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**Subject: State Aid SA.61890 (2021/N) – RRF – Germany
Support scheme for the acquisition of alternative fuel buses for
passenger transport**

Excellency,

1. PROCEDURE

1. By electronic notification dated 11 February 2021, 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 bus transport operators in Germany may receive aid for the acquisition of battery-electric, fuel-cell-powered or biomethane-powered buses, for installing private recharging and refuelling infrastructure, and for conducting environmental studies on the impact of the use of such buses (the 'notified measure' or the 'scheme'). As part of the notification, the German authorities submitted on 11 February 2021 the final draft of the evaluation plan for the scheme.
2. The German authorities provided additional information on the notified measure by email dated 4 March 2021.
3. By emails dated 23 March and 16 June 2021, the Commission requested from the German authorities additional information concerning the notified measure. The Commission received the requested information on 26 April and 28 June 2021.

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4. On 11 May 2021, the German authorities informed the Commission that the notified measure is part of the Recovery and Resilience Facility¹ ('RRF') plans of Germany.
5. By email dated 10 May 2021, the German authorities agreed to waive their rights deriving from Article 342 TFEU and Article 3 of Regulation 1/1958² and to have this Decision adopted and notified in English.
6. The German authorities provided additional information on the notified measure on 22 July 2021.

2. DESCRIPTION OF THE MEASURE

2.1. Background

7. The notified measure aims to support the use of buses using alternative fuel propulsion systems in local passenger transport in Germany. The measure forms part of the German Federal Government's Climate Protection Programme 2030, which includes measures intended to ensure that Germany reduces its greenhouse gas emissions by 55% of the 1990 levels by 2030.
8. The notified measure follows an existing scheme approved by the Commission on 26 February 2018³. The notified measure aims to extend the scope to support not only the acquisition of battery-electric buses but also of fuel-cell-powered and biomethane-powered buses, the retrofitting of diesel buses, the construction and installation of recharging and refuelling infrastructures and the carrying out of related environmental studies.
9. The scheme aims in particular to increase the number of alternative fuel buses in local public passenger transport in Germany. The German authorities have explained that bus transport in Germany is still based almost exclusively on the use of diesel-powered vehicles. According to the German authorities, there are currently around 80 000 diesel-powered public transport buses in Germany and only 458 electric buses and 44 fuel-cell buses. The German authorities have estimated that the scheme will support the acquisition of around 4 250 buses, resulting in a reduction of approximately 3.4 million tonnes of CO₂ emissions and that it will contribute to the reduction of CO₂ emissions, to the improvement of air quality and to the reduction of traffic noise.
10. Because of the very high cost of alternative fuel buses and the need to also invest in adequate recharging or refuelling installations and related equipment, local public transport operators and other passenger transport companies face difficulties for

¹ Regulation (EU) 2021/241 of the European Parliament and of the Council of 12 February 2021 establishing the Recovery and Resilience Facility (OJ L 57, 18.2.2021, p. 17).

² Regulation No 1 determining the languages to be used by the European Economic Community (OJ 17, 6.10.1958, p. 385).

³ Commission Decision of 26 February 2018 in SA.48190 (2017/N), as amended by Commission Decisions of 28 May 2018 in SA.50776 (2018/N) (whereby the Commission approved a budget increase for the scheme), of 7 February 2019 in SA.52677 (2018/N) (whereby the Commission approved a further budget increase and an extension of the duration of the scheme until 31 December 2022) and of 30 January 2020 in SA.55977 (2019/N) (whereby a further budget increase was approved).

acquiring alternative fuel buses. According to the German authorities, the main difficulty faced by bus operators to switch to buses with alternative fuel systems is due to the low financial attractiveness of investing in such buses. For this reason, the scheme aims to cover a substantial part of the price difference between conventional diesel buses and alternative fuel buses and to make investments in alternative fuel buses and infrastructure more cost-effective.

11. The German authorities have explained that they have opted for a technology-neutral approach when designing the scheme in order to give applicants the freedom to choose the alternative fuel technology that is most appropriate to their needs.

2.2. Legal basis

12. The national legal bases of the scheme are the draft Funding Guidelines for the support of buses with alternative drive systems in passenger transport (the ‘Funding Guidelines’)⁴ and the relevant provisions of German budgetary law.

2.3. Budget and duration of the scheme

13. The scheme has a budget of EUR 1.75 billion (around EUR 350 million per year). The budget of the notified measure is partly made available through the RRF. The increase in budget compared to the current scheme is due to the significant enlargement of the scheme’s scope to support besides electric buses also hydrogen and biogas powered buses as well as the installation of hydrogen and biogas refuelling stations.
14. The scheme will be applicable until 31 December 2025.

2.4. Scope of the notified measure

15. The scheme applies to the sector of local (public) passenger transport by road in Germany and consists of three sub-measures:
 - a. Sub-measure 1 concerns aid for the acquisition of alternative fuel buses (battery-electric, whether or not equipped with hydrogen fuel-cells as range-extendors and including battery trolleybuses; hydrogen fuel-cell-powered buses; gas-powered buses using methane produced from biomass) and for the retrofitting of existing diesel buses to use alternative fuel powertrains (battery electric, fuel-cell or biomethane)⁵.
 - b. Sub-measure 2 concerns aid for the construction and installation of private recharging and refuelling infrastructure for the use of alternative fuel buses as well as additional installations and equipment required for the operation and maintenance of alternative fuel buses (e.g. work stands, crane systems, special tooling, testing technology, etc.)⁶.

⁴ The date of entry into force of the Funding Guidelines is conditional upon the approval of the notified measure by the Commission.

⁵ Retrofitting will only be supported if it is less expensive than the acquisition of new alternative fuel buses or if no corresponding vehicle model is available on the market.

⁶ General maintenance infrastructure for the entire vehicle fleet is excluded (e.g. the construction of a maintenance hangar).

- c. Sub-measure 3 concerns aid for the performance of environmental studies on the impact of the use of alternative fuel buses in relation to Sub-measures 1 and 2.
16. The German authorities have indicated that Sub-measure 1 will account for around 85% of the budget of the scheme, Sub-measure 2 for around 10-14% and Sub-measure 3 for less than 1% of the budget of the scheme.

