



6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 86

[EPA-HQ-OAR-2017-0755; FRL-9984-54-OAR]

RIN 2060-AT75

Light-duty Vehicle GHG Program Technical Amendments

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: EPA is proposing two technical corrections to the light-duty vehicle greenhouse gas (GHG) emissions standards regulations finalized in the 2012 rulemaking that established standards for model years 2017-2025 light-duty vehicles. First, EPA proposes to correct regulations pertaining to how auto manufacturers must calculate credits for the GHG program's optional advanced technology incentives. The regulations currently in place result in auto manufacturers receiving fewer credits than the agency intended for electric vehicles, plug-in hybrid electric vehicles, fuel cell electric vehicles, and natural gas fueled vehicles. Auto manufacturers requested through a petition letter submitted jointly by the Auto Alliance and Global Automakers in June 2016 that EPA correct the regulations to provide the intended level of credits for these technologies. Second, the regulations regarding how manufacturers must calculate certain types of off-cycle credits contain an error and are inconsistent with the 2012 final rule preamble, raising implementation concerns for some manufacturers. The proposed amendments would clarify the calculation methodology in the regulations. Both of these corrections allow the program to be implemented as originally intended. The proposed corrections are not expected to result in any additional regulatory burdens or costs.

DATES: *Comments:* Written comments must be received on or before [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]. If EPA receives a request for a public hearing by [INSERT DATE 7 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER], we will publish information related to the timing and location of the hearing and a new deadline for public comment.

Public Hearing: EPA will not hold a public hearing on this matter unless a request is received by the person identified in the **FOR FURTHER INFORMATION CONTACT** section of this preamble by [INSERT DATE 7 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]. If EPA receives such a request, we will publish information related to the timing and location of the hearing and a new deadline for public comment.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA-HQ-OAR-2017-0755, at <http://www.regulations.gov>. Follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from Regulations.gov. The EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. The EPA will generally not consider comments or comment contents located outside of the primary submission (i.e. on the web, cloud, or other file sharing system). For additional submission methods, the full EPA public

comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit <http://www2.epa.gov/dockets/commenting-epa-dockets>.

FOR FURTHER INFORMATION CONTACT: Christopher Lieske, Office of Transportation and Air Quality (OTAQ), Assessment and Standards Division (ASD), Environmental Protection Agency, 2000 Traverwood Drive, Ann Arbor MI 48105; telephone number: (734) 214-4584; email address: lieske.christopher@epa.gov fax number: 734-214-4816.

SUPPLEMENTARY INFORMATION

I. General Information

A. Does This Action Apply to Me?

This action affects companies that manufacture or sell new light-duty vehicles, light-duty trucks, and medium-duty passenger vehicles, as defined under EPA's CAA regulations.¹ Regulated categories and entities include:

¹ "Light-duty vehicle," "light-duty truck," and "medium-duty passenger vehicle" are defined in 40 CFR 86.1803-01. Generally, the term "light-duty vehicle" means a passenger car, the term "light-duty truck" means a pick-up truck, sport-utility vehicle, or minivan of up to 8,500 lbs gross vehicle weight rating, and "medium-duty passenger vehicle" means a sport-utility vehicle or passenger van from 8,500 to 10,000 lbs gross vehicle weight rating. Medium-duty passenger vehicles do not include pick-up trucks.

| Category | NAICS Codes ^A | Examples of Potentially Regulated Entities |
|----------|--------------------------------------|---|
| Industry | 336111 336112 | Motor Vehicle Manufacturers |
| Industry | 811111 811112 811198 423110 | Commercial Importers of Vehicles and Vehicle Components |
| Industry | 335312 811198 | Alternative Fuel Vehicle Converters |

^ANorth American Industry Classification System (NAICS)

B. What action is the agency taking?

EPA is proposing two technical corrections to the light-duty vehicle greenhouse gas (GHG) emissions standards regulations finalized in the 2012 rulemaking that established standards for model years 2017-2025 light-duty vehicles. First, EPA proposes to correct an error in the regulations pertaining to how auto manufacturers must calculate credits for the GHG program's optional advanced technology incentives. The regulations currently in place result in auto manufacturers receiving fewer credits than the agency intended for electric vehicles, plug-in hybrid electric vehicles, fuel cell electric vehicles, and natural gas fueled vehicles. Auto manufacturers requested through a petition letter submitted jointly by the Auto Alliance and Global Automakers in June 2016 that EPA correct the regulations to provide the intended level of credits for these technologies. Second, the regulations regarding how manufacturers must calculate certain types of off-cycle credits contain an error and are inconsistent with the 2012 final rule preamble, raising implementation concerns for some manufacturers. The proposed amendments would clarify the calculation methodology in the regulations. Both of these corrections allow the program to be implemented as originally intended. The corrections are described in detail in Section III below.

