Commission Implementing Decision (EU) 2020/728 of 29 May 2020 on the approval of the efficient generator function used in 12 volt motor-generators for use in certain passenger cars and light commercial vehicles as an innovative technology pursuant to Regulation (EU) 2019/631 of the European Parliament and of the Council (Text with EEA relevance)

COMMISSION IMPLEMENTING DECISION (EU) 2020/728

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(Text with EEA relevance)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Regulation (EU) 2019/631 of the European Parliament and of the Council of 17 April 2019 setting CO_2 emission standards for new passenger cars and for new light commercial vehicles, and repealing Regulations (EC) No 443/2009 and (EU) No 510/2011[(1)], and in particular Article 11(4) thereof,

Whereas:

(1) On 20 September 2019, the manufacturers Bayerische Motoren Werke AG, Daimler AG, FCA Italy S.p.A, Honda Motor Europe Ltd, Hyundai Motor Europe Technical Center GmbH, Jaguar Land Rover LTD, Automobile Citroen, Automobile Peugeot, PSA Automobiles SA, Renault, SEG Automotive Germany GmbH, Volkswagen AG, Volkswagen AG Nutzfahrzeuge and the supplier Valeo Electrification Systems jointly made a request as provided for by Article 12a of Commission Implementing Regulation (EU) No 725/2011[(2)] to amend Commission Implementing Decision (EU) 2017/785[(3)] in order to extend the approval of the innovative technology to its use in certain not-off-vehicle charging hybrid electric vehicles (NOVC-HEVs) of category M_1 and passenger cars capable of running on certain alternative fuels.

(2) On 1 October 2019, the manufacturers Daimler AG, FCA Italy S.p.A, Hyundai Motor Europe Technical Center GmbH, Jaguar Land Rover LTD, Mitsubishi Electric Corporation, Opel Automobile GmbH-PSA, Automobile Citroen, Automobile Peugeot, PSA Automobiles SA, Renault, SEG Automotive Germany GmbH, Volkswagen AG, Volkswagen AG Nutzfahrzeuge and the supplier Valeo Electrification Systems submitted a joint application for the approval, in accordance with Article 11 of Regulation (EU) 2019/631, as an innovative technology, of the efficient generator function in 12 volt motor-generators for use in certain light commercial vehicles,

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including certain NOVC-HEVs and light commercial vehicles capable of running on certain alternative fuels.

(3) A 12 volt motor-generator may operate as either an electric motor converting electrical energy into mechanical energy, or a generator converting mechanical energy into electrical energy, i.e. similarly as an alternator. The technology subject to the amendment request and the application is defined as an efficient generator function of the 12 volt motor-generator.

(4) Considering that the amendment request and the approval application refer to the same innovative technology and that the same conditions apply for its use in the vehicle categories concerned, it is appropriate to address both the amendment request and the approval application in one single decision.

(5) The amendment request and the approval application have been assessed in accordance with Article 11 of Regulation (EU) 2019/631, Implementing Regulation (EU) No 725/2011 and Commission Implementing Regulation (EU) No 427/2014[(4)] as well as the Technical Guidelines for the preparation of applications for the approval of innovative technologies pursuant to Regulation (EC) No 443/2009 of the European Parliament and of the Council[(5)] (July 2018 version)[(6)]. Both the request and the application fulfilled the formal requirements; in accordance with Article 11(3) of Regulation (EU) 2019/631, they were notably accompanied by a verification report undertaken by an independent and certified body.

(6) The efficient generator function of a 12 volt motor-generator has already been approved for use in conventional combustion engine powered passenger cars by Implementing Decision (EU) 2017/785 as an innovative technology capable of reducing CO_2 emissions in a way that is only partially covered by the measurements performed as part of the emission test under the New European Driving Cycle set out in Commission Regulation (EC) No 692/2008[(7)]. The assessment shows that the approved eco-innovation is capable of reducing CO_2 emissions under the same conditions also for other vehicle categories.