2.5. Aid beneficiaries

17. Eligible aid beneficiaries are natural and legal persons organised under public and private law⁷, provided they are economically active and have a permanent establishment or branch in Germany at the latest at the time the aid is paid.
18. Leasing or rental companies that provide buses to transport operators may apply for the aid, provided that they fully pass on the aid to the transport operator and that the aid is identified in the leasing or rental contract.

2.6. Form of aid and eligible costs

19. The aid will be provided in the form of direct grants.
20. For Sub-measure 1, the aid will be granted as investment aid to cover the additional investment costs of acquiring alternative fuel buses compared to conventional diesel buses of a similar type or size category. If the environmental protection costs can be determined as a separate investment (e.g. in the case of retrofitting), these costs will constitute the eligible costs. There will be separate calls for proposals depending on the type of vehicle, based, for example, on vehicle length and transport capacity.
21. The eligible costs for Sub-measure 2 (private recharging or refuelling infrastructure) include the investment costs directly linked to the construction and installation or the extension or upgrade of recharging facilities or of hydrogen refuelling infrastructure and of the maintenance equipment required for the buses acquired or retrofitted under Sub-measure 1. These costs include those relating to, for example:
 - (i) for electric buses: chargers, contact systems, transformer stations including power systems, power transmission cabling, and data and communication cabling,
 - (ii) for fuel-cell buses: compressors, hydrogen storage tanks and equipment, dispensers, cooling and ventilation systems, cabling and piping, and
 - (iii) for biomethane buses: compressors, storage tanks and equipment, dispensers, cabling and piping.
22. The eligible costs for Sub-measure 3 (environmental studies) are the costs of the study.

2.7. Aid intensity

23. The maximum aid intensities will be the following:
 - a. for Sub-measure 1:

⁷ Undertakings in difficulty (as defined in the Communication from the Commission — Guidelines on State aid for rescuing and restructuring non-financial undertakings in difficulty, OJ C 249, 31.7.2014, p. 1) or subject to a Commission decision ordering recovery of unlawful aid, are excluded.

- i. 80% for the acquisition (purchase or the renting/leasing) of battery-electric buses or fuel-cell-powered buses;
 - ii. 40% for the acquisition (purchase or the renting/leasing) of biomethane-fuelled buses;
 - iii. 80% for the retrofitting of diesel buses;
- b. for Sub-measure 2: 40% for the construction, installation, upgrade or extension of private recharging and refuelling facilities;
 - c. for Sub-measure 3: 50% for the performance of environmental studies.
24. The aid intensities under Sub-measures 2 and 3 may be increased by 10 percentage points for medium-sized enterprises or by 20 percentage points for small enterprises⁸.
25. In addition, the eligible costs under Sub-measure 1 will be subject to the price limits shown in Table 1:

Table 1: Ceiling price for the eligible costs

EU vehicle class	Diesel comparator (EUR)	Battery bus (EUR)	Fuel-cell bus (EUR)	Biomethane bus (EUR)	Battery bus (retrofitting) (EUR)	Fuel-cell bus (retrofitting) (EUR)
Small bus (M2) transporter base, up to 8 m	120 000	270 000	340 000	160 000	100 000	170 000
Midi bus (M3) 8-10.6 m	220 000	450 000	550 000	240 000	230 000	220 000
Solo bus (M3) 10.6-16 m	230 000	570 000	590 000	250 000	340 000	360 000
Articulated bus (M3) from 16 m	320 000	730 000	800 000	360 000	410 000	480 000

26. An evaluation plan is necessary as the average annual budget of the notified scheme exceeds EUR 150 million (see recital 13 and Section 2.11).

2.8. Selection of beneficiaries and projects

27. The aid will be granted based on objective selection and eligibility criteria specified during calls for proposals. Separate calls will be organised for vehicles and

⁸ As defined in paragraph (19) point (17) of the EEAG.

infrastructure (Sub-measures 1 and 2) and for studies (Sub-measure 3). There will in principle be one call for proposals per grouping of sub-measures every year for the duration of the notified scheme.

28. For Sub-measures 1 and 2, the aid will be granted in two stages. The aid beneficiaries and the projects will be selected through a competitive bidding process conducted in an open, non-discriminatory and transparent manner. Following the publication of a call for proposals, applicants will submit project outlines describing each project (Phase 1).
29. The project outlines received in Phase 1 will be assessed by the body entrusted with the operational management of the selection of applicants (Projekträger Jülich – Forschungszentrum Jülich GmbH) according to the criteria set out in the call for proposals and in the accompanying instructions for applicants. The criteria concern: (i) the expected annual mileage of the buses, which are the subject of the aid application, (ii) the current and expected proportion of alternative fuel buses in the operator's fleet, (iii) local hydrogen production from renewable energies and regional production of methane from biomass, (iv) passenger transport numbers, (v) the planned overall reduction in greenhouse gas emissions and the link between the amount of greenhouse gas emissions avoided and the amount of aid requested, and (vi) the operating area of the buses, which are the subject of the aid application.
30. Eligible projects will be selected and ranked according to their achieved score. The score of each project will be determined *inter alia* by the expected aid amount and the level of CO₂ reduction that is planned to be achieved. The CO₂ savings (in t) will be determined by comparing the CO₂ emissions per km of the conventional vehicle that will be replaced or that would have been used in the absence of the aid and those of the new or retrofitted vehicle and by the expected mileage (in km) of the new or retrofitted vehicle. The aid amount will be determined as the difference between the cost of the new bus and the cost of the corresponding conventional diesel vehicle. Projects with high infrastructure costs, for example hydrogen fuel-cell bus projects including refuelling stations, will thus receive a lower score for the same amount of CO₂ reduction due to the higher required aid amount. This means that an application with higher CO₂ savings and a lower aid amount will be ranked higher than one that requires a higher aid amount for the same amount of CO₂ savings. More specifically, the ranking will be based on the product of two factors: (i) an environmental benefit factor (estimated CO₂ savings per km × theoretical number of passenger-kilometres) and (ii) an efficiency factor: (t CO₂ avoided / EUR of aid).
31. In Phase 2, the applicants with the highest scoring projects will be invited, in descending order starting from the first ranking proposal, to submit a formal application for funding. The total number of applicants invited will depend on the size of the highest-scoring projects, taking into account the available budget. Depending on the available funding budget, only the project outlines with the highest scores and a maximum of 80% of all project outlines received will be invited to submit applications. Priority will be given in each case within each technology pathway. In case of sufficient funding being available for more than 80% of the project outlines received in Phase 1, the 80% rate will however be applied to the project outlines with the highest scores and only they will be invited to submit an application:

- a. If the call for proposals is not oversubscribed and there is sufficient funding available, the highest ranked 80% of the projects in each technology pathway (battery, fuel cell, biomethane, open technology) will be funded.
 - b. If the call for proposals is oversubscribed and there is insufficient funding available, depending on the available funding, the percentage of projects that can be funded will then be determined and will be the same for all technology pathways. However, more than 80% of the project outlines received will never be supported in each technology pathway.
32. For Sub-measure 3, a one-step application procedure will apply whereby applicants will be invited to submit funding applications under separate calls for proposals. The applications will be evaluated according to the objective criteria defined for each call such as in particular the creditworthiness, eligible aid recipients, application formalities, exclusion of double funding.
 33. A decision on funding will be made in accordance with the selection after final review of the application. The aid will be disbursed on the basis of a granting decision.

2.9. Cumulation

34. The German authorities have committed to ensure that aid under the 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.

2.10. Reporting, monitoring and transparency

35. The German authorities will annually submit to the Commission the reports provided for by Article 26 of Council Regulation (EU) 2015/1589⁹. They will maintain for at least 10 years from the date of award of the aid, detailed records containing the information and supporting documentation necessary to establish that all compatibility conditions are met, and provide them, on written request, to the Commission within a period of 20 working days or such longer period as may be fixed in the request.
36. The German authorities have confirmed that they will comply with the transparency rules set out in Section 3.2.7 of the Guidelines on State aid for environmental protection and energy¹⁰ ('EEAG'), i.e. publication on a website of the text of the scheme, the identity of the granting authority and – except if the individual aid remains below EUR 500 000 – the identity of the beneficiaries, the form and amount

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

¹⁰ OJ C 200, 28.6.2014, p. 1, as amended and prolonged until 31 December 2021 by Communication from the Commission C/2020/4355 concerning the prolongation and the amendments of the Guidelines on Regional State Aid for 2014-2020, Guidelines on State Aid to Promote Risk Finance Investments, Guidelines on State Aid for Environmental Protection and Energy 2014-2020, Guidelines on State aid for rescuing and restructuring non-financial undertakings in difficulty, Communication on the Criteria for the Analysis of the Compatibility with the Internal Market of State Aid to Promote the Execution of Important Projects of Common European Interest, Communication from the Commission – Framework for State aid for research and development and innovation and Communication from the Commission to the Member States on the application of Articles 107 and 108 of the Treaty on the Functioning of the European Union to short-term export-credit insurance, OJ C 224, 8.7.2020, p. 2.

of the aid, the date of granting, the type of undertaking, the region in which the beneficiaries are located and the principal economic sector in which beneficiaries have their activities). The Funding Guidelines will be published on the website of the German Federal Gazette (www.bundesanzeiger.de) and information on the notified scheme will be published in the funding database of the German Federal Government (<https://foerderportal.bund.de/foekat>).

2.11. Evaluation

37. The notified scheme will apply until 31 December 2025. By 30 June 2025, the German authorities will submit to the Commission a final report, which will assess the performance of the scheme until 31 December 2024. The German authorities have committed to submit an additional evaluation report to the Commission no later than one year after the end of validity of the Funding Guidelines (31 December 2026); this additional report will present the results of the complete evaluation of the scheme.
38. In order to keep the Commission updated about the progress of the evaluation in terms of data collection and methodologies (including any potential difficulties encountered), the German authorities have committed to submit intermediate evaluation reports throughout the duration of the scheme: data collection on outlines/applications and on market and technology (starting from year 1 until the end of the scheme); data collection on project reports and preparation of control questions and identification of control groups, possible adjustments to data collection (starting from year 2 until end of the scheme), final evaluation based on monitoring data (last year of the scheme and one year after the scheme, i.e. 2026).
39. The evaluation plan submitted by the German authorities includes nine evaluation questions to assess the scheme's outputs and its direct effects on the beneficiaries, its indirect effects, the proportionality of the aid and the appropriateness of the chosen aid instrument.
40. The evaluation will provide general information on whether the aided projects have led to market take-up, for which specific technologies, in which time periods and in which regions. Based on these considerations, the following evaluation questions are formulated (direct effects of the aid on the beneficiary):
 - a. Has the aid helped accelerate investment in fleet renewal?
 - b. Has the aid contributed to increased use of renewable energy?
 - c. What technology is gaining acceptance in specific application areas? Is the aid relevant to a technology decision?
 - d. What are the implementation periods required by transport companies and have these been accelerated by the aid?
41. The evaluation will therefore primarily analyse how the projects have been designed and will focus on their contribution to achieving the set environmental goals.
42. In addition, the evaluation will provide insights into the impact of certain specific features of the scheme. In particular, it will examine: (i) whether the market supply and the technological diversity of different models of buses and infrastructure have

increased; (ii) whether the price of buses has decreased; and (iii) what influence the aid has had on the market situation (e.g. on demand, suppliers, delivery times, imports/exports).