C. What is the agency's authority for taking this action?

EPA is proposing technical amendments to provisions of the light-duty vehicle GHG regulations under section 202 (a) of the Clean Air Act (CAA) ((42 U.S.C. 7521 (a)).

D. What are the incremental costs and benefits of this action?

The proposed corrections are not expected to result in any significant changes in regulatory burdens, costs, or benefits.

II. Public Participation

A. How Do I Prepare and Submit Information?

Direct your submittals to Docket ID No EPA-HQ-OAR-2017-0755. EPA's policy is that all submittals received will be included in the public docket without change and may be made available online at www.regulations.gov, including any personal information provided, unless the submittal includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute.

Do not submit information to the docket that you consider to be CBI or otherwise protected through www.regulations.gov. The www.regulations.gov web site is an "anonymous access" system, which means EPA will not know your identity or contact information unless you provide it in the body of your submittal. If you submit an electronic submittal, EPA recommends that you include your name and other contact information in the body of your submittal and with any disk or CD-ROM you submit. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses. For additional information about EPA's public docket visit the EPA Docket Center homepage at <http://www.epa.gov/epahome/dockets.htm>.

B. Submitting CBI

Do not submit this information to EPA through www.regulations.gov or e-mail. Clearly mark

the part or all of the information that you claim to be CBI. For CBI information in a disk or CD ROM that you mail to EPA, mark the outside of the disk or CD ROM as CBI and then identify electronically within the disk or CD ROM the specific information that is claimed as CBI). In addition to one complete version of the comment that includes information claimed as CBI, a copy of the comment that does not contain the information claimed as CBI must be submitted for inclusion in the public docket. Information so marked will not be disclosed except in accordance with procedures set forth in 40 CFR part 2.

C. Tips for Preparing Your Comments

When submitting comments, remember to:

- Identify the action by docket number and other identifying information (subject heading, Federal Register date and page number).
- Explain why you agree or disagree; suggest alternatives and substitute language for your requested changes.
- Describe any assumptions and provide any technical information and/or data that you used.
- If you estimate potential costs or burdens, explain how you arrived at your estimate in sufficient detail to allow for it to be reproduced.
- Provide specific examples to illustrate your concerns, and suggest alternatives.
- Explain your views as clearly as possible, avoiding the use of profanity or personal threats.
- Make sure to submit your comments by the comment period deadline identified in

the DATES section above.

III. Proposed Provisions

This proposed rule would correct two technical provisions in the regulations for the model year (MY) 2017-2025 greenhouse gas (GHG) emissions standards. The first correction addresses how manufacturers must apply advanced technology vehicle multipliers during credit calculations in order to ensure that credits are calculated as EPA intended in the 2012 final rule. The second correction addresses how manufacturers must calculate off-cycle credits under the program's 5-cycle credit calculation methodology. EPA views these items as technical amendments that correct and clarify the regulations and are not changes in how the program functions. Therefore, neither of these technical amendments introduce or remove any requirements on automobile manufacturers, nor do these changes impose additional regulatory costs or benefits. We describe each of these changes in the following sections. We note that in the recent "Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks" issued by EPA and the National Highway Traffic Safety Administration (NHTSA) regarding GHG and Corporate Average Fuel Economy (CAFE) standards for Model Years (MY) 2021 to 2026 (see 83 FR 42986, August 24, 2018), the agencies are broadly seeking comment on various incentives and flexibilities, including the availability and scope of advanced technology multipliers and off-cycle credits for those model years. Today's proposal would correct the application of advanced technology vehicle multipliers for MYs 2017 through 2021, and an off-cycle credit calculation methodology for MY 2012 and later vehicles.

A. Clarification of the Advanced Technology Multiplier Regulations

As part of the MY 2017-2025 rule, EPA adopted temporary incentive multipliers for battery electric vehicles (BEVs), plug-in hybrid electric vehicles (PHEVs), fuel cell vehicles (FCVs), and compressed natural gas (CNG) vehicles.² The multipliers allow manufacturers to count these lower CO₂ emitting vehicles as more than one vehicle in their fleet average compliance calculations. For example, the 2.0 multiplier for MY 2017 BEVs would allow a manufacturer to count every MY 2017 BEV produced as two vehicles produced. The multipliers established in the MY 2017-2025 rule are shown in Tables 1 and 2 below.

Table 1: The production multipliers, by model year, for electric vehicles and fuel cell vehicles³

| Model year | Production multiplier |
|-------------------|------------------------------|
| 2017 | 2.0 |
| 2018 | 2.0 |
| 2019 | 2.0 |
| 2020 | 1.75 |
| 2021 | 1.5 |

Table 2: The production multipliers, by model year, for plug-in hybrid electric vehicles, dedicated natural gas vehicles, and dual-fuel natural gas vehicles⁴

| Model year | Production multiplier |
|-------------------|------------------------------|
| 2017 | 1.6 |
| 2018 | 1.6 |
| 2019 | 1.6 |
| 2020 | 1.45 |
| 2021 | 1.3 |

EPA and NHTSA received a joint petition from the Alliance of Automobile Manufacturers and the Association of Global Automakers on June 20, 2016 regarding various aspects of the

² 77 FR 62812-62816 (October 15, 2012) and 40 CFR 86.1866-12(b).