(7) More precisely, the applicants have demonstrated that the efficient generator function of a 12 volt motor-generator is capable of reducing CO_2 emissions in conventional combustion engine powered light commercial vehicles in the same way as for passenger cars with the same kind of powertrain.

(8) With regard to NOVC-HEVs of categories M_1 and N_1 for which uncorrected measured fuel consumption and CO_2 emission values may be used in accordance with point 5.3.2 of Annex 8 to Regulation UN/ECE No 101[(8)], it is appropriate to consider them equivalent for the purpose of this Decision to conventional combustion engine-powered M_1 and N_1 vehicles.

(9) The applicants have demonstrated that the testing methodology set out in Implementing Decision (EU) 2017/785 for testing CO_2 savings from the use of the efficient generator function in 12 volt motor-generators in conventional combustion engine powered passenger cars is appropriate for determining such savings from the use of the technology in light commercial vehicles as well as for certain M_1 and N_1 NOVC-HEVs.

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(10) The applicants have requested that, due to the increasing share of passenger cars and light commercial vehicles capable of running on liquefied petroleum gas (LPG), compressed natural gas (CNG) or E85, the scope of this Decision should include also such vehicles, and that consequently some factors in the testing methodology should be adjusted accordingly.

(11) Considering the limited availability of E85 on the Union market as a whole, it is, however, not appropriate to distinguish this fuel from petrol for the purpose of the testing methodology.

(12) With regard to the addition to the testing methodology of a run-in procedure for the motor-generator, the application does not set out with sufficient precision the details for how such run-ins should be performed nor how the run-in effect should be taken into account. Moreover, it is already integral to the testing methodology set out in Implementing Decision (EU) 2017/785 that such effects may be taken into account, where necessary, by the requirement that the efficiency of the generator function of the motor-generator must be measured at least five times. As the efficiency of the generator function of the motor-generator is determined on the basis of the average of the measurement results, any run-in effects, positive or negative, may therefore be adequately taken into account in the final efficiency determination, where necessary by increasing the number of measurements. Against that background, it is not appropriate to complement the testing methodology with an additional specific run-in procedure such as that proposed in the applications

(13) Taking into account the above considerations, the testing methodology provided for in Implementing Decision (EU) 2017/785, with the addition of some fuel-specific factors, should also be considered appropriate for determining the CO_2 savings from the innovative technology fitted in N_1 vehicles powered by internal combustion engines, NOVC-HEV M_1 and N_1 vehicles as well as M_1 and N_1 vehicles capable of running on certain alternative fuels.

(14) Manufacturers should have the possibility to apply to a type-approval authority for the certification of CO_2 savings from the use of the innovative technology where the conditions laid down in this Decision are met. Manufacturers should for that purpose ensure that the application for certification is accompanied by a verification report from an independent and certified body confirming that the innovative technology complies with the conditions laid down in this Decision and that the savings have been determined in accordance with the testing methodology set out in this Decision.

(15) In order to facilitate a wider deployment of the innovative technology in new vehicles, a manufacturer should also have the possibility to submit a single application for the certification of the CO_2 savings from the efficient generator functions used in several 12 volt motor generators. It is, however, appropriate to ensure that, where that possibility is used, a mechanism is applied that incentivises the deployment of only those motor generators that offer the highest efficiency.

(16) It is the responsibility of the type-approval authority to verify thoroughly that the conditions for certifying the CO_2 savings from the use of an innovative technology as

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specified in this Decision are met. Where the certification is issued, the responsible type-approval authority should ensure that all elements considered for the certification are recorded in a test report and kept together with the verification report and that this information is made available to the Commission on request.

(17) For the purpose of determining the general eco-innovation code to be used in the relevant type-approval documents in accordance with Annexes I, VIII and IX to Directive 2007/46/EC of the European Parliament and of the Council[9], it is necessary to attribute an individual code to the innovative technology.