43. Moreover, the evaluation will provide general information, in particular, on the proportionality of the aid and the appropriateness of the aid instrument, such as (i) whether the aid scheme was efficient and whether the amount of aid granted was proportional to the total investment achieved, and (ii) whether the aid scheme was proportional to the task, and whether the objective could have been achieved with less aid or another form of aid.
44. For the majority of evaluation questions and indicators, quantitative statistical methods will be used. These will be supplemented by qualitative evaluation and, in individual cases, will be supported by interviews with market participants. Technical and market monitoring will be carried out during the measure by Projektträger Jülich – Forschungszentrum Jülich GmbH and the programme company NOW GmbH. The resulting dataset will be made available to an evaluation panel (independent service provider) to perform an evaluation on the direct and indirect impacts.
45. The quantitative evaluation of the data will be supplemented by a qualitative investigation of facts by the independent service provider. The companies involved will be given the opportunity to comment on individual aspects in a supplementary manner. Feedback from market participants on the published interim and annual reports will be used for this purpose.
46. The evaluation will be conducted by an independent external evaluator which will be selected through an open tender procedure.
47. The interim and final evaluation reports will be published on the website of by the German Federal Ministry of Transport and Digital Infrastructure. The German authorities have indicated that they will take into account the evaluation results for future policy-making.

3. ASSESSMENT OF THE MEASURE

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

48. 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.’*
49. The qualification of a measure as State aid thus requires the following conditions to be met cumulatively: (i) the measure must be financed through State resources and be imputable to the State; (ii) it must grant a selective advantage liable to favour certain undertakings or the production of certain goods; (iii) the measure must distort or threaten to distort competition and (iv) the measure must have the potential to affect trade between Member States.

3.1.1. *Imputability and involvement of State resources*

50. The aid is financed from the federal budget of Germany and awarded based on the Funding Guidelines issued by the German Federal Government (recitals 12 and 13). The Commission concludes that the measure is financed from State resources and is imputable to the German State.

3.1.2. *Existence of a selective advantage*

51. An advantage, within the meaning of Article 107(1) TFEU, is any economic benefit, which an undertaking would not have obtained under normal market conditions, that is to say in the absence of State intervention¹¹. Article 107(1) TFEU also requires that a measure, in order to constitute State aid, is selective in the sense that it favours ‘*certain undertakings or the production of certain goods*’.
52. By reducing, through direct grants (recital 19) the investment costs for the acquisition of alternative fuel buses or retrofitting (Sub-measure 1) and for the installation of refuelling or recharging facilities for such vehicles (Sub-measure 2) as well as the costs of related environmental studies (Sub-measure 3), the aid procures an economic advantage that its beneficiaries would not have obtained under normal market conditions.
53. The notified measure is selective as only undertakings active in the sector of local passenger transport by road in Germany are eligible (recitals 15 and 18), and individual aid beneficiaries will be selected within the limits of the available budgetary appropriations based on a competitive bidding process.

3.1.3. *Impact on competition and on trade between Member States*

54. In accordance with settled case-law¹², when aid granted by a Member State strengthens the position of an undertaking compared with that of other undertakings competing in intra-Union trade, the latter must be regarded as affected by that aid. For a measure to impact competition and trade it is sufficient that the recipient of the aid competes with other undertakings on markets open to intra-EU competition.
55. The notified measure is capable of strengthening the position of certain undertakings active in the local passenger transport sector in which trade between Member States exists. The measure therefore has potentially distortive effects on competition and is likely to affect trade between Member States.

3.1.4. *Conclusion regarding the existence of State aid*

56. In light of the above, the Commission concludes that the notified measure involves State aid within the meaning of Article 107(1) TFEU.

¹¹ See judgments of the Court of Justice of 11 July 1996, *SFEI and Others*, C-39/94, EU:C:1996:285, paragraph 60, and of 29 April 1999, *Spain v Commission*, C-342/96, EU:C:1999:210, paragraph 41.

¹² See judgments of the Court of Justice of 17 September 1980, *Philip Morris v Commission*, Case 730/79, EU:C:1980:209, paragraph 11; of 22 November 2001, *Ferring*, C-53/00, EU:C:2001:627, paragraph 21; and of 29 April 2004, *Italy v Commission*, C-372/97, EU:C:2004:234, paragraph 44.

¹² See judgment of the Court of 30 April 1998, *Het Vlaamse Gewest v Commission*, ECLI:EU:T:1998:77.

3.2. Legality of the measure

57. By notifying the measure, which has not been put into effect (recital 12), the German authorities have respected the notification and standstill obligation laid down in Article 108(3) TFEU.

3.3. Compatibility of the measure

3.3.1. Legal basis for assessment

58. The notified measure aims to facilitate the development of certain environmentally-friendly economic activities, and will thus be assessed under the relevant provisions of the EEAG. More specifically, Sub-measure 1 promotes the development of the local (public) passenger transport sector by supporting investments to acquire alternative fuel buses or retrofit diesel buses to allow going beyond the currently applicable emission standards for heavy-duty vehicles (Euro VI). It thus qualifies as environmental protection investment going beyond Union standards and is therefore to be assessed under Section 3.2 of the EEAG. The private recharging and refuelling infrastructure targeted by Sub-measure 2 can only be supported under the scheme if they are applied for in the context of the acquisition of an alternatively fuelled bus under Sub-measure 1. As they are intended to be kept private (not open for third parties' access, i.e. to only serve the needs of the beneficiary in carrying out its economic activities) and their main purpose will be to serve the beneficiary who acquired a supported vehicle, they form thus an integral part of the environmental protection investment covered by Sub-measure 1, and have to be assessed under the same provisions. In fact, where recharging and refuelling facilities can be considered as solely ancillary facilities to the acquired vehicle, thus with the only purpose to serve the beneficiary who acquired a supported vehicle, for its compatibility assessment the provisions of the EEAG would apply. Sub-measure 3 concerns aid for environmental studies and the provisions of paragraph 18(c) of the EEAG therefore apply.
59. Thus, for the scheme's compatibility assessment (Sub-measures 1, 2 and 3) the Commission's EEAG apply. The EEAG, Section 3, identifies several environmental 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*".

