Commission Implementing Decision (EU) 2020/1232 of 27 August 2020 on the approval of the efficient generator function used in 12 Volt motor-generators for use in passenger cars and light commercial vehicles, including certain hybrid electric vehicles and vehicles capable of running on alternative fuels, 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) 2020/1232

of 27 August 2020

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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 performance 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 27 November 2019, the manufacturers Bayerische Motoren Werke AG, Daimler AG, FCA Italy S.p.A, Ford-Werke GmbH, Honda Motor Europe Ltd, Hyundai Motor Europe Technical Center GmbH, Jaguar Land Rover Ltd., Opel Automobile GmbH-PSA, Automobiles Citroën, Automobiles Peugeot, PSA Automobiles SA, Renault, Volkswagen AG, Volkswagen AG Nutzfahrzeuge and the suppliers SEG Automotive Germany GmbH and Valeo Electrification Systems, jointly made a request ('the 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 its validity to cover the conditions referred to in the Worldwide Harmonised Light Vehicles Test Procedure (WLTP) as set out in Commission Regulation (EU) 2017/1151[(4)] and to include in its scope the use of the innovative technology in certain not-off vehicle charging hybrid electric passenger cars (NOVC-HEV) as well as in certain NOVC-HEVs and internal combustion engine powered passenger cars capable of running on certain alternative fuels.

(2) On 27 November 2019, the manufacturers Daimler AG, FCA Italy S.p.A, Hyundai Motor Europe Technical Center GmbH, Jaguar Land Rover Ltd., Opel Automobile GmbH-PSA, Automobiles Citroën, Automobiles Peugeot, PSA Automobiles SA, Renault, Volkswagen AG, Volkswagen AG Nutzfahrzeuge and the suppliers SEG

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Automotive Germany GmbH, Mitsubishi Electric Corporation and Valeo Electrification Systems submitted a joint application ('the application') for the approval, in accordance with Article 11 of Regulation (EU) 2019/631, as an innovative technology, of the efficient generator function of 12 Volt motor-generators for use in light commercial vehicles powered by internal combustion engines capable of running on petrol, diesel or certain alternative fuels as well as in certain NOVC-HEVs of category N_1 capable of running on those fuels.

(3) The request and the 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[(5)] 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[(6)] (July 2018 version)[(7)].

(4) Considering that the request and the 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 request and the application in one single decision.

(5) 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 a standard alternator. The technology subject to the request and the application concerns an efficient generator function of 12 Volt motor-generator.

(6) The efficient generator function of a 12 Volt motor-generator has already been approved by Implementing Decision (EU) 2017/785 and Commission Implementing Decision (EU) 2020/728[(8)] as an innovative technology for use in internal combustion engine powered passenger cars and light commercial vehicles as well as in certain NOVC-HEVs of the same vehicle categories. The innovative technology has also been approved for use in passenger cars and light commercial vehicles capable of running on certain alternative fuels. According to those Implementing Decisions, the innovative technology is 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 NEDC.

(7) The request and the application refer, however, to the WLTP, and it is demonstrated that also the measurements performed as part of the emissions test under the WLTP only partially cover the CO_2 savings resulting from the technology used in 12 Volt efficient motor-generators.

(8) Based on the experience gained from the assessment of the applications approved by Implementing Decisions (EU) 2017/785 and (EU) 2020/728, and taking into account the information provided with the present request and application, it has been satisfactorily and conclusively demonstrated that the efficient generator function of a 12 Volt motor-generator meets the criteria referred to in Article 11(2) of Regulation (EU) 2019/631 and the eligibility criteria specified in Article 9(1)(b) of Implementing Regulations (EU) No 725/2011 and (EU) No 427/2014.

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(9) The request and the application concern the use of the efficient generator function of a 12 Volt motor-generator in passenger cars, respectively light commercial vehicles, powered by internal combustion engines capable of running on petrol, diesel, liquefied petroleum gas (LPG), compressed natural gas (CNG) or E85, or in NOVC-HEVs of category M_1 or N_1 capable of running on those fuels and for which uncorrected measured fuel consumption and CO_2 emission values may be used in accordance with paragraph 1.1.4 of Appendix 2 to Sub-annex 8 to Annex XXI to Regulation (EU) 2017/1151.

(10) Both the request and the application refer to the methodology for determining the CO_2 savings from the use of the 12 Volt efficient motor-generators set out in the Annex to Implementing Decision (EU) 2017/785, except for the proposals to modify the average speed from the one of the NEDC (33,58 km/h) to the one of the WLTP (46,6 km/h) and to introduce a run-in procedure.

(11) As the conditions of the WLTP should be taken into account, it is appropriate to set the average speed equal to 46,6 km/h.

(12) With regard to the addition to the testing methodology of a run-in procedure for the motor-generator, neither the application nor the request 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 application and the request.

(13) In order to take into account the use of alternative fuels, it is proposed in the request and the application to include in the testing methodology additional factors for the consumption of the effective power and the fuel consumption conversion coefficients as well as additional extra mass coefficients corresponding to those fuels.

(14) With regard to the proposed factors for the consumption of the effective power and the fuel consumption conversion coefficients, it is appropriate to include them in the testing methodology, taking into account that they are taken from the Technical Guidelines. With regard to the proposed extra mass coefficients, no clear justification for using the proposed values were provided, and in the absence of such justifications, it is appropriate to determine the extra mass coefficients using the reference values already included in the Technical Guidelines.

(15) Considering the limited availability of E85 on the Union market as a whole, it is not appropriate to distinguish this fuel from petrol for the purpose of the testing methodology. As such, the values referring to the consumption of the effective power,

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the fuel consumption conversion and the extra mass coefficient to be used for E85 shall be the ones used for petrol.

(16) Both in the request and the application new minimum efficiency rates for the generator function of the 12 Volt motor-generator are proposed. However, it is considered appropriate to maintain the minimum efficiency rates set out in Implementing Decision (EU) 2020/728 as no evidence has been provided that motor-generators with a lower efficiency rate would meet the market penetration requirement set out in Article 2(2)(a) of Implementing Regulations (EU) No 725/2011 and (EU) No 427/2014.

(17) 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.

(18) 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 types of 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.

(19) 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 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.

(20) 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,

HAS ADOPTED THIS DECISION:

Article 1

Innovative technology

The efficient generator function of a 12 Volt motor-generator 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 (EU) 2017/1151, and provided that the technology conforms to the following:

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(a) it is fitted in passenger cars and light commercial vehicles powered by internal combustion engines capable of running on petrol, diesel, liquefied petroleum gas (LPG), compressed natural gas (CNG) or E85, or in not-off-vehicle charging hybrid electric vehicles (NOVC-HEVs) of the category M_1 or N_1 that comply with paragraph 1.1.4 of Appendix 2 to Sub-annex 8 to Annex XXI to Regulation (EU) 2017/1151 and that are capable of running on those fuels;

(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.

Article 2

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 4(1) are recorded in the certificate of conformity of the vehicles concerned.

Article 3

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 type of 12 Volt motor-generator in relation to one vehicle version, the type-approval authority shall determine which type 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: