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To: Douglas Rathbun, Competition Policy & Advocacy Section, Antitrust Division, DOJ

From C. Boyden Gray; Adam Gustafson

Re: Comments on Roundtable on Anticompetitive Regulations: Removing Regulatory Barriers to Nonpetroleum-Based Fuels Such as Midlevel Ethanol Blends

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The Antitrust Division's Competition Advocacy Program should address anticompetitive practices in the motor vehicle fuel market by urging EPA to remove regulatory barriers to low-cost, octane-rich, clean blends of gasoline with higher concentrations of ethanol and other clean alternative fuels. This effort would save customers money at the pump, and it is essential to a successful outcome of the pending rulemaking on fuel economy standards.

EPA has acknowledged that high-octane midlevel ethanol blends such as E30 would aid compliance with such standards and other clean-air goals. Yet EPA has erected regulatory barriers that mandate petroleum's monopoly and cap ethanol blending without cause. As explained in the attached comments, EPA should take these actions to restore competition:

- **Approve an alternative certification fuel with 25–30% ethanol.** Automakers have told EPA they need higher octane fuel and have touted ethanol's benefits. But EPA deterred automakers from requesting an alternative certification fuel by threatening to deny requests unless the fuel is "readily available nationwide."
- **Fix the fuel economy formula to stop cheating ethanol blends.** EPA admits that the "R-factor" in its formula unfairly penalizes automakers who certify new vehicles on ethanol-blended fuel. Rather than fix the problem, EPA is working on a new penalty factor to compensate for ethanol's low carbon content, further discouraging automakers from designing efficient vehicles optimized for such fuel.
- **Reinterpret "substantially similar" to cover higher ethanol blends.** As of 2017, ethanol is a fuel additive utilized in certification, so ethanol blending is no longer constrained by the "sub-sim" law. EPA should revise an outdated interpretive rule to clarify that ethanol blends no longer require a sub-sim waiver. EPA should *not* finalize the proposed REGS rule's unlawful ban on higher ethanol blends.
- **Reinterpret the RVP waiver statute to apply to all fuel blends containing gasoline and at least 10% ethanol—not just E10.** This would allow E15, a cleaner fuel, to be sold year-round, and it would encourage more retailers to sell E15. Pruitt has already promised to fix this problem if the law allows, and the suggested interpretation gives effect to the statute's text and Congress's purpose.
- **Adopt an updated lifecycle analysis of ethanol's greenhouse gas emissions.** EPA continues to rely on an outdated 2010 lifecycle analysis, ignoring new data and updated models by USDA and DOE, and distorting cost-benefit analyses. EPA's erroneous analysis makes U.S. ethanol less competitive in the global market. EPA should adopt DOE's model in a forthcoming Report to Congress.

## INTRODUCTION

One of the statutes governing NHTSA's CAFE program makes clear that the program is broadly conceived to encourage "nonpetroleum transportation fuels," including methanol, ethanol, and natural gas, to "successfully compete with petroleum-based fuels."[1] That congressional goal is frustrated by EPA's regulations. For example, NGVAmerica, a natural-gas vehicle advocacy group, recently commented that eliminating certain EPA restrictions applicable to natural-gas vehicles would "level the playing field with other technologies, and would provide additional regulatory flexibility for manufacturers in meeting future greenhouse gas emission standards."[2] Many other regulatory barriers limit the ability of nonpetroleum-based fuels to compete in the market. The remainder of these comments, however, will focus on midlevel ethanol blends because of their prime importance to the automobile industry for increased fuel efficiency and their well-demonstrated consumer benefits.