3.3.2. Contribution to the development of certain economic activity

60. Under paragraph (18)(a) of the EEAG, 'aid for going beyond Union standards or increasing the (including aid for the acquisition of new transport vehicles)' may under certain conditions be compatible with the internal market under Article 107(3)(c) TFEU: To that end the compatibility criteria set out in the EEAG and assessed in the following sections must be fulfilled. Contribution to the development of certain economic activities

61. Article 107(3)(c) TFEU provides that the Commission may declare compatible ‘*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*’. Therefore, to be declared compatible under that provision of the TFEU, aid must first facilitate the development of certain economic activities¹³.

a) Identification of the supported economic activity

62. The notified scheme and its sub-measures aim to support the development of the use of alternative fuel buses in local (public) passenger transport services. The Commission therefore considers that the aid scheme targets ‘*the development of certain economic activities*’ within the meaning of Article 107(3)(c) TFEU.

b) Aid facilitating the development of the economic activity

63. State aid facilitates the development of the economic activity if it incentivises the beneficiary to change its behaviour towards the development of a certain economic activity and if the change in behaviour would not occur without the aid¹⁴.

64. As the aid will support parts of the costs that undertakings would have to incur to carry out feasibility studies regarding the acquisition of alternative fuel buses and to their use (Sub-measure 3), and to finance part of the extra investment costs that result from acquiring or retrofitting buses with alternative fuel systems (Sub-measure 1) and indirect (linked recharging or refuelling infrastructure) investment costs that result from acquiring alternatively fuelled buses under Sub-measure 1 (Sub-measure 2), such aid will reduce the risks resulting from those activities or investments and will thus induce more bus operators to switch to alternative fuel buses than would happen in the absence of the aid. The alternative fuel buses targeted by Sub-measure 1, and supported by aid for the necessary private recharging and refuelling infrastructure under Sub-measure 2 and for environmental studies under Sub-measure 3 offer a higher level of environmental protection than those required by the applicable EU standard (currently Euro VI) for diesel-based models that would be acquired in the counterfactual situation.

65. On the basis of the information provided by the German authorities, the Commission further understands that without the aid for the procurement of recharging or refuelling infrastructure, operators of bus fleets would have little or no incentive to invest, as the investment costs could not be offset by corresponding financial savings. Making aid available to cover part of the costs associated with setting up recharging or refuelling stations will eliminate some of the risks borne by the operators. It will thus likely incentivise those companies to make the necessary investments or increase their investments in electric recharging or refuelling infrastructure compared to the situation in the absence of aid.

66. Under the applicable legislation, eligible projects cannot start before an application is made. The formal incentive effect criterion as set out by paragraph 50 EEAG is therefore respected.

¹³ See judgment of the Court of 22 September 2020, *Austria v Commission*, C-594/18 P, EU:C:2020:742 (‘the *Austria v Commission* judgment’), paragraphs 19, 20 and 24.

¹⁴ See, in that sense, Section 3.2.4. of the EEAG and the *Austria v Commission* judgment, paragraph 60.

67. On this basis, the Commission concludes that the scheme has an incentive effect, as the aid will help to incentivise bus operators to replace or retrofit their vehicles with alternative fuel models, hence contributing to a positive change of behaviour in terms of environmental protection for the economic activity in the local (public) passenger transport sector.

3.3.3. *Absence of adverse effects on trading conditions to an extent contrary to the common interest*

a) Positive effects of the aid

68. The notified measure can be expected to have a range of positive effects in facilitating the development of the economic activity of the local (public) passenger transport sector due to the effect on an increased demand for the supply of alternatively fuelled buses supported under the measure (see recitals 63 to 67).
69. Furthermore, the notified measure will have positive effects in terms of environmental protection and climate change mitigation by contributing to CO₂ emissions and local pollution reduction, in accordance with the carbon-neutrality objectives set out in the European Green Deal¹⁵. According to the European Green Deal and to the European Sustainable and Smart Mobility Strategy¹⁶, transport accounts for a quarter of Europe's greenhouse gas emissions and is the main cause of air pollution in cities. One milestone on reducing the current dependence on fossil fuels is the aim that by 2050, nearly all buses will be zero-emission¹⁷. As the notified measure aims to stimulate the uptake of alternative fuel buses in Germany by compensating the net extra costs for the acquisition or retrofitting of such vehicles, it will incentivise bus operators to switch from diesel buses to more climate-friendly ones and will therefore contribute to the development of the supported economic activities. By doing so, the measure is also expected to contribute to the avoidance of approximately 3.4 million tonnes of local CO₂ emissions¹⁸, to the improvement of air quality and to the reduction of traffic noise, thereby having positive effects on the achievement of national¹⁹ and EU CO₂ reduction targets²⁰. These positive effects will be increased by Sub-measure 3 which will support the costs of feasibility studies that bus operators would have to carry out in order to prepare and analyse the possible applications of alternative drive buses.

¹⁵ Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions, The European Green Deal (COM(2019) 640 final).

¹⁶ Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions, Sustainable and Smart Mobility Strategy – putting European transport on track for the future (COM(2020) 789 final).

¹⁷ See recital (7).

¹⁸ See recital (9).

¹⁹ See recital (7).

²⁰ The Commission has set a new EU target for 2030 of reducing greenhouse gas emissions by at least 55% compared to levels in 1990, Regulation (EU) 2021/1119 of the European Parliament and of the Council of 30 June 2021 establishing the framework for achieving climate neutrality and amending Regulations (EC) No 401/2009 and (EU) 2018/1999 ('European Climate Law'), OJ L 243, 9.7.2021, p. 1.

70. In addition, the Commission notes that Sub-measure 2 is expected to have positive effects in terms of environmental protection, as it will support bus operators to install refuelling or recharging facilities and to acquire the necessary maintenance equipment, thereby promoting the development of economic activity in the local (public) passenger transport sector in an environmental-friendly manner. By facilitating support for such infrastructure, the aid will encourage bus operators to acquire and use alternative drive buses instead of diesel buses.
71. The aid will therefore also contribute to environmental protection by helping to reduce CO₂ emissions and air and noise pollution (see recital 9).

b) Negative effects of the aid

72. Paragraph 97 of the EEAG lays down that, when assessing the negative effects of an aid measure, the Commission must assess the impact on competition between undertakings in the product markets affected and on the location of economic activity.
73. The Commission considers that the scheme could potentially distort competition between undertakings present on the local (public) passenger transport market as the implementation of the scheme will lead to a situation where some undertakings will receive aid, namely those that apply and are selected, and some will not, namely those that are not eligible, that do not apply or that are not selected. This may strengthen the position of the undertakings that will receive aid under the scheme compared to those that, if they decide to acquire or retrofit alternative fuel buses as well as when installing private recharging or refuelling infrastructure and/or carry out environmental studies to that effect, will have to do so at their own cost entirely.

i) Need for State intervention (Section 3.2.2 of the EEAG)

74. According to paragraph 34 of 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. In order to demonstrate the necessity of the measure, it has to be established that the measure enables the development of an economic activity that would not have taken place absent the measure, or at least would not have taken place on the same terms.
75. The Commission notes that due to the current market situation of alternative fuel buses, the market is currently not in a position on its own to produce an efficient result regarding the national environmental targets²¹ (due to the high prices of such vehicles).
76. In this context, Germany has submitted information showing that, at present, the buses in operation in Germany are almost exclusively diesel-powered, which results in high CO₂ emissions, that comparable alternative fuel models are currently limited, and that high additional investment costs are currently required for alternative fuel buses and for the necessary recharging or refuelling facilities (see recitals 9 and 10).

²¹ See recital (7).

77. The Commission considers that it is necessary to promote the acquisition of such buses in order to create stronger market demand for such vehicles, which will ultimately also increase their availability.
78. The notified aid scheme therefore aims to further accelerate the deployment of alternative fuel buses that would not take place without aid, as the cost of environmental damage is not yet sufficiently internalised in bus operators' profitability calculations that underpin their investment decisions. The additional investment cost does not lead, at this stage of market development and given current price structures, to cost savings that would exceed the additional investment cost. Based on information provided by the German authorities, it appears that bus operators are thus not willing to invest in climate-friendly vehicles, as they would not be able to recoup the additional investment costs.
79. In this context, and based on the submitted information, the Commission notes that other regulatory measures that have been put in place thus far²² are not sufficient to fully compensate for the market entry barriers especially with regard to the additional investment costs for such vehicles. The main obstacles to addressing the remaining market failure are that: (i) aid intensities are too low to achieve a sufficiently high incentive effect to induce undertakings to make the high investment costs in larger fleets, (ii) other measures are in part regionally limited and thus only cover a small part of the market, (iii) there is a lack of sufficient funding to achieve a self-sustaining market for alternative fuel buses through substantial economies of scale in pricing, and (iv) some existing measures are only of a specific character, i.e. they are not suitable for the acquisition of larger fleets of buses.
80. By granting aid for additional investment costs for alternative fuel buses and therefore the reduction of the overall cost disadvantage compared to an acquisition of conventional diesel models, and for the performance of studies, the notified measure is thus a necessary tool to ramp up and accelerate the development of clean mobility in the local (public) passenger transport sector and increase the number of registrations of alternative fuel buses while also decreasing CO₂ emissions in the aforementioned sector.
81. The bus operators by switching to alternative fuelled buses would face considerable additional costs, which, however, could not be recuperated through an increase to the price of the transport service due to the regulated or semi-regulated nature of the economic environment in which they operate.

²² Other measures to promote buses, in addition to that of the German Federal Ministry for the Environment (SA.48190), included, until the end of 2020 and 2019, respectively, the German Federal Ministry for Transport and Digital Infrastructure's funding guidelines for battery-electric buses (SA.50122) and fuel cell buses (SA.48217). Both measures provided for State aid on the basis of Commission Regulation (EU) No 651/2014 of 17 June 2014 declaring certain categories of aid compatible with the internal market in application of Articles 107 and 108 of the Treaty, OJ L 187, 26.6.2014, p. 1, for the acquisition of buses and their infrastructure. The maximum aid intensity for buses was 40% of the additional investment costs.

82. As outlined above, several risk factors, in particular the early stage of development of the market for alternative fuel buses and the associated high investment costs, currently prevent transport operators from an environmentally-friendly transition without incentives.
83. For the same reasons, as regards the recharging and refuelling infrastructure required for the use of alternative drive buses, it is unlikely that operators would be capable of investing in the necessary recharging or refuelling infrastructure without aid. The use of alternative fuel buses for local (public) passenger transport services requires the presence of private recharging or refuelling infrastructure at bus depots or bus terminals. Investments for the acquisition of alternative fuel buses are therefore subordinated to corresponding investments in recharging or refuelling infrastructure.
84. As described in recital 27, both types of investments (vehicles and fixed infrastructure) will in fact be assessed jointly as part of the same calls for proposals.
85. As the need for investments in recharging and refuelling infrastructure is directly related to the level of investment in alternative fuel vehicles, in the absence of aid for the construction and installation of recharging or refuelling infrastructure, it is likely that many operators would have to reduce the level of their investment in vehicles in order to preserve some of their financial capacity for investing in the necessary recharging or refuelling infrastructure.
86. Aid for recharging and refuelling infrastructure will therefore increase the capacity of transport operators to invest in alternative fuel buses and thus contribute to the reduction of emissions in the local (public) passenger transport sector in Germany.
87. In light of the above, the Commission considers that all three sub-measures are necessary to support the development of an economic activity.
 - ii) Appropriateness of the aid measure (Section 3.2.3 of the EEAG)
88. In accordance with paragraph 40 of the EEAG, *‘an aid measure must be an appropriate instrument to address the policy objective concerned’* and *‘an aid measure will not be considered compatible with the internal market if the same positive contribution to the common objective is achievable through other less distortive policy instruments or other less distortive types of aid instruments’*.
89. As regards the examination of appropriateness among alternative policy instruments (see paragraphs (41) to (44) of the EEAG), paragraph (42) of the EEAG sets out that *‘State aid is not the only policy instrument available to Member States to promote increased levels of environmental protection’* and that *‘there may be other, better placed instruments to achieve those objectives’*.
90. In this case, the scheme addresses already partially the issue of externalities, notably the high cost of alternative fuel buses. The scheme aims to support projects and technologies in the local (public) passenger transport sector for which a residual market failure still exists.

