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**Subject: State Aid SA.51450 (2018/N) – Germany.  
Support scheme for retrofitting diesel buses in local public transport**

Sir,

**1. PROCEDURE**

- (1) By electronic notification dated 26 June 2018, 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 the Federal Republic of Germany intends to provide grants to support retrofitting buses of categories Euro III, IV, V and EEV used for public passenger transport (*öffentlicher Personennahverkehr*) in approximately 90 municipalities (*Kommunen*) where national limit values of nitrogen oxides (hereinafter "NOx") were exceeded in 2016 or 2017.
- (2) By letters of 22 August 2018, 11 October 2018 and 30 October 2018, the Commission asked the German authorities for additional information concerning the notified scheme. The Commission received the requested information by letters of 18 September 2018, 29 October 2018 and 31 October 2018. Conference calls between the German authorities and Commission services took place on 8 October 2018 and 25 October 2018.
- (3) By letter dated 29 October 2018, the German authorities exceptionally agreed to waive their rights deriving from Article 342 TFEU in conjunction with Article 3 of Regulation 1/1958 and to have the present decision adopted and notified in English.

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## 2. DETAILED DESCRIPTION OF THE SCHEME

### 2.1. Background, Scope and General Description

- (4) The German authorities explained that according to Section 3 of the Federal Emission Control Act, the permissible annual average emission level of NO<sub>x</sub> in Germany is 40 µg/m<sup>3</sup>. Air pollution measurements are carried out by the air monitoring network of the Federal Environment Agency. The Federal law only regulates the limits to be achieved. It is the responsibility of the federal states (*Länder*) to comply with the target. The German authorities explained that most *Länder* opted for a cooperative solution involving an interactive process of the concerned municipalities and the responsible regional authorities.
- (5) In 2016, in approximately 90 municipalities in Germany, the annual average limit values of NO<sub>x</sub> were substantially exceeded. In view of the negative effects on public health, the Federal Government launched the "Immediate Clean Air Programme for 2017-2020" (*Sofortprogramm Saubere Luft 2017-2020*) in order to reduce NO<sub>x</sub> levels to below the relevant limit as soon as possible. The "Immediate Clean Air Programme for 2017-2020" should improve, in the short term, air quality and hence public health.
- (6) Road transport is one of the biggest sources of pollution in many European countries, including Germany. Urban areas are particularly affected by pollution from road transport, including buses. For example in Berlin, public passenger transport covers approximately 300.000 bus kilometres per day.
- (7) The German authorities estimate that approximately 37.000 buses are used in local public transport in Germany, the large majority of which are equipped with a compression-ignition (diesel) engine. About 54 % of those buses belong to the above mentioned categories Euro III, IV, V and Enhanced Environmentally friendly Vehicle (hereinafter "EEV"). Diesel buses therefore contribute by a significant share to the pollution of city centres with NO<sub>x</sub> emissions. At present, however, due to high costs of retrofitting systems and their installation, slightly higher fuel consumption, and the absence of an obligation to retrofit the buses, only a small number of buses has been retrofitted. According to the German authorities, this is not enough to improve the air quality in German municipalities.
- (8) The aim of the scheme is to significantly improve air quality in cities by providing financial support for the voluntary retrofitting of buses equipped with diesel engines. The scheme should cover approximately 90 municipalities where NO<sub>x</sub> limit values were exceeded in 2016 or 2017. The proposed support for the retrofitting of up to 7.000 diesel buses will lead to an estimated reduction of at least 2.200 tonnes of NO<sub>x</sub> per year in Germany.
- (9) The support will also increase interest in the technology and contribute to its further dissemination by stimulating demand. The German authorities expect that, if the number of retrofitting systems and providers rises significantly, costs will decrease due to increased competitive pressure. This should significantly reduce the procurement costs of the systems by 2020 compared to 2018.
- (10) The support will cover the investment and installation costs of retrofitting qualifying buses with an exhaust after-treatment system (*Abgasnachbehandlungssystem*) for the purpose of reducing NO<sub>x</sub> emissions, based on a general type approval (*Allgemeine*

*Betriebserlaubnis, ABE*) for NOx reduction systems in accordance with Annex I to the *Förderrichtlinie für die Nachrüstung von Diesel-Bussen der Schadstoffklassen Euro III, IV, V und EEV im Öffentlichen Personennahverkehr* (also referred to as "*Förderrichtlinie*") of 18 May 2018 of the German Federal Ministry of Transport and Digital Infrastructure, as amended, or the equivalent approval under UN Regulation No 132, 01 series of amendments.