³ 40 CFR 86.1866-12(b)(1).

⁴ 40 CFR 86.1866-12(b)(2).

CAFE and GHG programs.⁵ Item 8 of the petition, titled “Correct the Multiplier for BEVs, PHEVs, FCVs, and CNGs,” correctly notes that “the equation through which the number of earned credits is calculated is inaccurately stated in the regulations” and that credits would be inadvertently lost due to the error. EPA is proposing to modify the regulations so that the credits are calculated correctly in all cases. The calculations are done separately for the passenger car and light truck fleets. These advanced vehicle technology multipliers do not apply to the NHTSA CAFE program.

The current regulations regarding the application of the multipliers state that “[T]he actual production of qualifying vehicles may be multiplied by the applicable value according to the model year, and the result, rounded to the nearest whole number, may be used to represent the production of qualifying vehicles when calculating average carbon-related exhaust emissions under §600.512 of this chapter.”⁶ The following shows the application of this regulatory text in equation form:⁷

$$CO2\ Credits = (S - E_{adj}) \times VLM \times P \div 1,000,000 \ [Megagrams]$$

$$S = \frac{\Sigma Target \times Volume}{\Sigma Volume} \ [g/mile]; \ E_{adj} = \frac{\Sigma CREE \times Volume_{adj}}{\Sigma Volume_{adj}} \ [g/mile]$$

Where:

⁵ “Petition for Direct Final Rule with Regard to Various Aspects of the Corporate Average Fuel Economy Program and the Greenhouse Gas Program,” Alliance of Automobile Manufacturers and the Association of Global Automakers, June 20, 2016.

⁶ See 40 CFR 86.1866-12(b)(3).

⁷ The descriptions of the terms in the above equations have been simplified somewhat for illustrative purposes compared to the proposed regulations. See the proposed language at 40 CFR 86.1866-12(b) for the proposed detailed regulatory provisions.

S = Production weighted fleet average standard

E_{adj} = Production weighted fleet average carbon related exhaust emissions (CREE) with the multiplier(s) applied to the advanced technology production in the CREE average value calculation

VLM = Vehicle lifetime miles (195,264 for cars and 225,865 for light trucks)

P = Annual total vehicle production (for either cars or light trucks)

Target = Model type footprint target

Volume = Model type vehicle production

$Volume_{adj}$ = Model type vehicle production with multiplier(s) applied to advanced technology vehicle production

Under the current regulations at 40 CFR 86.1865-12(k)(4), the multiplier for advanced technology production is applied by modifying the way the CREE⁸ (E_{adj} in the equation above) is calculated. The petitioners noted that applying the multiplier only to E_{adj} does not produce the intended credit. The petitioners provided an example of the incorrect calculation for a manufacturer producing 5,000 battery electric vehicles (BEVs), which have a CREE of zero, showing that such a manufacturer would not receive any additional credits from the multiplier because the E_{adj} term would remain zero (regardless of the multiplier or how many vehicles were produced) and the fleet average standard term (i.e., the footprint-based standard) remains unchanged because the multiplier does not affect the fleet average standard calculation.

⁸Vehicle and fleet average compliance is based on a combination of CO₂, hydrocarbon (HC), and carbon monoxide (CO) emissions. This is consistent with the carbon balance methodology used to determine fuel consumption for the labeling and CAFE programs. The GHG regulations account for these total carbon emissions appropriately and refer to the sum of these emissions as the “carbon related exhaust emissions” (CREE).

Example 1 below shows the calculation of credits without the multiplier and Example 1a shows the calculation with the incorrect application of the multiplier using the 5,000 BEV example, assuming a footprint-based standard of 210 g/mile and a multiplier of 2.0.

Example 1a: Calculation of Credits Without the Multiplier

$$CO_2 \text{ Credits} = (210 - 0) \times 195,264 \times 5,000 \div 1,000,000 = 205,027 \text{ Megagrams}$$

Example 1b: Incorrect Application of the Multiplier under Current Regulations:

$$CO_2 \text{ Credits} = (210 - 0) \times 195,264 \times 5,000 \div 1,000,000 = 205,027 \text{ Megagrams}$$

Where the production weighted fleet average carbon related exhaust emissions, or E_{adj} , with the multiplier applied is calculated as follows:

$$E_{adj} = \frac{0 \times 5,000 \times 2.0}{5,000 \times 2.0} = 0 \text{ g/mile}$$