91. There is no alternative policy instrument besides aid, which would incentivise bus operators to acquire alternative fuel vehicles in significant numbers. Soft measures such as an environmental label visible to consumers, appear insufficient, as instruments based on image would not influence consumer behaviour to an extent that would offset the high additional costs linked to the acquisition of alternative fuel buses. Other policy instruments such as measures of a fiscal or regulatory nature cannot be considered as an alternative to aid, but solely as a complement. This is because, currently, the market share of alternative fuels buses is very low (see recital 9), which demonstrates that fiscal or regulatory measures alone are insufficient.
92. As regards the examination of appropriateness among different aid instruments (see paragraphs (45) to (48) of the EEAG), paragraph (46) of the EEAG sets out that *'the choice of the aid instrument should be coherent with the market failure that the aid aims at addressing'*.
93. The market failure, which the aid scheme aims at addressing is the lack of financial capacity of private operators to undertake investments into alternative fuel buses, which present high additional costs and low profitability.
94. The lack of financial capacity of operators in the public transport sector to invest in alternative fuel technologies is not due primarily to difficulties in access to finance but rather to the low profitability of commercial operations in the public transport sector in general (due to high investment and operating costs and regulated operations and prices), which, coupled to the high capital costs of such investments, make it difficult for large-scale investments in fleet renewal to be economically viable.
95. This type of market failure is appropriately addressed through direct grants, which enable to reduce the capital requirements of an investment project and to improve its economic viability, and not through other aid instruments such as debt or equity instruments (which may serve to improve access to capital, to leverage additional credit, to reduce debt service costs or to increase cash-flow and capital reserves) or tax advantages (which may serve to offset certain liabilities).
96. The Commission therefore considers that for the scheme, the type of aid chosen is appropriate to address the observed market failure.

iii) Proportionality of the aid (Section 3.2.5 of the EEAG)

97. According to paragraphs 69 and 70 of the EEAG, environmental aid is considered to be proportionate if the aid amount per beneficiary is limited to the minimum needed to achieve the targeted objective. For measures which are not subject to an individual assessment, aid will be considered to be limited to the minimum necessary if (see paragraph 71 of the EEAG) it does not exceed an aid intensity calculated with regard to the applicable eligible costs, as defined in paragraphs 72 to 76 of the EEAG. Annex I to the EEAG lays down an aid intensity ceiling of 40% (plus 10 percentage points for medium-sized or 20 percentage points for small enterprises, further referred to as the 'SME bonus') for environmental investment aid for undertakings going beyond Union standards or increasing the level of environmental protection in the absence of Union standards, and an aid intensity of 50% for environmental studies (plus the same SME bonus). According to paragraph 80 of the EEAG, however, where aid to the beneficiary for environmental protection

investments falling under Section 3.2 of the EEAG is granted in application of a competitive bidding process, which is based on clear, transparent and non-discriminatory criteria, the maximum aid intensity may reach up to 100% of the eligible costs. In fact, the competitive application process should allow selecting those beneficiaries that address the targeted objective using the least amount of aid, or using it in the most cost-effective way, and thus help to maximise the effectiveness of the aid scheme, while limiting aid amounts to a minimum (and thus also the resulting aid-induced distortions of competition).

98. In accordance with Annex II of the EEAG, the eligible costs under Sub-measure 1 are the additional costs of an alternative fuel bus compared to an equivalent conventional diesel model. Therefore, in line with paragraphs 72 and 73 of the EEAG, the eligible costs consist in the additional investment costs necessary to acquire or retrofit buses with climate-friendly alternatively fuel systems, or the total investment expenditures, if the costs can be determined as a separate investment.
99. The eligible costs for Sub-measure 2 (private recharging or refuelling infrastructure) include the investment costs directly linked to the construction and installation or the extension or upgrade of recharging and refuelling infrastructure and of the maintenance equipment required for the buses acquired or retrofitted under Sub-measure 1 (see recital 21 above).
100. For studies under Sub-measure 3, the eligible costs are the costs of the studies. The eligible costs of all Sub-measures are therefore defined in line with the provisions of the EEAG.
101. As explained in Section 2.8, the notified measure involves a competitive bidding process that has been specifically designed to be open to a particularly wide range of projects (first and foremost due to the wide range of technologies supported, see recital 11) that may contribute to facilitating the development of the economic activities in question. Furthermore, given the large number of potentially eligible undertakings, not all the operators participating in the bidding process will necessarily receive a grant. All the criteria to submit bids are defined in advance in a clear and transparent way (see Section 2.8). As the notified maximum aid intensity for Sub-measure 1 is 80% of the eligible costs for battery-electric and fuel-cell-powered buses, 40% for biomethane-powered buses and the individual aid awards result from a competitive bidding process, the Commission considers that Sub-measure 1 is proportionate. The maximum aid intensity under Sub-measure 2 is 40% of the eligible investment costs (plus an SME bonus, if applicable). Also here, the notified aid intensity is significantly below the maximum aid intensity allowed under the EEAG (namely up to 100%) in cases where aid is granted in a competitive bidding process, see Section 2.8) and is thus proportionate.
102. Similarly, as the notified aid intensity for Sub-measure 3 amounts to 50% of the costs of studies (plus 10%/20% due to SME bonus), and thus corresponds to the applicable aid intensity ceiling laid down in the EEAG, the Commission considers that the aid under Sub-measure 3 is proportionate.

3.3.4. Avoidance of undue negative effects on competition and trade and balancing test (Section 3.2.6 of the EEAG)

103. On the negative side, the Commission notes that the measure might strengthen the competitive position of some economic players, in particular the aided bus

operators, as opposed to potential competitors and thus could distort competition between players especially on the local (public) passenger transport market (see recitals 72 to 73).

