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Tad Wysor  
Office of Transportation and Air Quality  
Assessment and Standards Division  
Environmental Protection Agency  
2000 Traverwood Drive  
Ann Arbor, MI 48105

Via: [www.regulations.gov](http://www.regulations.gov)

Attn: Environmental Protection Agency (EPA) Docket No. EPA–HQ–OAR-2016-0604

Re: Notice of Proposed Rulemaking: Vehicle Test Procedure Adjustments for Tier 3 Certification Test Fuel (85 Fed. Reg. 28,564; May 13, 2020)

The Renewable Fuels Association (RFA) appreciates the opportunity to provide comments on the notice of proposed rulemaking (NPRM) regarding Vehicle Test Procedure Adjustments for Tier 3 Certification Test Fuel.

RFA is the leading national trade association representing U.S. fuel ethanol producers. Its mission is to advance the development, production, and use of low-carbon ethanol by strengthening America’s ethanol industry and raising awareness about the benefits of renewable fuels. Founded in 1981, RFA serves as the premier forum for industry leaders and supporters to discuss ethanol policy, regulation, and technical issues. RFA’s 300-plus members are working daily to help America become cleaner, safer, more energy secure, and economically vibrant.

The NPRM intends to “...re-align test results from Greenhouse Gas (GHG) and Corporate Average Fuel Economy (CAFE) testing on the new Tier 3 test fuel so they are consistent with test results from testing on the original Tier 2 test fuel, in order to avoid an effective change in the stringency of the GHG and CAFE standards.” RFA provides these comments in response to the proposed rule.

- 1. EPA should update the proposed “R-factor” for fuel economy (CAFE) compliance calculations to better represent modern engines and fuels, as recommended by the Department of Energy and numerous automakers.**

EPA incorporates the use of a “R-factor” in fuel economy calculations in order to address concerns about the impacts of test fuel property variations on CAFE compliance. The R-factor represents the ratio of the percent change in fuel economy to the percent change in volumetric heating value for tests conducted using two differing fuels.

Currently, based on outdated 1980s-era vehicle technology testing data, EPA requires that automakers use an R-factor of 0.6 in CAFE compliance calculations. The new Tier 3 certification fuel contains 10% ethanol by volume, and EPA allows automakers to petition the Agency for approval to use certification fuels with even higher levels of ethanol (e.g. 25% or 30% ethanol by volume). Because ethanol has a lower heating value than gasoline, the inclusion of ethanol in certification fuels is expected to result in a significant deviation from the CAFE baseline test fuel heating value. Thus, the accuracy of the R-factor in predicting fuel economy changes resulting from heating value changes becomes increasingly important.

In this rulemaking EPA proposes to replace and revise the original R-factor with a new factor (Ra) of 0.81. In addition to accounting for the change in fuel energy content (the role of the original R-factor), the new empirically-derived Ra value in effect incorporates that factor, but also other impacts that may result from the change in test fuel between Tier 2 and Tier 3 fuel.

However, the proposed adjustment factor (Ra) of 0.81 still falls short of accurately reflecting the performance of modern fuels in modern engines, due to reliance on a flawed auto study. EPA's analysis used test data mostly from non-Tier 3 vehicle technologies, inappropriately included faulty test data from the 2013 Chevrolet Malibu, which had accelerator errors during Tier 2 HFET runs, and excluded test data from a newer vehicle, the 2016 Acura ILX. Correcting these errors alone would have increased the agency's proposed Ra value.

Other reassessments of the R-factor have been conducted to determine the impacts of adjustments to the properties of certification gasoline under EPA's Tier 3 regulations on modern engines. These recent studies by Oak Ridge National Laboratory, Ford Motor Company, and others have found that the R-factor for modern engines and vehicles is very close to 1.0.<sup>1</sup> Based on these findings, many stakeholders encouraged EPA to raise the adjustment factor to 1.0 during the Tier 3 public notice and comment period.

EPA's continued failure to provide the proper R-factor serves to discourage automakers from pursuing certification and commercialization of engines designed to operate on higher levels of ethanol. We are concerned the proposed Ra value of 0.81 could serve as a deterrent to automakers interested in designing engines that are optimized to use higher-ethanol blends.

We strongly encourage EPA to revise the proposed adjustment factor (Ra) to 1.0, which is justified by the latest scientific literature. Doing so would encourage—rather than deter—innovation in engine design and remove another EPA-erected barrier to expanded renewable fuel use.

## **2. EPA should adopt a regulatory approach where it requires the use of Tier 3 gasoline certification fuel without any test procedure adjustment for CO<sub>2</sub>**

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<sup>1</sup> See, Sluder, C., West, B., Butler, A., Mitcham, A. et al., "Determination of the R Factor for Fuel Economy Calculations Using Ethanol-Blended Fuels over Two Test Cycles," *SAE Int. J. Fuels Lubr.* 7(2):551-562, 2014, doi:10.4271/2014-01-1572; and Sluder, C. Scott and Brian H. West. Oak Ridge National Laboratory. "Preliminary Examination of Ethanol Fuel Effects on EPA's R-factor for Vehicle Fuel Economy." June 2013. ORNL/TM-2013/198

In the proposal, EPA requests comment on “...whether the Agency should consider a regulatory approach where we require the use of Tier 3 gasoline certification fuel without any test procedure adjustment for CO<sub>2</sub>.” RFA believes EPA should indeed adopt a final approach that does not include the proposed test procedure adjustment for CO<sub>2</sub>. Our recommendation is based on the fact that EPA’s proposed CO<sub>2</sub> adjustment factor is predicated on EPA’s unjustified and unsupportable view that “maintaining GHG and CAFE stringency” relates *only* to vehicle efficiency and not to the resultant tailpipe emissions from the use of a market representative fuel. EPA’s view, as described in the proposal, appears to be inconsistent with the clear intent and authorities provided under the Clean Air Act.

EPA solicits further comment on whether a Supplemental Notice of Proposed Rulemaking (SNPRM) would be necessary in the instance that the proposed CO<sub>2</sub> adjustment factor is withdrawn and excluded from the Agency’s final action. We do not believe an SNPRM would be warranted in this case, as stakeholders have already been provided ample opportunity to comment on the necessity, legality, and technical considerations of the presently proposed CO<sub>2</sub> adjustment factor. Further, finalizing an approach that excludes the CO<sub>2</sub> adjustment factor would clearly meet the “logical outgrowth” legal standard, as the proposed rule explicitly raises the distinct possibility that EPA may finalize a rule without any CO<sub>2</sub> adjustment factor. It is RFA’s position that EPA should finalize a change in the gasoline certification fuel without any CO<sub>2</sub> adjustment factor and without issuing a SNPRM.

Thank you again for the opportunity to provide comment on this important matter.

Sincerely,

Kelly Davis  
VP of Regulatory Affairs