In order for the calculation to produce the correct result, the multiplier must be applied not only to the advanced technology vehicle production in the CREE average value, E_{adj} , calculation but also to the advanced technology vehicle production in the average standard calculation and the advanced technology vehicle production portions of the total production. The calculation of credits in megagrams with the multiplier correctly applied is represented by the following equations:

$$CO_2 \text{ Credits}_{adj} = (S_{adj} - E_{adj}) \times VLM \times P_{adj} \div 1,000,000 \text{ [Megagrams]}$$

$$S_{adj} = \frac{\Sigma \text{Target} \times \text{Volume}_{adj}}{\Sigma \text{Volume}_{adj}} [g/mile]; E_{adj} = \frac{\Sigma \text{CREE} \times \text{Volume}_{adj}}{\text{Volume}_{adj}} [g/mile]$$

Where:

S_{adj} = Production weighted fleet average standard with the multiplier(s) applied to the advanced technology vehicle production in the footprint target calculation

E_{adj} = Production weighted fleet average CREE with the multiplier(s) applied to the advanced technology production in the CREE value calculation

VLM = Vehicle lifetime miles (195,264 for cars and 225,865 for light trucks)

P_{adj} = Annual vehicle production with the multiplier(s) applied to the advanced technology vehicle production

Target = Model type footprint target

Volume_{adj} = Model type vehicle production with multiplier(s) applied to advanced technology vehicle production

Using the corrected methodology, manufacturers would determine the additional credits associated with using the multiplier(s) by calculating fleet credits with and without the multiplier applied (the credits without the multiplier applied are shown below as term C). The credits calculated without the multiplier would be subtracted from the credits calculated with the multiplier with the difference reflecting the additional credits attributable to the multiplier.

$$\text{Credits due to multiplier} = (S_{adj} - E_{adj}) \times VLM \times P_{adj} \div 1,000,000 - C [\text{Megagrams}]$$

Applying the above corrected equation to Example 1 produces the expected credits due to the multiplier. As shown using Example 1 from above, the correct application of the 2.0 multiplier doubles the resulting credit in this example, which is what EPA intended and manufacturers expected when the program was finalized.

Example 1a: Calculation of Credits Without the Multiplier

$$CO_2 \text{ Credits}(C) = (210 - 0) \times 195,264 \times 5,000 \div 1,000,000 = 205,027 \text{ Megagrams}$$

Example 1c: Correct Application of the Multiplier:

$$\begin{aligned} CO_2 \text{ Credits}_M &= (210 - 0) \times 195,264 \times (5,000 \times 2.0) \div 1,000,000 \\ &= 410,054 \text{ Megagrams} \end{aligned}$$

Where the production weighted fleet average standard and fleet average carbon related exhaust emissions, or CREEavg, are calculated with the multiplier as follows:

$$S_{adj} = \frac{210 \times 5,000 \times 2.0}{5,000 \times 2.0} = 210 \text{ g/mile}$$

$$E_{adj} = \frac{0 \times 5,000 \times 2.0}{5,000 \times 2.0} = 0 \text{ g/mile}$$

And finally, the credits due to application of the multiplier are:

$$\text{Credits due to multiplier} = 410,054 - 205,027 = 205,027$$

Example 2 below provides an example calculation for a fleet that consists of both conventional and advanced technology vehicles. The example consists of a fleet mix of two conventional vehicle models, one plug-in hybrid electric (PHEV) model, and one battery electric vehicle (BEV) model, where the PHEV multiplier is 1.6 and the EV multiplier is 2.0.

Table 3: Example 2 Fleet Mix

| Vehicle Model | Production | Footprint Target (CO ₂ g/mi) | CREE (CO ₂ g/mi) | Multiplier |
|----------------|------------|---|-----------------------------|------------|
| Conventional 1 | 10,000 | 300 | 320 | N/A |
| Conventional 2 | 8,000 | 210 | 210 | N/A |
| PHEV | 5,000 | 210 | 50 | 1.6 |
| BEV | 5,000 | 210 | 0 | 2.0 |
| Total | 28,000 | | | |

Example 2a: Calculation of credits for mixed fleet with no multiplier:

$$CO_2 \text{ Credits } (C) = (242 - 183) \times 195,264 \times 28,000 \div 1,000,000 = 322,576 \text{ Megagrams}$$

Where the production weighted fleet average standard (S) and fleet average CREE (E) terms are calculated as follows:

$$S = \frac{(300 \times 10,000) + (210 \times 8,000) + (210 \times 5,000) + (210 \times 5,000)}{28,000} = 242 \text{ g/mile}$$

$$E = \frac{(320 \times 10,000) + (210 \times 8,000) + (50 \times 5,000) + (0 \times 5,000)}{28,000} = 183 \text{ g/mile}$$

Example 2b: Incorrect Application of the Multiplier under Current Regulations:

$$CO2\ Credits = (242 - 147) \times 195,264 \times 28,000 \div 1,000,000 = 519,402\ Megagrams$$

