

Commission Implementing Decision (EU) 2020/1806 of 25 November 2020 on the approval of the use of the engine-on coasting function in passenger cars with internal combustion engines and in not off-vehicle charging hybrid electric passenger cars as an innovative technology pursuant to Regulation (EU) 2019/631 of the European Parliament and of the Council and repealing Commission Implementing Decisions 2013/128/EU, 2013/341/EU, 2013/451/EU, 2013/529/EU, 2014/128/EU, 2014/465/EU, 2014/806/EU, (EU) 2015/158, (EU) 2015/206, (EU) 2015/279, (EU) 2015/295, (EU) 2015/1132, (EU) 2015/2280, (EU) 2016/160, (EU) 2016/265, (EU) 2016/588, (EU) 2016/362, (EU) 2016/587, (EU) 2016/1721, (EU) 2016/1926, (EU) 2017/785, (EU) 2017/1402, (EU) 2018/1876, (EU) 2018/2079, (EU) 2019/313, (EU) 2019/314, (EU) 2020/728, (EU) 2020/1102, (EU) 2020/1222 (Text with EEA relevance)

Article 1	Innovative technology
Article 2	Application for certification of CO ₂ savings
Article 3	Certification of CO ₂ savings
Article 4	Eco-innovation code
Article 5	Repeal
Article 6	Entry into force
	Signature

ANNEX

METHODOLOGY TO DETERMINE THE CO₂ SAVINGS OF THE ENGINE-ON COASTING FUNCTION FOR INTERNAL COMBUSTION ENGINE VEHICLES AND CERTAIN NOT OFF-VEHICLE CHARGING HYBRID ELECTRIC VEHICLES

1. SYMBOLS, UNITS AND PARAMETERS
 - Latin symbols
 - Greek symbols
2. TEST VEHICLES
3. DEFINITION OF THE MODIFIED TESTING CONDITIONS
 - 3.1. Definition of the Road Loads
 - 3.2. Definition of the Coast Down Curve in engine-on coasting mode...
 - 3.3. Generation of the modified NEDC speed profile (mNEDC)
 - 3.3.1. Gearshift profile generation for vehicles with manual gearbox
 - 3.4. Coasting corresponding manoeuvres for the baseline vehicle
4. DETERMINATION OF THE ADDITIONAL PARAMETERS
 - 4.1. Coast down in overrun mode (baseline vehicle)
 - 4.1.1. Automatic transmission
 - 4.1.2. Manual transmission
 - 4.1.3. Load balance of the battery in overrun mode
 - 4.2. Constant speed test
 - 4.3. Idle fuel consumption or idle speed test

Changes to legislation: There are outstanding changes not yet made to Commission Implementing Decision (EU) 2020/1806. Any changes that have already been made to the legislation appear in the content and are referenced with annotations. (See end of Document for details) [View outstanding changes](#)

- 4.4. Engine synchronization energy determination
 - 4.4.1. Calculation of fuel consumption to accelerate the engine from the...
5. DETERMINATION OF THE CO2 EMISSIONS OF THE ECO-INNOVATIVE VEHICLE UNDER...
6. DETERMINATION OF THE CO2 EMISSIONS OF THE BASELINE VEHICLE UNDER...
7. CALCULATION OF CO2 SAVINGS
8. CALCULATION OF THE UNCERTAINTY
9. CERTIFICATION OF CO2 SAVINGS BY THE TYPE APPROVAL AUTHORITY
10. ASSESSMENT AGAINST THE MINIMUM THRESHOLD
Appendix Cycle for constant speed fuel consumption measurement

