VOLKSWAGEN

GROUP OF AMERICA

October 7, 2014

Mr. Christopher Grundler
USEPA Headquarters
William Jefferson Clinton Building
1200 Pennsylvania Avenue NW
MC 6401A
Washington, DC 20460

Mr. William Charmley
USEPA National Vehicle and Fuel Emissions Laboratory/OAR
2565 Plymouth Road
Ann Arbor, MI 48105

VOLKSWAGEN GROUP OF AMERICA, INC.
3800 HAMLIN ROAD
AUBURN HILLS, MI 48326
PHONE +1 248 754 5000

Dear Chris and Bill,

I am writing to request that EPA issue the enclosed Draft Guidance Letter concerning the E85 weighting factor ("F factor") for model year 2016-2025 flex fuel vehicles. The F factor is used to estimate the volume of E85 combusted in flex fuel vehicles for the purpose of calculating the greenhouse gas emissions of such vehicles.

Volkswagen makes this request pursuant to 40 C.F.R. § 600.510-12(k), which provides that "manufacturers may request the use of alternative values for the weighting factor F," and that "[u]pon written request from a manufacturer, the Administrator will determine and publish by written guidance an appropriate value of F for each requested alternative fuel . . . ."

In the GHG rule, EPA provided a utility factor for dual fuel compressed natural gas (CNG) vehicles and Plug-In Hybrid Electric Vehicles ("PHEV), but not E85 FFVs. However, EPA "commit[ted] to providing early [F factor] guidance to [E85 FFV] manufacturers well in advance of each model year," recognizing that "planning and manufacturing commitments for future production of FFVs may depend on knowing the future regulatory environment."[1]

Thereafter, EPA issued a "Draft Guidance Letter" that would have set an E85 F factor of 0.2 for

[1] 2017 and Later Model Year Light-Duty Vehicle Greenhouse Gas Emissions and Corporate Average Fuel Economy Standards, Final Rule, 77 Fed. Reg. 62624, 62830 (2012).

model years 2016 through 2019,[2] but this guidance was never finalized, and EPA has yet to take any action on the E85 F factor.

Several key assumptions underlying the CAFE rule's treatment of E85 and the subsequent Draft Guidance Letter are no longer valid, and changed circumstances justify a new approach to the F factor for E85.

First, EPA's recent Clean Power Plan signals the agency's commitment to progress on climate change as a major agency priority. EPA has hitherto sought to limit greenhouse gas emissions through regulation of stationary sources and vehicles, but a comprehensive climate change strategy will include fuel as well. Increasing the number of FFVs on the road eventually would give EPA the freedom to initiate a shift to cleaner, higher-octane fuel, thereby reducing emissions of CO_2.[3]

Second, on November 29, 2013, EPA issued a proposed partial waiver of the Renewable Fuel Standard's blending requirement for 2014.[4] This is significant, because EPA relied on the RFS's ability to drive ethanol demand when it denied a utility factor for E85: "[I]f actual use of E85 and other higher-ethanol blends increases, for example in response to future RFS requirements and/or due to more competitive pricing, then the regulations already allow automakers to apply a higher E85 weighting consistent with the greater use of the fuel."[5] In light of the partial waiver, the RFS can no longer be relied upon to drive ethanol usage above the E10 "blendwall" without some additional incentive to produce FFVs. Increasing the number of FFVs in the national fleet would help to overcome the blendwall and enable compliance with the RFS's statutory blending requirements.

Third, in denying an F factor for E85, EPA referred to "fuel use data [that] demonstrate[s] that ethanol FFVs only use E85 less than one percent of the time."[6] More recent experience has shown that when FFVs make up a significant portion of the vehicles in an area, station owners will invest in the infrastructure necessary to sell E85 and price it competitively with gasoline on an energy basis. In such areas, FFV owners use E85 a significant portion of the time. By making it cost effective for manufacturers to produce FFVs, EPA would enable the market conditions necessary for nationwide ethanol-gasoline price parity.

---

[2] Available at http://www.epa.gov/otaq/regs/ld-hwy/greenhouse/documents/draft-ffv-guidance-letter.pdf.

[3] As researchers at Oak Ridge National Laboratory concluded in one recently study, "[t]he unique properties of midlevel alcohol–gasoline blends were shown to be the enabling technology toward higher engine efficiency, leading to feasible near-term increases in vehicle efficiency and reductions in CO_2." Derek A Splitter & James P. Szybist, *Experimental Investigation of Spark-Ignited Combustion with High-Octane Biofuels and EGR. 1. Engine Load Range and Downsize Downspeed Opportunity*, Energy & Fuels (2013); *see also* Control of Air Pollution from Motor Vehicles: Tier 3 Motor Vehicle Emission and Fuel Standards, 78 Fed. Reg. 29825, 29911 (noting that a 30% ethanol blend "could help manufacturers who wish to raise compression ratios to improve vehicle efficiency, as a step toward complying with the 2017 and later light-duty greenhouse gas and CAFE standards.").