Where the production weighted fleet average Standard (S) and adjusted CREE with the multiplier applied (E_{adj}) are calculated as follows:

$$S = \frac{(300 \times 10,000) + (210 \times 8,000) + (210 \times 5,000) + (210 \times 5,000)}{28,000} = 242\ g/mile$$

$$E_{adj} = \frac{(320 \times 10,000) + (210 \times 8,000) + (50 \times 5,000 \times 1.6) + (0 \times 5,000 \times 2.0)}{36,000} = 147\ g/mile$$

Example 2c: Calculation of credits for mixed fleet using corrected multiplier methodology:

$$\begin{aligned} CO2\ Credits\ with\ multiplier &= (235 - 147) \times 195,264 \times 36,000 \div 1,000,000 \\ &= 618,596\ Megagrams \end{aligned}$$

Where the production weighted fleet average S_{adj} and E_{adj} terms and the P_{adj} terms, are calculated using the multiplier as follows:

$$S_{adj} = \frac{(300 \times 10,000) + (210 \times 8,000) + (210 \times 5,000 \times 1.6) + (210 \times 10,000 \times 2.0)}{36,000} = 235\ g/mile$$

$$E_{adj} = \frac{(320 \times 10,000) + (210 \times 8,000) + (50 \times 5,000 \times 1.6) + (0 \times 5,000 \times 2.0)}{36,000} = 147\ g/mile$$

$$P_{adj} = 10,000 + 8,000 + (5,000 \times 1.6) + (5,000 \times 2.0) = 36,000$$

Under the proposed regulations, manufacturers would use the above approach to calculate Megagrams of credits with and without the multipliers applied and report the difference to EPA as the credits attributed to the use of the advanced technology multipliers. In the above Example 2, the credits attributable to the multipliers are $618,596 - 322,576 = 296,020$. The previously established incorrect methodology, which applies the multiplier only to the CREE term, would provide fewer credits ($519,402 - 322,576 = 196,826$ Mg) for this example.

The descriptions of the terms in the above equations have been simplified somewhat for illustrative purposes compared to the proposed regulations. See the proposed language at 40 CFR 86.1866-12(b) for the proposed detailed regulatory provisions. Previously, § 86.1866-12(b)(3) simply modified the CREE term in the equation in § 86.1865-12(k)(4) to incorporate the multiplier. Now, since the multiplier should have been applied as discussed above, EPA proposes to revise the regulations to add additional steps to the calculation process. First, manufacturers would use the new equation to calculate the total number of credits generated with multipliers included. Then, manufacturers would subtract from that calculation the credits calculated without the multipliers applied, using the equation that already exists in § 86.1865-12(k)(4). The result provides the credit attributable to the multipliers to be reported to EPA as part of the credits portion of the year end compliance report.

The advanced technology multiplier incentive is available starting with the 2017 model year. Manufacturers are required to report all credit information by May 1 of the year following the end of the model year, which, for model year 2017, is May 1, 2018. EPA recognizes that the

timing of this rulemaking precludes the ability to finalize the multiplier-based credits by the deadline, and, given this, the submissions made by manufacturers on or before May 1, 2018 will be evaluated using the current incorrect multiplier. For the 2017 model year reporting, EPA has asked that manufacturers enter all their test data as they normally would (which needs to be done for CAFE calculations anyway), and that reports be submitted on time, with fleet credits calculated from the values as determined by EPA's current regulatory calculation. After the regulations proposed today are finalized, EPA will allow manufacturers to request through EPA's online system, used by manufacturers to submit data to EPA for vehicle emissions certification and compliance purposes, that the EPA system recalculate the manufacturer's fleet performance based on the corrected values. EPA does not expect this to be burdensome, as the necessary data for the recalculation will have previously been submitted electronically by the manufacturer.

B. Off-Cycle Credit Calculations Based On The 5-Cycle Methodology

EPA's GHG emissions standards allow manufacturers to generate credits toward compliance through the application of off-cycle technologies. In model years 2017 and later, fuel economy off-cycle credits equivalent to EPA CO₂ credits are also available in the CAFE program. Off-cycle technologies are those that result in real-world emissions reductions that are not fully captured on the 2-cycle emissions tests used for compliance with the GHG standards (i.e., the city and highway test cycles). EPA originally adopted the off-cycle credits program as part of the rulemaking establishing the MY 2012-2016 standards.⁹ EPA later modified the off-cycle

⁹ 75 FR 25438-25440 (May 7, 2010) and 75 FR 25697-25698.

program in the MY 2017-2025 final rule.¹⁰ One of the methodologies for manufacturers to demonstrate off-cycle emissions reductions is by conducting 5-cycle testing¹¹ with and without the off-cycle technology applied (i.e., A/B testing).¹² The original program did not allow off-cycle credits for technologies that showed significant benefits on the 2-cycle segment of the 5-cycle test. The regulations established by the MY 2012-2016 rule stated that the “CO₂-reducing impact of the technology must not be significantly measurable over the Federal Test Procedure and the Highway Fuel Economy Test.”¹³ As such, the regulations did not require manufacturers to subtract 2-cycle reductions from the 5-cycle benefits when deriving the off-cycle credit because the 2-cycle benefit would necessarily be negligible.