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- (1) [OJ L 111, 25.4.2019, p. 13.](#)
- (2) Commission Implementing Regulation (EU) No 725/2011 of 25 July 2011 establishing a procedure for the approval and certification of innovative technologies for reducing CO₂ emissions from passenger cars pursuant to Regulation (EC) No 443/2009 of the European Parliament and of the Council ([OJ L 194, 26.7.2011, p. 19](#)).
- (3) <https://circabc.europa.eu/sd/a/a19b42c8-8e87-4b24-a78b-9b70760f82a9/July%202018%20Technical%20Guidelines.pdf>
- (4) Commission Regulation (EC) No 692/2008 of 18 July 2008 implementing and amending Regulation (EC) No 715/2007 of the European Parliament and of the Council on type-approval of motor vehicles with respect to emissions from light passenger and commercial vehicles (Euro 5 and Euro 6) and on access to vehicle repair and maintenance information ([OJ L 199, 28.7.2008, p. 1](#)).
- (5) Commission Implementing Decision (EU) 2015/1132 of 10 July 2015 on the approval of the Porsche AG coasting function as an innovative technology for reducing CO₂ emissions from passenger cars pursuant to Regulation (EC) No 443/2009 of the European Parliament and of the Council ([OJ L 184, 11.7.2015, p. 22](#)).
- (6) Commission Implementing Decision (EU) 2017/1402 of 28 July 2017 on the approval of the BMW AG engine idle coasting function as an innovative technology for reducing CO₂ emissions from passenger cars pursuant to Regulation (EC) No 443/2009 of the European Parliament and of the Council ([OJ L 199, 29.7.2017, p. 14](#)).
- (7) Commission Implementing Decision (EU) 2018/2079 of 19 December 2018 on the approval of the engine idle coasting function as an innovative technology for reducing CO₂ emissions from passenger cars pursuant to Regulation (EC) No 443/2009 of the European Parliament and of the Council ([OJ L 331, 28.12.2018, p. 225](#)).
- (8) Regulation No 101 of the Economic Commission for Europe of the United Nations (UN/ECE) – Uniform provisions concerning the approval of passenger cars powered by an internal combustion engine only, or powered by a hybrid electric power train with regard to the measurement of the emission of carbon dioxide and fuel consumption and/or the measurement of electric energy consumption and electric range, and of categories M₁ and N₁ vehicles powered by an electric power train only with regard to the measurement of electric energy consumption and electric range ([OJ L 138, 26.5.2012, p. 1](#)).
- (9) Commission Implementing Regulation (EU) 2020/683 of 15 April 2020 implementing Regulation (EU) 2018/858 of the European Parliament and of the Council with regards to the administrative requirements for the approval and market surveillance of motor vehicles and their trailers, and of systems, components and separate technical units intended for such vehicles ([OJ L 163, 26.5.2020, p. 1](#)).
- (10) Commission Regulation (EU) 2017/1151 of 1 June 2017 supplementing Regulation (EC) No 715/2007 of the European Parliament and of the Council on type-approval of motor vehicles with respect to emissions from light passenger and commercial vehicles (Euro 5 and Euro 6) and on access to vehicle repair and maintenance information, amending Directive 2007/46/EC of the European Parliament and of the Council, Commission Regulation (EC) No 692/2008 and Commission Regulation (EU) No 1230/2012 and repealing Commission Regulation (EC) No 692/2008 ([OJ L 175, 7.7.2017, p. 1](#)).
- (11) Commission Implementing Decision 2013/128/EU of 13 March 2013 on the approval of the use of light emitting diodes in certain lighting functions of an M1 vehicle as an innovative technology for reducing CO₂ emissions from passenger cars pursuant to Regulation (EC) No 443/2009 of the European Parliament and of the Council ([OJ L 70, 14.3.2013, p. 7](#)).
- (12) Commission Implementing Decision 2013/341/EU of 27 June 2013 on the approval of the Valeo Efficient Generation Alternator as an innovative technology for reducing CO₂ emissions from passenger cars pursuant to Regulation (EC) No 443/2009 of the European Parliament and of the Council ([OJ L 179, 29.6.2013, p. 98](#)).
- (13) Commission Implementing Decision 2013/451/EU of 10 September 2013 on the approval of the Daimler engine compartment encapsulation system as an innovative technology for reducing CO₂ emissions from new passenger cars pursuant to Regulation (EC) No 443/2009 of the European Parliament and of the Council ([OJ L 242, 11.9.2013, p. 12](#)).

