ii) raising the share of Union energy consumption produced from renewable resources to 20 %; and (iii) a 20 % improvement in the EU's energy efficiency compared to 1990 levels. The first two of these binding targets were implemented by 'The climate and energy package'¹⁰. In addition, the European Strategy for Low Emission Mobility adopted in July

⁶ Guidelines on State aid for environmental protection and energy 2014-2020, OJ C 200, 28.6.2014, p.1-55.

⁷ Ibid, page 5, paragraph 1.2. (a).

⁸ Ibid, page 12, paragraph 30.

⁹ COM(2010) 2020 final of 3.3.2010.

¹⁰ Decision No 406/2009/EC of 23 April 2009 (OJ L 140,5.6.2009, p. 136) and Directive 2009/28/EC of 23 April 2009 (OJ L 140, 5.6.2009, p. 16).

2016¹¹ states with regard to city buses that an early adoption of zero-emission technologies seems in reach and that a separate zero-emission target should be explored.

- (40) According to the data provided by the German authorities, the measure is expected to put into operation at least 100 to 150 electric buses by the end of 2021 replacing the same number of EURO VI diesel buses. This alone will, based on the data provided by the Germany authorities, lead to a reduction in greenhouse gas emissions of up to approximately 10,000 tons of CO₂ equivalents annually (compared to the situation that EURO VI diesel buses continue to be used). The support is expected to lead to a conversion of entire bus fleets or bus lines. According to the estimates provided by the Federal Ministry for the Environment, the total reduction potential in this area for Germany is estimated at 2.5 million t of CO₂ equivalents per year.
- (41) The scheme thus contributes to the reduction of greenhouse gas emissions and the conservation of resources.
- (42) Further significant environmental effects regarding air pollution are envisaged. In particular, since electrically powered buses emit virtually no air pollutants they will provide improvements in terms of Euro VI standards. It can be further noted that the scheme also sets limits for noise emissions.
- (43) By stipulating that the buses purchased with benefits granted under the scheme must be operated with electricity from renewable sources, the measure aims at enhancing the use of renewable energy in the transport sector. In the Commission's opinion, this is key for the transport sector to achieve the climate change targets and to enhance the level of environmental protection beyond existing EU standards.
- (44) Therefore, in line with section 3 paragraph (25)(c) of the EEAG the aid scheme provides for aid for the acquisition of new transport vehicles which increase the level of environmental protection by going beyond current Union standards.

3.4.2. Need for State intervention (3.2.2 EEAG)

- (45) According to the EEAG, a state aid measure must be targeted at a situation where aid can bring about a material improvement that the market alone cannot deliver, contributing to an increased level of environmental protection.
- (46) There are currently around 36,000 public transport buses in Germany, most of which are equipped with diesel engines. Replacing diesel buses with electric buses would make it possible to significantly reduce greenhouse gas emissions by using electricity from renewable energy sources. At the moment, bus operators purchase mostly individual electric vehicles, mainly for testing and demonstration purposes because of their high price. The national and European climate and environmental protection goals cannot be met on this basis, according to the information provided by the German authorities. Rather, it is necessary to operate entire bus fleets or at least individual bus lines with low emission or emission-free vehicles, which cannot be achieved without financial support to bus operators. For example, according to the information provided by the German Government, a fully electric battery-based bus of a type commonly used currently costs approximately EUR 550,000, while a diesel bus of the same equipment costs EUR 280,000, which results in additional costs of EUR 270,000 per electric bus purchased.

¹¹ http://europa.eu/rapid/press-release_MEMO-16-2497_en.htm

(47) To the extent that state support for the purchase of electric buses is available in Germany, previous measures have not significantly increased their use. At the beginning of 2017, electric buses did not even account for 1% of the total German bus fleet, according to official figures presented by Germany. Therefore there is a need for the aid scheme under assessment.

3.4.3. *Appropriateness of the aid scheme (3.2.3 EEAG)*

(48) To ensure compliance with this criterion, the Member State has to show that the aid is awarded in a form that is likely to generate the least distortions of trade and competition.

(49) The aid is an appropriate instrument to attain the desired climate objectives. First, it has to be noted that, because of the current high prices, legislative obligations to use electric buses would have unacceptable financial consequences for bus operators, and therefore in most cases the public entities responsible for the services in question (mostly local authorities).

