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 (Text with EEA relevance)

Article 1	Approval
Article 2	Definitions
Article 3	Application for certification of CO2 savings
Article 4	Certification of CO2 savings
Article 5	Eco-innovation code
Article 6	Applicability
Article 7	Entry into force
	Signature

## **ANNEX**

Methodology to determine the CO2 savings of the SEG Automotive Germany GmbH High efficient 48V motor generator (BRM) plus the 48V/12V DC/DC converter fitted in vehicles in compliance with the conditions set out in Article 1

- 1. INTRODUCTION
- 2. SYMBOLS, PARAMETERS AND UNITS

Latin symbols Greek symbols Subscripts

- 3. METHOD 1 ('SEPARATE METHOD')
  - 3.1. Efficiency of the 48V motor generator
  - 3.2. Efficiency of the 48V/12V DC/DC converter
  - 3.3. Total efficiency and saved mechanical power
  - 3.4. Calculation of the CO2 savings
  - 3.5. Calculation of the statistical margin
- 4. METHOD 2 ('COMBINED METHOD')
  - 4.1. Efficiency of the 48V motor generator plus the 48V/12V DC/DC...
  - 4.2. Demonstration of conservativeness of the 48V motor generator plus 48V/12V...
  - 4.3. Saved mechanical power
  - 4.4. Calculation of the CO2 savings
  - 4.5. Calculation of the statistical margin
- 5. ROUNDING
- 6. STATISTICAL SIGNIFICANCE (for both methods)

Changes to legislation: There are currently no known outstanding effects for the Commission Implementing Decision (EU) 2019/314. (See end of Document for details)

- (1) OJ L 140, 5.6.2009, p. 1.
- (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 CO<sub>2</sub> 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) 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 CO<sub>2</sub> 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)
- (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 (EUR 5 and EUR 6) and on access to vehicle repair and maintenance information (OJ L 199, 28.7.2008, p. 1).
- (5) 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 (EUR 5 and EUR 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).
- (6) Directive 2007/46/EC of the European Parliament and of the Council of 5 September 2007 establishing a framework for the approval of motor vehicles and their trailers, and of systems, components and separate technical units intended for such vehicles (Framework Directive) (OJ L 263, 9.10.2007, p. 1).

## **Changes to legislation:**

There are currently no known outstanding effects for the Commission Implementing Decision (EU) 2019/314.