The program as revised by the MY 2017-2025 rule allows for the possibility that some qualifying technologies could have a small 2-cycle benefit but a larger off-cycle benefit. The 2012 rule stated “EPA is removing the “not significantly measurable over the 2-cycle test” criteria” allowing for credits for qualifying off-cycle technologies “providing small reductions on the 2-cycle tests but additional significant reductions off-cycle.”¹⁴ EPA stated “[t]he intent of the off-cycle provisions is to provide an incentive for CO₂ and fuel consumption reducing off-cycle technologies that would otherwise not be developed because they do not offer a significant 2-cycle benefit and that the program would “encourage innovative strategies for reducing CO₂ emissions beyond those measured by the 2-cycle test procedures.”¹⁵ It is plain from the proposed and final rules that the revised off-cycle credit program was intended to provide credits for the incremental benefit of the off-cycle technology that was not captured on the 2-cycle test. For

¹⁰ 77 FR 62726-62738, 77 FR 62832-62840, and 40 CFR 86.1869-12.

¹¹ The 5-cycle methodology is currently used to determine fuel economy label values. EPA established the 5-cycle test methods to better represent real-world factors impacting fuel economy, including higher speeds and more aggressive driving, colder temperature operation, and the use of air conditioning.

¹² 77 FR 62837.

¹³ 75 FR 25698.

¹⁴ 77 FR 62835.

¹⁵ 77 FR 62832.

example, EPA provided extensive discussion of how it developed the standards based on its evaluation of various technologies and their effectiveness as demonstrated on the 2-cycle test.¹⁶ EPA further stated that the off-cycle credits were intended to recognize GHG reductions in excess of the benefits already reflected in the standards.¹⁷ For the menu credits for waste heat recovery and active aerodynamics, for example, EPA derived the credits by estimating the 5-cycle benefit and then subtracting out the 2-cycle benefit.¹⁸

However, EPA inadvertently did not make the associated change in the regulations to require that the 2-cycle benefit be subtracted from the 5-cycle benefit for those off-cycle credits which are based on a manufacturer-specific 5-cycle technology demonstration. This could lead to double counting of the 2-cycle benefit of the technology, which is also included in the 2-cycle tailpipe emissions results of the vehicle used to determine compliance with the standards. EPA made clear in the final rule that such “windfall credits” would be inappropriate.¹⁹ This issue has been raised by manufacturers seeking clarification from the agency. EPA is addressing this oversight and the potential double-counting issue by proposing to change the regulations such that the 2-cycle benefit is subtracted from the 5-cycle benefit of the off-cycle technology. EPA is proposing to add to the regulations the equation below to ensure that credits derived from the 5-cycle methodology are calculated properly. See the proposed regulatory language in 40 CFR 86.1869-12(c) for the complete proposed regulatory text.

Under the proposed regulatory correction, manufacturers would calculate the off-cycle credit in grams per mile using the following formula, rounding the result to the nearest 0.1 grams/mile:

¹⁶ 76 FR 74942 (December 1, 2011) & 77 FR 62726

¹⁷ 77 FR 62650 and 77 FR 62836.

¹⁸ Joint Technical Support Document: Final Rulemaking for 2017-2025 Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards, August 2012, EPA-420-R-12-901 pp. 5-65 and 5-82.

¹⁹ 77 FR 62836.

$$Credit = (A - B) - (C - D)$$

Where:

Credit = the off-cycle benefit of the technology or technologies being evaluated, subject to EPA approval

A = the 5-cycle adjusted combined city/highway carbon-related exhaust emission value for the vehicle without the off-cycle technology;

B = 5-cycle adjusted combined city/highway carbon-related exhaust emission value for the vehicle with the off-cycle technology;

C = 2-cycle unadjusted combined city/highway carbon-related exhaust emissions value for the vehicle without the off-cycle technology; and

D = 2-cycle unadjusted combined city/highway carbon-related exhaust emissions value for the vehicle with the off-cycle technology.

IV. Statutory and Executive Order Reviews

A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

This action is a significant regulatory action that was submitted to the Office of Management and Budget (OMB) for review. This action is a “significant regulatory action” because it raises policy issues. Any changes made in response to OMB recommendations have been documented in the docket.

This proposed rule merely clarifies and corrects existing regulatory language. EPA does not believe there will not be costs associated with this rule. Also, this proposed rule is not anticipated

to create additional burdens to the existing requirements. As such, a regulatory impact evaluation or analysis is unnecessary.

B. Executive Order 13771: Reducing Regulations and Controlling Regulatory Costs

This action is not expected to be subject to Executive Order 13771 because this proposed rule merely clarifies and corrects existing regulatory language and is not expected to result in costs or additional burdens.