(50) Second, while the current EURO VI standard does reduce CO₂ and other pollutant emissions from diesel buses compared to previous standards (e.g. EURO IV and EURO V), such buses still emit significant amounts of pollutants. As indicated at paragraph (40) above, based on the data submitted by the German authorities, the scheme could lead to a conversion of at least 100 to 150 EURO VI diesel buses into electric buses by the end of 2021. Electric buses are completely non-polluting and therefore they exceed the EURO VI standard. There is no instrument which incentivises bus operators to purchase such vehicles in significant numbers and thereby to go beyond these existing standards, namely the applicable thresholds for CO₂ and other pollutant emissions underlying the EURO VI norm. So-called "soft measures", such as an environmental label visible to passengers, are also insufficient as instruments based on image do not influence consumer behaviour to an extent that would offset the still significant extra costs generated by the purchase of electric buses.

(51) Therefore, the Commission considers that the type of aid chosen is appropriate to address the observed market failure.

3.4.4. *Incentive effect (3.2.4 EEAG)*

(52) Under the applicable legislation, eligible projects cannot start before an application is made and support is granted under the scheme. The formal incentive effect criterion is therefore respected. The requirement for applicants to present a non-binding offer ("*unverbindliche Lieferzusage*") for the purchase of the intended number of buses does not change this assessment as these offers do not directly impose a delivery obligation on the bus manufacturers.

(53) Moreover, the Commission considers that the incentive effect requirement pursuant to paragraph (54)(a) of the EEAG is fulfilled as the aid is for the purchase of new electric buses which go beyond EURO VI standards. The German authorities submitted that in the absence of such state support, bus operators in Germany would have little to no incentive to invest in electric buses given that the additional cost would not be compensated by any additional revenues, even if they replaced the vehicles with the highest CO₂ emissions in their fleet. In particular, the additional costs cannot be financed through higher fares. The scheme will hence provide at least some financial motivation to bus operators to replace their buses despite the additional cost, and to thereby lower their CO₂ emissions.

- (54) As set out above, according to the materials submitted by the German authorities, the additional cost for the acquisition of electric buses compared to diesel buses can be very significant, for example EUR 270 000 per bus of a type commonly used in Germany (see above at paragraph (46)).
- (55) On this basis, the Commission concludes that the scheme has an incentive effect as the aid will help to incentivise bus operators to replace their buses with electrical buses providing for better environmental protection than the one resulting from the Union standards.

3.4.5. *Proportionality of the aid (3.2.5 EEAG)*

- (56) Environmental aid is considered to be proportionate if the aid amount per beneficiary is limited to the minimum needed to achieve the objective aimed for. Aid will be considered to be limited to the minimum necessary if it corresponds to the net extra cost necessary to meet the objective, compared to the counterfactual scenario in the absence of aid (paragraph 70 EEAG).
- (57) Under the notified scheme, the eligible costs are the additional costs of an electric or plug-in hybrid bus compared to a standard diesel bus. Therefore, in accordance with paragraphs 72 and 73 of the EEAG, the eligible costs consist of the additional investment costs necessary to achieve a higher level of environmental protection than in the absence of the aid.
- (58) Under the scheme, the maximum aid intensity for electric buses is 80% of the eligible additional investment costs. The maximum aid intensity for plug-in hybrid buses is 40% of the eligible additional investment costs. The aid intensities are therefore below the maximum permissible aid intensity of 100%, applicable according to paragraph 80 of the EEAG because the aid is granted through a competitive bidding process (see paragraphs (22) to (24)).
- (59) The aid intensities set out in the scheme are ceilings. To ensure the efficient use of the state aid, the amount to be granted to an applicant will be determined according to the results of the TCO. This ensures that the aid is limited to the minimum necessary in each case. Furthermore, there is no risk that the maximum aid intensity are exceeded if federal and *Länder* resources are combined.
- (60) Therefore, in line with paragraph 70 of the EEAG, the notified scheme will ensure that the aid will be limited to the minimum needed to meet the environmental protection sought.