104. However, the competitive bidding process, combined with a price cap for the eligible costs²³ (for Sub-measure 1) and aid intensity ceilings of 80% (or 40% for biomethane buses) for Sub-measure 1, under Sub-measure 2 40% of the eligible investment costs (plus an SME bonus, if applicable), and 50% (plus an SME bonus) for Sub-measure 3); minimise the potential for distortions of competition²⁴. Furthermore, the Commission notes that as demonstrated by the submitted information²⁵, the measure is unlikely to create additional capacity in a declining market or a market characterised by overcapacity. It is also unlikely to crowd out other market participants or investments by other market participants. Therefore, the measure is designed in a way that limits any distortions of competition as much as possible.
105. The Commission also welcomes the fact that the aid scheme is open to different alternative fuel systems (electric, fuel-cell, biomethane).
106. In light of the above, the Commission considers that the negative effects on competition and trade are limited to an extent, which is not contrary to the common interest, and are outweighed by the positive effects for the local (public) passenger transport sector, and the broader environmental positive effects that the aid is expected to bring about.

3.3.5. Transparency (Section 3.2.7 of the EEAG)

107. The Commission notes that the German authorities have committed to comply with the applicable transparency requirements set out in Section 3.2.7 of the EEAG (see Section 2.10) and with the reporting obligations set out in Section 6 of the EEAG.
108. The Commission therefore considers that the German authorities have complied with the transparency and reporting obligations set out in the EEAG.

3.3.6. Conclusion regarding the compatibility of the measure with the EEAG

109. In light of the foregoing (see Sections 3.3.1. to 3.3.5.) the Commission considers that the aid for the acquisition of alternative fuel buses (Sub-measure 1), private recharging and refuelling stations (Sub-measure 2) and for related environmental studies (Sub-measure 3) fulfils the relevant compatibility criteria set out in the EEAG and can thus be declared compatible with the internal market.

²³ See Table 1 at recital 25 above.

²⁴ A rational investor would acquire alternative fuel buses only if their net additional costs were compensated by the aid, or due to the prestige of a 'greener' image that demonstrates environmental awareness and due to reduced operating costs of the alternative fuel systems' vehicles. However, since the aid does not cover operating costs, it does not compensate for normal business risks.

²⁵ See the selection process described in Section 2.8.

3.3.7. Compliance with other provisions of Union law

110. Based on the information submitted by the German authorities, the Commission has no reason to doubt that the measure complies with Union law.

3.3.8. Evaluation plan

111. Paragraph 28 and Chapter 4 of the EEAG state that the Commission may require that certain aid schemes be subject to an evaluation, where the potential distortion of competition is particularly high, that is to say when the measure may risk significantly restricting or distorting competition if its implementation is not reviewed in due time. Given its objectives, evaluation only applies for aid schemes with large aid budgets, containing novel characteristics or where significant market, technology or regulatory changes are foreseen.
112. The scheme fulfils the criteria of being a scheme with a large aid budget, as its annual budget exceeds EUR 150 million (see recital 13); it will therefore be subject to an *ex post* evaluation.
113. The German authorities have notified an evaluation plan, setting out the scope and modalities of the *ex post* evaluation. The plan is described in recitals 37 to 47, with certain elements, in particular the data and methodologies used, being further described in the following recitals.
114. The Commission considers that the notified evaluation plan contains the necessary elements: the objectives of the aid scheme to be evaluated, the evaluation questions, the result indicators, the envisaged methodology to conduct the evaluation, the data collection requirements, the proposed timing of the evaluation including the date of submission of the final evaluation report, the description of the independent body conducting the evaluation or the criteria that will be used for its selection and the modalities for ensuring the publicity of the evaluation. It comprises a list of evaluation questions with corresponding result indicators.
115. The Commission notes that the scope of the evaluation is defined in an appropriate way and adheres to the principles set out in the Commission Staff Working Document on a common methodology for State aid evaluation²⁶.
116. The Commission notes that the evaluation will be conducted according to the notified evaluation plan by an independent evaluation body. The envisaged publication of the evaluation plan and its results on a public website is adequate to ensure transparency (see recitals 46 and 47).

²⁶ Commission Staff Working Document – Common methodology for State aid evaluation, SWD (2014) 179 final.

117. The Commission also notes that the German authorities plan to submit the final evaluation report by 30 June 2025, i.e. in due time before the expiry of the scheme (and an additional report at the latest by the end of 2026 containing a full evaluation of the scheme until its expiry) and that interim evaluation reports will be provided, which will update the Commission on the progress with data collection and the progress to apply the targeted methodologies mentioned above.
118. Moreover, the Commission notes that despite the absence of a particular methodological approach regarding aid for vehicles in passenger transport, the clear specifications of the approval notices and the contractual arrangements based on them ensure that the causal effects of the measure can be clearly recorded and evaluated. In this context, the German authorities have indicated that the current initial situation throughout Europe shows that no significant number of buses with alternative drives based on batteries or fuel-cells and their infrastructure are being purchased without national or EU funding. The defined control questions and control groups are therefore intended to look at the indirect effects on the market in addition to the question of whether a switch to alternative vehicles would nevertheless have taken place without the granting of the aid. It is to be analysed whether the expansion of unit numbers initiated by the aid has an impact on the market. Of particular relevance are aspects relating to the price development for the vehicles, the expansion of the model range, delivery times and the availability of vehicles on the market. For the final evaluation, statements can thus be made about the efficiency of the aid. Difficulties with the definition of control groups concern the unforeseeable acquisition of vehicles without the aid. The German authorities have indicated that it remains open whether transport operators would decide to acquire alternative fuel buses without any financial support. Since it is difficult to predict from the current perspective which control groups will ultimately be usable for an evaluation, potential control groups such as rejected applicants (due to budget or low rank), projects that have not been implemented, etc. will be collected in the data pool by the granting authority. Likewise, technical data on past energy use, etc., presented at the time of application will be collected and evaluated by the granting authority. The German authorities have further explained that in case the evaluation panel is unable to define suitable control groups in individual cases, the German Federal Ministry for Transport and Digital Infrastructure will also consider an international comparison. This is necessary to compare statements on market development and costs under different framework conditions.
119. The Commission therefore considers that the notified evaluation plan meets the requirements set out in point 28 and Chapter 4 of the EEAG.

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 Treaty on the Functioning of the European Union.

Yours faithfully,

For the Commission

Margrethe VESTAGER
Executive Vice-President