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- (14) Commission Implementing Decision 2013/529/EU of 25 October 2013 on the approval of the Bosch system for navigation-based preconditioning of the battery state of charge for hybrid vehicles as an innovative technology for reducing CO₂ emissions from passenger cars pursuant to Regulation (EC) No 443/2009 of the European Parliament and of the Council ([OJ L 284, 26.10.2013, p. 36](#)),
- (15) Commission Implementing Decision 2014/128/EU of 10 March 2014 on the approval of the light emitting diodes low beam module 'E-Light' as an innovative technology for reducing CO₂ emissions from passenger cars pursuant to Regulation (EC) No 443/2009 of the European Parliament and of the Council ([OJ L 70, 11.3.2014, p. 30](#)).
- (16) Commission Implementing Decision 2014/465/EU of 16 July 2014 on the approval of the DENSO efficient alternator as an innovative technology for reducing CO₂ emissions from passenger cars pursuant to Regulation (EC) No 443/2009 of the European Parliament and of the Council and amending Commission Implementing Decision 2013/341/EU ([OJ L 210, 17.7.2014, p. 17](#)).
- (17) Commission Implementing Decision 2014/806/EU of 18 November 2014 on the approval of the battery charging Webasto solar roof as an innovative technology for reducing CO₂ emissions from passenger cars pursuant to Regulation (EC) No 443/2009 of the European Parliament and of the Council ([OJ L 332, 19.11.2014, p. 34](#)).
- (18) Commission Implementing Decision (EU) 2015/158 of 30 January 2015 on the approval of two Robert Bosch GmbH high efficient alternators as the innovative technologies for reducing CO₂ emissions from passenger cars pursuant to Regulation (EC) No 443/2009 of the European Parliament and of the Council ([OJ L 26, 31.1.2015, p. 31](#)).
- (19) Commission Implementing Decision (EU) 2015/206 of 9 February 2015 on the approval of the Daimler AG efficient exterior lighting using light emitting diodes as an innovative technology for reducing CO₂ emissions from passenger cars pursuant to Regulation (EC) No 443/2009 of the European Parliament and of the Council ([OJ L 33, 10.2.2015, p. 52](#)).
- (20) Commission Implementing Decision (EU) 2015/279 of 19 February 2015 on the approval of the battery charging Asola solar roof as an innovative technology for reducing CO₂ emissions from passenger cars pursuant to Regulation (EC) No 443/2009 of the European Parliament and of the Council ([OJ L 47, 20.2.2015, p. 26](#)).
- (21) Commission Implementing Decision (EU) 2015/295 of 24 February 2015 on the approval of the MELCO GXi efficient alternator as an innovative technology for reducing CO₂ emissions from passenger cars pursuant to Regulation (EC) No 443/2009 of the European Parliament and of the Council ([OJ L 53, 25.2.2015, p. 11](#)).
- (22) Commission Implementing Decision (EU) 2015/2280 of 7 December 2015 on the approval of the DENSO efficient alternator as an innovative technology for reducing CO₂ emissions from passenger cars pursuant to Regulation (EC) No 443/2009 of the European Parliament and of the Council ([OJ L 322, 8.12.2015, p. 64](#)).
- (23) Commission Implementing Decision (EU) 2016/160 of 5 February 2016 on the approval of the Toyota Motor Europe efficient exterior lighting using light emitting diodes as an innovative technology for reducing CO₂ emissions from passenger cars pursuant to Regulation (EC) No 443/2009 of the European Parliament and of the Council ([OJ L 31, 6.2.2016, p. 70](#)).
- (24) Commission Implementing Decision (EU) 2016/265 of 25 February 2016 on the approval of the MELCO Motor Generator as an innovative technology for reducing CO₂ emissions from passenger cars pursuant to Regulation (EC) No 443/2009 of the European Parliament and of the Council ([OJ L 50, 26.2.2016, p. 30](#)).
- (25) Commission Implementing Decision (EU) 2016/588 of 14 April 2016 on the approval of the technology used in 12 Volt efficient alternators as an innovative technology for reducing CO₂ emissions from passenger cars pursuant to Regulation (EC) No 443/2009 of the European Parliament and of the Council ([OJ L 101, 16.4.2016, p. 25](#)).
- (26) Commission Implementing Decision (EU) 2016/362 of 11 March 2016 on the approval of the MAHLE Behr GmbH & Co. KG enthalpy storage tank as an innovative technology for reducing CO₂ emissions from passenger cars pursuant to Regulation (EC) No 443/2009 of the European Parliament and of the Council ([OJ L 67, 12.3.2016, p. 59](#)).
- (27) Commission Implementing Decision (EU) 2016/587 of 14 April 2016 on the approval of the technology used in efficient vehicle exterior lighting using light emitting diodes as an innovative