C. Paperwork Reduction Act (PRA)

This proposed action would not impose any new information collection burden under the PRA, since it merely clarifies and corrects existing regulatory language. OMB has previously approved the information collection activities contained in the existing regulations and has assigned OMB control number of 2060-0104.

D. Regulatory Flexibility Act (RFA)

I certify that this proposed action would not have a significant economic impact on a substantial number of small entities under the RFA. In making this determination, the impact of concern is any significant adverse economic impact on small entities. An agency may certify that a rule will not have a significant economic impact on a substantial number of small entities if the rule relieves regulatory burden, has no net burden or otherwise has a positive economic effect on the small entities subject to the rule. This proposed rule merely clarifies and corrects existing regulatory language. We therefore anticipate no costs and therefore no regulatory burden associated with this proposed rule. Further, small entities are generally exempt from the light-duty vehicles greenhouse gas standards unless the small entity voluntarily opts into the program. See 40 CFR 86.1801-12(j). We have therefore concluded that this proposed action will have no net regulatory burden for all directly regulated small entities.

E. Unfunded Mandates Reform Act (UMRA)

This proposed action does not contain any unfunded mandate as described in UMRA, 2 U.S.C. 1531–1538, and does not significantly or uniquely affect small governments. The proposed action imposes no enforceable duty on any state, local or tribal governments. Requirements for the private sector do not exceed \$100 million in any one year.

F. Executive Order 13132: Federalism

This proposed action does not have federalism implications. It will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government.

G. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments

This proposed action does not have tribal implications as specified in Executive Order 13175. This rule only corrects and clarifies regulatory provisions that apply to light-duty vehicle manufacturers. Tribal governments would be affected only to the extent they purchase and use regulated vehicles. Thus, Executive Order 13175 does not apply to this action.

H. Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks

This proposed action is not subject to Executive Order 13045 because it is not economically significant as defined in Executive Order 12866, and because the EPA does not believe the environmental health or safety risks addressed by this action present a disproportionate risk to children. This proposed rule merely corrects and clarifies previously established regulatory provisions.

I. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution or Use

This proposed action is not subject to Executive Order 13211, because it is not a significant regulatory action under Executive Order 12866.

J. National Technology Transfer and Advancement Act (NTTAA)

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (“NTTAA”), Public Law 104–113, 12(d) (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies. NTTAA directs agencies to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards.

This proposed action modifies existing regulations to correct errors in the regulations and therefore involves technical standards previously established by EPA. The amendments to the regulations do not involve the application of new technical standards. EPA is continuing to use the technical standards previously established in its rules regarding the light-duty vehicle GHG standards for MYs 2017-2025. See 77 FR 62960.

K. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

The EPA believes that this action is not subject to Executive Order 12898 (59 FR 7629, February 16, 1994) because it does not establish an environmental health or safety standard. This

proposed regulatory action makes technical corrections to a previously established regulatory action and as such does not have any impact on human health or the environment.

List of Subjects

40 CFR Part 86

Administrative practice and procedure, Confidential business information, Labeling, Motor vehicle pollution, Reporting and recordkeeping requirements.

Dated: September 18, 2018.

Andrew R. Wheeler,
Acting Administrator.

For the reasons set forth in the preamble, the Environmental Protection Agency is proposing to amend part 86 of title 40, Chapter I of the Code of Federal Regulations as follows:

PART 86—CONTROL OF EMISSIONS FROM NEW AND IN-USE HIGHWAY VEHICLES AND ENGINES

1. The authority citation for part 86 continues to read as follows:

Authority: 42 U.S.C. 7401-7671q.

2. Section 86.1865-12 is amended by redesignating paragraph (k)(5)(v) as paragraph (k)(5)(vi) and by adding paragraph (k)(5)(v), to read as follows:

§86.1865-12 How to comply with the fleet average CO2 standards.

* * * * *

(k) * * *

(5) * * *

(v) Advanced technology vehicle credits earned according to the provisions of §86.1866-12(b)(3).

* * * * *

3. Section 86.1866-12 is amended by revising paragraphs (b) introductory text and (b)(3) to read as follows:

§86.1866-12 CO₂ credits for advanced technology vehicles.

* * * * *

(b) For electric vehicles, plug-in hybrid electric vehicles, fuel cell vehicles, dedicated natural gas vehicles, and dual-fuel natural gas vehicles as those terms are defined in §86.1803-01, that are certified and produced for U.S. sale in the 2017 through 2021 model years and that meet the additional specifications in this section, the manufacturer may use the production multipliers in this paragraph (b) to determine additional credits for advanced technology vehicles. Full size pickup trucks eligible for and using a production multiplier are not eligible for the performance-based credits described in §86.1870-12(b).