- (11) According to the German authorities, such retrofitting systems will extend the originally expected commercial life span of the retrofitted bus due to the additional investment, which will be depreciated in a period of four years. However, the German authorities explained that while the commercial life span will be extended slightly, there will be additional costs (a slight increase in fuel consumption, costs of refilling of reagent). Germany confirmed that as the existing public service obligations contracts and the Euro classification of the retrofitted buses will not be changed and operators cannot recoup the investment costs (e.g. by higher fares), effect on competition will be limited.
- (12) The German authorities have drawn attention to the fact that a previous measure<sup>1</sup> implemented under the General Block Exemption Regulation<sup>2</sup> did not provide a sufficient incentive for bus operators, as the number of applications received was insufficient to address the environmental issues identified.

## **2.2. Aid Instrument**

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

## **2.3. Budget and Duration**

- (14) The total budget of the measure is EUR 107 million.
- (15) The scheme will be in place until the end of 2020.

## **2.4. Beneficiaries**

- (16) Eligible recipients of the support are commercial undertakings and public entities providing public passenger transport services by bus in the relevant municipalities in Germany listed in Annex II to the *Förderrichtlinie* (also referred to as "bus operators").
- (17) The German authorities have also confirmed that no aid will be granted to undertakings in difficulty<sup>3</sup> or to undertakings subject to an outstanding recovery order following a previous Commission decision declaring an aid illegal and incompatible with the internal market.

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<sup>1</sup> SA.50862 (2018/X)

<sup>2</sup> Commission Regulation (EU) N°651/2014 of 17 June 2014 declaring certain categories of aid compatible with the internal market in application of Articles 107 and 108

<sup>3</sup> As defined by the applicable Guidelines on State aid for rescuing and restructuring non-financial undertakings in difficulty, OJ C 249, 31.7.2014, p.1 - 28

## **2.5. Eligible Costs**

- (18) The support will be granted as investment aid in tangible assets to cover the costs of exhaust after-treatment systems and their installation.
- (19) No operating or maintenance costs will be eligible.

## **2.6. Aid Intensity**

- (20) The maximum aid intensity under the proposed aid scheme is 80% of the eligible costs, subject to the cumulation rules explained below.
- (21) The maximum funding amount per bus is EUR 20,000.

## **2.7. Granting Conditions**

- (22) The scheme applies to the retrofitting of public passenger transport buses in the Euro III, IV, V and the EEV emission categories, which are predominantly used in one of the municipalities listed in Annex II to the *Förderrichtlinie*. The buses may not be sold or scrapped, and their emission category cannot be changed, for four years following the installation of the retrofitting system, except for cases of a total loss caused by an accident or engine failure.
- (23) The retrofitting systems shall comply with the technical requirements set out in Annex I to the *Förderrichtlinie*, i.e. a reduction of at least 85 % of NOx emissions per vehicle is necessary.

## **2.8. Granting Procedure**

- (24) The German authorities confirmed that under the applicable legislation, eligible projects cannot start before an application is made. The German authorities committed to introduce a competitive bidding process on the basis of clear, transparent and non-discriminatory criteria: Only parts of the budget shall be released at the occasion of up to four calls per year. The applications will have to be placed by a certain deadline (e.g. 31 March, 30 June, 30 September and 31 December). The calls will be individually tailored to the most urgent needs (e.g. preference for cities with the highest amount of NOx or cities where diesel bans had to be introduced following court orders or number of busses to be retrofitted). Eligible projects will be selected and ranked by order of the given criteria. Thus not all applicants will necessarily receive the grant. Concerning the modalities of the public procurement of the retrofitting systems by the aid beneficiaries, the German authorities confirmed that all retrofitting under this scheme is subject to public procurement rules.

## **2.9. National Legal Basis**

- (25) The planned support will be based on sections 23 and 44 of the Federal Budget Code (*Bundeshaushaltsordnung*) and the *Förderrichtlinie für die Nachrüstung von Diesel-Bussen der Schadstoffklassen Euro III, IV, V und EEV im Öffentlichen Personennahverkehr* of 18 May 2018 of the German Federal Ministry of Transport and Digital Infrastructure, as amended.

## **2.10. Cumulation**

- (26) Cumulation with State aid measures of the Federal Republic of Germany for the same eligible costs is excluded. Cumulation with other aid measures at other levels (e.g. federal states – *Länder*) is allowed in order to reach up to 95% of the eligible costs.

## **3. ASSESSMENT OF THE SCHEME**

### **3.1. Existence of State Aid**

- (27) 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.*”
- (28) Therefore, in order to determine whether the scheme at stake qualifies as State aid 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 and the measure is imputable to the State, c) this advantage distorts or threatens to distort competition and, finally, d) the measure affects trade between Member States.
- (29) The Commission considers that the implementation of the notified scheme allows bus operators to be relieved of a part of the costs which they would otherwise 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.
- (30) In addition, the scheme may strengthen the position of those companies benefiting from the scheme in Germany as compared to their competitors from other EU Member States. Therefore, the measure has potentially distortive effects on competition and it is likely to affect trade between Member States.
- (31) In view of the above, the notified measure constitutes State aid within the meaning of Article 107(1) TFEU with respect to the bus transport operators.

### **3.2. Legality of the Measure**

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

### **3.3. Compatibility of the Measure**

- (33) The aid provided for the retrofitting of diesel buses contributes to the protection of the environment. In the absence of Union standards for the retrofitting of buses, it aims to substantially reduce NOx emissions and to improve air quality in the short-term in some municipalities in Germany. Thus, for its compatibility assessment the

Commission's "Guidelines on State aid for environmental protection and energy"<sup>4</sup> (hereinafter the "EEAG") apply.

- (34) The EEAG, Section 3, identify a number of environmental and energy measures for which State aid under certain conditions may be declared compatible with the internal market under Article 107(3)(c) TFEU. One of these measures is State aid "increasing the level of environmental protection in the absence of Union standards (including aid for the acquisition of new transport vehicles)"<sup>5</sup>.
- (35) The measure is compatible with the TFEU if the compatibility criteria assessed in the following are met.

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

- (36) Based on the EEAG<sup>6</sup>, 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.
- (37) The Europe 2020 strategy<sup>7</sup> (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. It is also noted that the Commission Communication "A Europe that protects: Clean air for all" (2018)<sup>8</sup> encourages Member States to take national measures in relation to low and zero emission mobility, for the benefit of clean air.
- (38) According to the data provided by the German authorities, the proposed support for retrofitting of up to 7.000 diesel buses of the above mentioned categories will lead to a reduction at least 2.200 tonnes of NOx per year in Germany. The aid scheme will thus contribute significantly to the reduction of emissions of NOx and compliance with the ambient air quality limit values for those emissions.
- (39) Therefore, in line with section 3 paragraph (25)(c) of the EEAG, the aid scheme which provides for aid for the retrofitting of diesel buses used in public transport will increase in the short term the level of environmental protection in the absence of Union standards.

*3.3.2. Need for State intervention (3.2.2 EEAG)*

- (40) 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.
- (41) There are currently around 37.000 public transport buses in Germany, most of which are equipped with diesel engines. At present, due to high costs of retrofitting systems and their installation, higher fuel consumption, and the absence of an

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<sup>4</sup> Guidelines on State aid for environmental protection and energy 2014-2020, OJ C 200, 28.6.2014, p.1-55.

<sup>5</sup> Ibid, page 5, paragraph 1.2. (a).

<sup>6</sup> Ibid, page 12, paragraph 30.

<sup>7</sup> COM(2010) 2020 final of 3.3.2010.

<sup>8</sup> COM(2018) 330 final of 17.5.2018.

obligation to retrofit buses, only a small number of buses have been retrofitted. This was so far not enough to improve the air quality in German municipalities. Therefore, it is necessary to retrofit all buses or at least a substantial proportion of all buses.

- (42) A significant obstacle to the market introduction of exhaust after-treatment systems in Germany is currently created by the fact that the acquisition costs cannot be recouped. Given the high level of investment costs for transport operators, it is not possible to achieve the desired environmental objectives in the absence of the aid.
- (43) The wider application of exhaust after-treatment systems in diesel buses necessary for the reduction of NOx emissions from the public bus transport will not be achieved without the State aid, due to the market failure described above.
- (44) Therefore there is a need for the aid scheme under assessment.