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- technology for reducing CO₂ emissions from passenger cars pursuant to Regulation (EC) No 443/2009 of the European Parliament and of the Council ([OJ L 101, 16.4.2016, p. 17](#)).
- (28) Commission Implementing Decision (EU) 2016/1721 of 26 September 2016 on the approval of the Toyota efficient exterior lighting using light emitting diodes for the use in non-externally chargeable hybrid electrified vehicles as an innovative technology for reducing CO₂ emissions from passenger cars pursuant to Regulation (EC) No 443/2009 of the European Parliament and of the Council ([OJ L 259, 27.9.2016, p. 71](#)).
- (29) Commission Implementing Decision (EU) 2016/1926 of 3 November 2016 on the approval of the battery-charging photovoltaic roof as an innovative technology for reducing CO₂ emissions from passenger cars pursuant to Regulation (EC) No 443/2009 of the European Parliament and of the Council ([OJ L 297, 4.11.2016, p. 18](#)).
- (30) Commission Implementing Decision (EU) 2017/785 of 5 May 2017 on the approval of efficient 12 V motor-generators for use in conventional combustion engine powered passenger cars as an innovative technology for reducing CO₂ emissions from passenger cars pursuant to Regulation (EC) No 443/2009 of the European Parliament and of the Council ([OJ L 118, 6.5.2017, p. 20](#)).
- (31) Commission Implementing Decision (EU) 2018/1876 of 29 November 2018 on the approval of the technology used in 12 Volt efficient alternators for use in conventional combustion engine powered light commercial vehicles as an innovative technology for reducing CO₂ emissions from light commercial vehicles pursuant to Regulation (EU) No 510/2011 of the European Parliament and of the Council ([OJ L 306, 30.11.2018, p. 53](#)).
- (32) Commission Implementing Decision (EU) 2019/313 of 21 February 2019 on the approval of the technology used in SEG Automotive Germany GmbH High efficient 48V motor generator (BRM) plus 48V/12V DC/DC converter for use in conventional combustion engine and certain hybrid powered light commercial vehicles as an innovative technology for reducing CO₂ emissions from light commercial vehicles pursuant to Regulation (EU) No 510/2011 of the European Parliament and of the Council ([OJ L 51, 22.2.2019, p. 31](#)).
- (33) Commission Implementing Decision (EU) 2019/314 of 21 February 2019 on the approval of the technology used in SEG Automotive Germany GmbH High efficient 48V motor generator (BRM) plus 48V/12V DC/DC converter for use in conventional combustion engine and certain hybrid powered passenger cars as an innovative technology for reducing CO₂ emissions from passenger cars pursuant to Regulation (EC) No 443/2009 of the European Parliament and of the Council ([OJ L 51, 22.2.2019, p. 42](#)).
- (34) 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 ([OJ L 170, 2.6.2020, p. 21](#)).
- (35) Commission Implementing Decision (EU) 2020/1102 of 24 July 2020 on the approval of the technology used in a 48 Volt efficient motor-generator combined with a 48 Volt/12 Volt DC/DC converter for use in conventional combustion engine and certain hybrid electric passenger cars and light commercial vehicles as an innovative technology pursuant to Regulation (EU) 2019/631 of the European Parliament and of the Council and by reference to the New European Driving Cycle (NEDC) ([OJ L 241, 27.7.2020, p. 38](#)).
- (36) Commission Implementing Decision (EU) 2020/1222 of 24 August 2020 on the approval of efficient vehicle exterior lighting using light emitting diodes as an innovative technology for reducing CO₂ emissions from internal combustion engine powered light commercial vehicles with regard to NEDC conditions pursuant to Regulation (EU) 2019/631 of the European Parliament and of the Council ([OJ L 279, 27.8.2020, p. 5](#)).

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Changes and effects yet to be applied to :

- [Decision revoked by S.I. 2022/1361 reg. 14](#)