3.4.6. *Avoidance of undue negative effects on competition and trade (3.2.6 EEAG)*

- (61) According to the submissions of the German authorities, the notified measure will have only a limited effect on competition and trade.
- (62) The implementation of the scheme will lead to a situation where some bus operators will receive the aid, namely those who apply and are eligible, and some will not, namely those who do not apply and/or those who do not qualify. However, the distortive effect emerging from this situation is limited. This follows from the fact that other potential advantages (e.g. relating to lower running and maintenance costs for electric buses) are taken into account in the TCO. Also, subsidised buses have to replace *equivalent* diesel buses, hence it is ensured that only the additional costs linked to e-mobility are eligible. This limited impact is also outweighed by the positive effects in terms of contribution the increased environmental protection.

(63) On this basis, the scheme will not have an undue negative effect on competition and trade.

3.4.7. *Transparency (3.2.7 EEAG)*

(64) The legal basis of the scheme will be made public and published on the central website of the Federal German Gazette (www.bundesanzeiger.de). In addition, they will be included in the federal database for state aid (www.foerderdatenbank.de), and will be publicised as part of the public relations work of the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety regarding climate protection (www.klimaschutz.de).

(65) Further details, including the identity of individual beneficiaries and the aid amounts awarded to them, will be available on the website of DG Competition.¹²

(66) Therefore, the aid scheme meets the applicable transparency criteria as set out in section 3.2.7 of the EEAG.

(67) Furthermore, the German authorities comply with their obligations regarding reporting as they undertook to submit annual reports in accordance with section 6 of the EEAG.

3.4.8. *Conclusion with regard to the compatibility of the measure regarding the purchase of electric buses*

(68) The aid provided for the purchase of electric buses meets the relevant criteria of the EEAG and is thus compatible with the internal market.

3.5. Compatibility of the Measure Regarding the Recharging Infrastructure

(69) The assessment of the compatibility with the internal market of the aid for recharging infrastructure requires an assessment based directly on Article 107(3)(c) TFEU, which states that: *"The following may be considered to be compatible with the internal market: (...) 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."*

(70) This is in line with the Commission's case practice, where it decided that the assessment of similar infrastructure schemes had to be based directly on Article 107(3) (c) TFEU considering their contribution to the development of an activity that served the common interest.

(71) In order to be compatible with Article 107(3)(c) TFEU, aid must fulfil certain criteria, ensuring that on balance the positive effects of the aid are likely to outweigh its potential distortive effects. In its decision practice the Commission has developed the following criteria, the fulfilment of which allows to conclude that the aid is compatible with the internal market pursuant to Article 107(3)(c) TFEU because:

- a) it contributes to a well-defined objective of common interest;
- b) it is necessary to achieve such an objective;
- c) it is an appropriate policy instrument to address such an objective;
- d) it has an incentive effect for the beneficiaries to engage in additional activities which they would not carry out without the aid;

¹² <https://webgate.ec.europa.eu/competition/transparency>

- e) its amount is proportional in the sense that is limited to the minimum needed to incentivise the additional investment or activity in the area concerned;
- f) it does not entail undue negative effects on competition and trade between Member States.

3.5.1. *Contribution to an Objective of Common Interest*

- (72) The funding provided for the supporting recharging infrastructure for electric buses is in line with Directive 2014/94/EU¹³ on the deployment of alternative fuels infrastructure. This directive requires Member States to develop national policy frameworks for the deployment of alternative fuels and their infrastructure. In particular in urban/suburban and other densely populated areas, it entrusts Member States with responsibility to promote the establishment of an appropriate number of publicly accessible charging points by the end of 2020.
- (73) Reducing the cost of the supporting infrastructure, i.e. plug-in recharging stations for electric or hybrid buses, and making it easier to charge these buses, will encourage operators to purchase them. Electrification of transport (electro-mobility) is also a priority in the Community Research Programme¹⁴ and figures prominently in the European Economic Recovery Plan¹⁵.