### *3.3.3. Appropriateness of the aid scheme (3.2.3 EEAG)*

- (45) State aid is not the only policy instrument available to Member States to promote increased levels of environmental protection. For example, regulation can be an important tool to achieve environmental objectives. The Member State should show that State aid is the appropriate policy instrument. Moreover, to ensure compliance with this criterion, the Member State also has to show that the aid is awarded in a form that is likely to generate the least distortions of trade and competition.
- (46) The Commission considers that the aid according to the notified scheme is an appropriate instrument to attain the desired environmental objectives. First, it has to be noted that, because of the current high prices of retrofitting, any legislative obligations to immediately use retrofitted buses would be disproportionate and would have significant financial consequences for the bus operators, and therefore in most cases the public entities responsible for the services in question (mostly local authorities).
- (47) The German authorities confirmed that they require labels indicating the aid received in the retrofitted buses. However, the so called "soft measures", including environmental labels for the information of passengers, do not affect a sufficient number of passengers to create the necessary incentive for the bus operators to spend additional resources on retrofitting.
- (48) Therefore, the Commission considers that the type of aid chosen is appropriate to address the observed market failure.

### *3.3.4. Incentive effect (3.2.4 EEAG)*

- (49) The formal incentive effect criterion is respected (see recital 24 above).
- (50) Moreover, the Commission considers that the incentive effect requirement pursuant to the EEAG, section 3.2.4, is fulfilled. According to the materials submitted by the German authorities, the average cost for retrofitting is EUR 21.000 per bus. In the absence of State aid, the bus operators in Germany would have little to no incentive to invest in retrofitting, given that the additional cost would not be compensated by any additional revenues. In particular, the additional costs cannot be financed through higher fares. The scheme will hence provide at least some financial motivation for bus operators to retrofit their buses despite the additional cost.

- (51) On this basis, the Commission concludes that the scheme has an incentive effect, as the aid will help to incentivise bus operators to retrofit their diesel buses, providing for better environmental protection in the absence of Union standards.

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

- (52) 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).
- (53) Under the notified scheme, the eligible costs are the retrofitting costs of 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.
- (54) The maximum aid intensity under the proposed aid scheme is 80% of the eligible costs. In cumulation with other aid measures this will be allowed to reach up to 95% of the eligible costs.
- (55) The aid intensities therefore do not exceed 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 recital 24 above).
- (56) The actual amount granted is ultimately based on the information required in the application. This ensures that companies are not given more aid than necessary.
- (57) 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.

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

- (58) According to the submissions of the German authorities, the notified measure will have only a limited effect on competition and trade.
- (59) 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 are granted the aid following a competitive process (see Section 2.8 above), and some will not, namely those who do not apply and/or those who do not qualify or are not selected for support (see Section 2.8 above). However, the distortive effect emerging from this situation is limited. This follows from the fact that the bus operators will be able to operate retrofitted buses with lower NO<sub>x</sub> emissions, but with slightly higher fuel consumption and maintenance costs. Moreover, it has to be noted that the aid will be granted following an open competitive bidding process (see Section 2.8 above).
- (60) Distortions to competition and trade will be very limited. As there is no apparent profit, but only additional costs (increased fuel consumption etc.) for the consequent operation of buses and the retrofitting will not affect the public service contracts under which the buses are operated, the impact on competition will be limited. Moreover, the emission category cannot be changed as a result of the retrofitting.



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

### 3.3.7. *Transparency (3.2.7 EEAG)*

(62) The legal basis of the scheme will be made public and published on the central website of the Federal German Gazette ([www.bundesanzeiger.de](http://www.bundesanzeiger.de)). In addition, it will be included in the federal database for State aid ([www.foerderdatenbank.de](http://www.foerderdatenbank.de)).

(63) Further details, including the identity of individual beneficiaries and the aid amounts awarded to them, will be available on the website of DG Competition<sup>9</sup>.

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

(65) 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.

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

(66) The aid provided for the retrofitting of diesel buses meets the relevant criteria of the EEAG and is thus compatible with the internal market.

## 4. CONCLUSION

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

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<sup>9</sup> <https://webgate.ec.europa.eu/competition/transparency>

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Yours faithfully  
For the Commission

Margrethe VESTAGER  
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