[4] 2014 Standards for the Renewable Fuel Standard Program, Proposed Rule, 78 Fed. Reg. 71732.

[5] 77 Fed. Reg. at 62830.

[6] *Id.*

Finally, the draft Guidance document provides manufacturers assurance of an F factor only through Model Year 2019, but as the agency knows, the automobile production cycle is several years long, and manufacturers will soon be making decisions that affect the number of FFVs produced in Model Year 2020 and beyond. By Model Year 2019, the statutory incentive to produce FFVs will be fully phased out.[7] Thus, our proposed Guidance would provide an F factor through 2025.

For these reasons we respectfully request that you issue the enclosed Draft Guidance Letter.

Sincerely,

Stuart I Johnson
Senior Manager
Powertrain Regulatory Affairs
Volkswagen Group of America
Engineering and Environmental Office
3800 Hamlin Road
Auburn Hills, MI 48326
Phone: 248-754-4208

[7] 49 U.S.C. § 32906.

Proposed Guidance Letter

CD-13-XX (LD) SUBJECT: E85 Flexible Fuel Vehicle Weighting Factor for Model Year 2016-2025 Vehicles

Dear Manufacturer:

Under EPA's light-duty vehicle greenhouse gas (GHG) program, starting with the 2016 model year, the regulations describe two pathways for determining the GHG value for a gasoline-E85 flexible fuel vehicle (FFV). The default approach is to use the value determined for operation on gasoline (see 40 CFR 600.510-12(j)(2)(vi)). The alternative is to combine the gasoline and E85 GHG values together in a way that accounts for the real-world use of E85 with a weighting factor (this weighting factor is described as "F" in the regulations (see 40 CFR 600.51012(j)(2)(vi) and (k)).

The regulations describe two different approaches that may be used to determine the value of F. First, upon written request from a manufacturer, EPA "will determine and publish by written guidance an appropriate value of F for each requested alternative fuel based on the Administrator's assessment of real-world use of the alternative fuel" (see 40 CFR 600.510-12(k)(1)). Second, a manufacturer may submit its own data to EPA that demonstrates the real-world use of the alternative fuel and determines an appropriate value of F specific to their vehicles (see 40 CFR 600.510-12(k)(2)).

Several manufacturers have requested that EPA determine a value of F for E85 to apply to 2016 and beyond model year FFVs, and that EPA publish guidance as early as possible. EPA is therefore issuing this guidance as directed by 40 CFR 600.510-12(k)(1).

For the 2016 model year, manufacturers may determine a utility factor (F value) using the following calculation. $F = 350 / CREE_{gas}$. This is optional; manufacturers may always continue to use the default value of 0, thus ignoring the E85 carbon-related exhaust emissions (CREE) value. Manufacturers may continue to use this calculation through the 2025 model year.

The equation using the F factor is described in 40 CFR 600.510-12(j)(2)(vi) as follows:

1) $CREE = (F \times CREE_{alt}) + (1 - F) \times CREE_{gas},$

where $CREE_{alt}$ is the CREE value calculated for the model type using the alternative fuel (in this case E85) and $CREE_{gas}$ is the CREE value calculated for the model type while operating on gasoline.

There are several important things to note for manufacturers electing to use this F value:

A. Do not apply a factor of 0.15 to the E85 CREE value before combining with the gasoline CREE value. The requirements to use a multiplier of 0.15 for purposes of the greenhouse gas emissions standards extend only through the 2015 model year (see 40 CFR 600.510-12(j)(2)(iv) and (vi)).

B. Manufacturers electing to use this F value must apply it to all gasoline-E85 FFVs, regardless of the relative E85 and gasoline emission values. In other words, this value may not be used solely on FFVs where the E85 CREE value is lower than the gasoline CREE value.

C. Manufacturers continue to retain the option of collecting their own data demonstrating the real-world use of E85 for those model types and similar industry models and requesting that EPA determine a unique F factor for use in the equation for those model types (see 40 CFR 600.510-12(k)(2)).

In the event that a new certification fuel with an ethanol level above 10% is approved, this guidance will apply equally to that fuel with the CREEalt from the new certification fuel being used in equation 1 above.

If you have any questions about this guidance, please contact your certification team representative.