3.5.2. *Need for State intervention*

- (74) As shown at section 3.4.2 above, there is a need for State intervention for the purchase of electric buses. This need for State intervention is linked to the fact that bus operators who intend to use electric buses instead of diesel buses would not be able to recoup the additional investment cost, for example through fare increases.
- (75) Therefore, bus operators would be even less likely to invest in electric buses if they had to finance the recharging infrastructure on their own, as this would constitute an additional cost to them.
- (76) The possibility of receiving support for recharging infrastructure will hence increase their interest in investing in electric buses and contribute to the attainment of the full extent of achievable CO₂ emission reduction in bus transport in Germany.
- (77) So far, the German market has not been able to provide for the development and the commercial offering of supporting infrastructures for electric buses.
- (78) On this basis, there is a need for State intervention.

3.5.3. *Appropriateness of the aid scheme*

- (79) The notified measure for support for the installation of recharging infrastructure is an appropriate instrument to achieve the planned reduction in CO₂ and other pollutant emissions.
- (80) In view of the already significantly higher price of electric buses, mere regulatory obligations to install recharging infrastructure - without any state support - would

¹³ OJ L 307, 28.10.2014, p. 1–20.

¹⁴ https://ec.europa.eu/transport/themes/urban/vehicles/road/electric_en

¹⁵ COM(2008) 800, of 26 November 2008,
http://ec.europa.eu/economy_finance/publications/pages/publication13504_en.pdf

have severe financial consequences for bus operators, and therefore in most cases the public entities responsible for the services in question (mostly local authorities).

- (81) The Commission considers that the type of aid chosen is appropriate to address the market failure in the economic sector in question.

3.5.4. Incentive effect

- (82) Under the applicable legislation, eligible projects cannot start before an application is made and support is granted under the scheme. The formal incentive effect criterion is therefore respected.
- (83) The Commission considers that an incentive effect exists if the aid changes the beneficiary's behaviour, enabling certain investments which are necessary to achieve the objective of common interest, but which would not be undertaken without the aid.
- (84) As shown at section 3.4 above, there is a need for State intervention for the purchase of electric buses in order to give the necessary incentives to bus operators. The replacement of diesel buses by electric buses is however only possible if a suitable recharging infrastructure is built in parallel. The cost of the construction and operation of these charging points would also have to be borne by the bus operators concerned, while they would not be able to recoup the additional investment cost, for example through fare increases. An economic incentive is hence required to ensure that such investments are made - with the ultimate objective to reduce CO₂ emissions and to improve air quality in public passenger transport. Otherwise, the bus operators would have no or little incentive to invest in the recharging infrastructure.
- (85) Therefore, the scheme incentivises bus operators to invest in the necessary recharging infrastructure, thereby supporting the purchase of electric buses with the aim to achieve the objective of common interest.

3.5.5. Proportionality of the aid

- (86) The aid granted for the funding of the supporting infrastructure is proportionate. First, the maximum aid intensity for recharging infrastructure is 40% of the eligible investment costs. Although the present assessment is based on Article 107(3)(c) TFEU, it can be regarded as a strong indication in terms of proportionality that the aid intensity is below the maximum aid intensity which would be applicable on the basis of paragraph 80 EEAG (namely up to 100% as the aid will be granted on the basis of a competitive bidding process, see paragraphs (22) to (24) above).
- (87) Moreover, as explained in relation to the support for the purchases of electric buses, the ultimate amount of aid to be granted to each beneficiary will be determined on the basis of the TCO which has to be submitted by applicants. This calculation includes the cost for the recharging infrastructure. This ensures that aid is limited to the minimum necessary in each individual case.
- (88) Therefore, the measure complies with the proportionality requirement.

3.5.6. Avoidance of undue negative effects on competition and trade

- (89) The Commission refers to the reasoning provided in relation to the aid for the purchase of electric buses (see paragraphs (61) to (63) above).
- (90) On this basis, the measure will not have undue negative effects on competition.

3.5.7. *Transparency*

(91) The Commission refers to the reasoning provided in relation to the aid for the purchase of electric buses (see paragraphs (64) to (67) above). The scheme therefore meets the applicable transparency requirements.

3.5.8. *Conclusion with regard to the compatibility of the measure regarding recharging infrastructure*

(92) In the light of the above, the part of the scheme that allows aid for the supporting recharging infrastructure is also compatible with the internal market on the basis of Article 107(3)(c) TFEU.

4. CONCLUSION

(93) The Commission has decided not to raise objections to the aid measure on the ground that it is compatible with the internal market pursuant to Article 107(3)(c) 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 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