(18) From 2021, manufacturers' compliance with their specific CO_2 emission targets is to be established on the basis of the CO_2 emissions determined in accordance with the Worldwide Harmonised Light Vehicle Test Procedure (WLTP) set out in Commission Regulation (EU) 2017/1151[10]. CO_2 savings from the innovative technology certified by reference to this Decision may therefore be taken into account for the calculation of manufacturers' average specific CO_2 emissions only for the calendar year 2020,

HAS ADOPTED THIS DECISION:

Article 1

Innovative technology

The efficient generator function used in a 12 volt motor-generator, as referred to in Implementing Decision (EU) 2017/785, is approved as an innovative technology within the meaning of Article 11 of Regulation (EU) 2019/631, taking into account that it is only partially covered by the standard test procedure set out in Regulation (EC) No 692/2008, and provided that the following conditions are met:

(a) the innovative technology is fitted in light commercial vehicles (N_1) powered by internal combustion engines running on petrol, diesel, liquefied petroleum gas (LPG), compressed natural gas (CNG) or E-85, or in not-off-vehicle charging hybrid electric vehicles (NOVC-HEVs) of the category M_1 or N_1 that comply with point (3) of paragraph 5.3.2 of Annex 8 to Regulation No 101 of the Economic Commission for Europe of the United Nations;

(b) the efficiency of the generator function, determined in accordance with the methodology set out in the Annex, is at least:

  (i) 73,8 % for petrol- or E85-fuelled vehicles, other than turbo-charged;

  (ii) 73,4 % for turbo-charged petrol- or E85–fuelled vehicles;

  (iii) 74,2 % for diesel-fuelled vehicles;

  (iv) 74,6 % for LPG-fuelled vehicles other than turbo-charged;

  (v) 74,1 % for turbo-charged LPG-fuelled vehicles;

  (vi) 76,3 % for CNG-fuelled vehicles other than turbo-charged;

  (vii) 75,7 % for turbo-charged CNG-fuelled vehicles.

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Article 2

Baseline technology

The baseline technology shall be an alternator with a mass of maximum 7 kg and an efficiency of 67 %.

Article 3

Application for certification of CO_2 savings

1 A manufacturer may apply to a type-approval authority for certification of the CO_2 savings from the use of the technology approved in accordance with Article 1 ('the innovative technology') in one or several 12 volt motor-generators by reference to this Decision.

2 The manufacturer shall ensure that the application for the certification is accompanied by a verification report from an independent and certified body confirming that the conditions set out in Article 1 have been met.

3 Where savings have been certified in accordance with Article 3, the manufacturer shall ensure that the certified CO_2 savings and the eco-innovation code referred to in Article 5(1) are recorded in the certificate of conformity of the vehicles concerned.

Article 4

Certification of CO_2 savings

1 The type-approval authority shall ensure that CO_2 savings achieved from the use of the innovative technology have been determined using the methodology set out in the Annex.

2 Where a manufacturer applies for the certification of the CO_2 savings from the use of the innovative technology in more than one 12 volt motor-generator in relation to one vehicle version, the type-approval authority shall determine which of the 12 volt motor-generators tested delivers the lowest CO_2 savings. That value shall be used for the purpose of paragraph 4.

3 Where the innovative technology is fitted in a bi-fuel or flex-fuel vehicle, the approval authority shall record the CO_2 savings as follows:

a for bi-fuel vehicles using petrol and gaseous fuels, the CO_2 savings value with regard to LPG or CNG fuels;

b for flex-fuel vehicles using petrol and E85, the CO_2 savings value with regard to petrol.

4 The type approval authority shall record the certified CO_2 savings determined in accordance with paragraph 1 and 2, and the eco-innovation code referred to in Article 5(1) in the relevant type-approval documentation.

5 The type-approval authority shall record all the elements considered for the certification in a test report and keep that together with the verification report referred to in Article 3(2), and shall make that information available to the Commission on request.

6 The type-approval authority shall only certify CO_2 savings, if it finds that the innovative technology complies with the conditions set out in Article 1, and if the CO_2 savings achieved are 1 g CO_2/km or higher, as specified in Article 9(1)(a) of Implementing