* * * * *

(3) Calculate credits for advanced technology vehicles for a given model year, and separately for passenger automobiles and light trucks, using the following equation. No credits are earned if the result is a negative value.

$$\text{Credits due to the multiplier} = ((S_{\text{adj}} - E_{\text{adj}}) \times P_{\text{adj}} \times \text{VLM} \div 1,000,000) - C$$

Where:

S_{adj} = adjusted CO₂ standard calculated according to the method described in §86.1818-12(c) or (d) and rounded to the nearest whole number. For the purpose of this calculation, the actual production of qualifying vehicles under this section must be multiplied by the applicable production multiplier, and the result shall be rounded to the nearest whole number.

E_{adj} = adjusted production-weighted fleet average carbon-related exhaust emissions calculated

according to the method described in §600.510-12(j) and rounded to the nearest whole number. For the purpose of this calculation, the actual production of qualifying vehicles under this section must be multiplied by the applicable production multiplier, and the result shall be rounded to the nearest whole number.

P_{adj} = total adjusted production of passenger automobiles or light trucks, where the actual production of qualifying vehicles under this section must be multiplied by the applicable production multiplier and the result shall be rounded to the nearest whole number.

VLM = vehicle lifetime miles, which for passenger automobiles shall be 195,264 and for light trucks shall be 225,865; and

C = The credits calculated according to §86.1865-12(k)(4), without use of multipliers, in whole megagrams.

4. Section 86.1869-12 is amended by revising paragraphs (c)(1) through (c)(3) to read as follows:

§86.1869-12 CO₂ credits for off-cycle CO₂-reducing technologies.

* * * * *

(c) * * *

(1) Testing without the off-cycle technology installed and/or operating.

(i) Determine carbon-related exhaust emissions over the FTP, the HFET, the US06, the SC03, and the cold temperature FTP test procedures according to the test procedure provisions specified in 40 CFR part 600 subpart B and using the calculation procedures specified in §600.113-12 of this chapter. Run each of these tests a minimum of three times without the off-

cycle technology installed and operating and average the per phase (bag) results for each test procedure.

(ii) Calculate the FTP and HFET carbon-related exhaust emissions from the FTP and HFET averaged per phase results.

(iii) Calculate the combined city/highway carbon-related exhaust emission value from the FTP and HFET values determined in paragraph (c)(1)(ii) of this section, where the FTP value is weighted 55% and the HFET value is weighted 45%. The resulting value is the 2-cycle unadjusted combined city/highway carbon-related exhaust emissions value for the vehicle without the off-cycle technology.

(iv) Calculate the 5-cycle weighted city/highway combined carbon-related exhaust emissions from the averaged per phase results, where the 5-cycle city value is weighted 55% and the 5-cycle highway value is weighted 45%. The resulting value is the 5-cycle adjusted combined city/highway carbon-related exhaust emission value for the vehicle without the off-cycle technology.

(2) Testing with the off-cycle technology installed and/or operating.

(i) Determine carbon-related exhaust emissions over the FTP, the HFET, the US06, the SC03, and the cold temperature FTP test procedures according to the test procedure provisions specified in 40 CFR part 600 subpart B and using the calculation procedures specified in §600.113-12 of this chapter. Run each of these tests a minimum of three times with the off-cycle technology installed and operating and average the per phase (bag) results for each test procedure.

(ii) Calculate the FTP and HFET carbon-related exhaust emissions from the FTP and HFET averaged per phase results.

(iii) Calculate the combined city/highway carbon-related exhaust emission value from the FTP and HFET values determined in paragraph (c)(2)(ii) of this section, where the FTP value is weighted 55% and the HFET value is weighted 45%. The resulting value is the 2-cycle unadjusted combined city/highway carbon-related exhaust emissions value for the vehicle with the off-cycle technology.

(iv) Calculate the 5-cycle weighted city/highway combined carbon-related exhaust emissions from the averaged per phase results, where the 5-cycle city value is weighted 55% and the 5-cycle highway value is weighted 45%. The resulting value is the 5-cycle adjusted combined city/highway carbon-related exhaust emission value for the vehicle with the off-cycle technology.

(3) Calculate the off-cycle credit in grams per mile using the following formula, rounding the result to the nearest 0.1 grams/mile:

$$Credit = (A - B) - (C - D)$$

Where:

Credit = the off-cycle benefit of the technology or technologies being evaluated, subject to EPA approval

A = the 5-cycle adjusted combined city/highway carbon-related exhaust emission value for the vehicle without the off-cycle technology calculated in paragraph (c)(1)(iv) of this section;

B = 5-cycle adjusted combined city/highway carbon-related exhaust emission value for the vehicle with the off-cycle technology calculated in paragraph (c)(2)(iv) of this section;

C = 2-cycle unadjusted combined city/highway carbon-related exhaust emissions value for the vehicle without the off-cycle technology calculated in paragraph (c)(1)(iii) of this section; and

D = 2-cycle unadjusted combined city/highway carbon-related exhaust emissions value for the

vehicle with the off-cycle technology calculated in paragraph (c)(2)(iii) of this section.

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