Vehicle manufacturers want to design cars optimized to use clean, high-octane, midlevel ethanol blends, because such fuel enables efficiency gains that would reduce the cost of compliance with greenhouse gas and fuel economy standards. As the auto industry has explained in comments to EPA, a high-octane midlevel ethanol blend would enable next generation engines with increased vehicle efficiency and lower greenhouse gas emissions at a lower cost.[3] Ford Motor Company, for example, "strongly recommend[ed] that EPA pursue regulations . . . to facilitate the introduction of higher octane rating market fuels," noting that the "increased octane rating from increased ethanol content has the potential to allow for fuel economy, performance and emissions improvements through more efficient engine designs."[4] Ford's recommendation was linked to EPA and DOT's greenhouse gas and fuel economy rules: "Progress on this issue will be a key parameter for consideration in [EPA and NHTSA's] . . . mid-term evaluation" of the light-duty CAFE Rule in 2017."[5]

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[1] Alternative Motor Fuels Act of 1988, Pub. L. 100-494, § 2(4), 102 Stat. 2441.

[2] NGVAmerica, Comments on EPA's Reconsideration of the Final Determination of the Mid-Term Evaluation of Greenhouse Gas Emissions Standards for Model Year 2022–2025 Light-Duty Vehicles, EPA–HQ–OAR–2015–0827, at 2 (Oct. 5, 2017).

[3] The Alliance of Automobile Manufacturers and the Association of Global Automakers explained that ethanol's "in cylinder cooling effect," along with its high octane rating, make a "mid-level gasoline-ethanol blend" particularly well suited for "improv[ing] vehicle efficiency and lower[ing] GHG emissions," through "increas[ing] the engine compression ratio" and "downsizing of the engine." Stephen Douglas & Julia Rege, Alliance of Automobile Manufacturers & Association of Global Automakers, Comments on Proposed Tier 3 Rule, EPA-HQ-OAR-2011-0135-4461 (July 1, 2013), at 52 (hereinafter "Auto Alliance Tier 3 Comments").

[4] Cynthia Williams, Ford Motor Company, Comments on Proposed Tier 3 Rule, EPA-HQ-OAR-2011-0135-4349 (July 1, 2013), at 3, 17.

[5] *Id.* at 17.

Automotive engineers estimate that midlevel ethanol blends could increase vehicle efficiency and reduce carbon dioxide emissions by about 7%.[6] This would reduce compliance costs, and could save new vehicle purchasers billions of dollars every year.[7] Midlevel ethanol blends would also reduce fuel prices and fuel consumption.[8]

Unfortunately, EPA's anticompetitive regulations prevent automakers and consumers from realizing these benefits. By blocking new vehicles optimized for midlevel ethanol blends, EPA's rules raise consumer costs and reduce choice at the pump. Anti-ethanol trade groups argue that market demand for ethanol is limited "because most U.S. vehicle engines were not designed to handle gasoline consisting of more than 10 percent ethanol."[9] This argument ignores the anticompetitive regulatory environment that shapes vehicle manufacturers' design choices in the first place.

An introductory warning observation is in order: EPA's ban on increased usage of ethanol and other alternative fuels is based on a combination of several interrelated rules that are difficult to understand individually and even more difficult to put together collectively. But when this constellation of anticompetitive rules is grasped, it becomes evident that gasoline enjoys a government-mandated monopoly—a guaranteed 85–90% market share.

These regulatory barriers—many written in virtually impenetrable language—have no environmental or public interest justification. They serve only to protect the incumbent oil industry's product from market competition at the expense of consumers. The Antitrust Division should urge EPA to repeal these regulatory barriers to a competitive fuel market.

## I. EPA Should Revise Its Alternative Certification Fuel Rules to Promote Competition.

### A. Certification Fuel Properties Limit the Vehicles Automakers Can Build.

"Before a manufacturer may introduce a new motor vehicle into commerce, it must obtain an EPA certificate indicating compliance with the requirements of the Act and

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[6] *See* Thomas G. Leone et al., *The Effect of Compression Ratio, Fuel Octane Rating, and Ethanol Content on Spark-Ignition Engine Efficiency*, 49 Envtl. Sci. & Tech. 10778, 10785, Table 2 (2015).

[7] Economists estimate that a high-octane E25 fuel, if widely adopted in all model year 2025 vehicles, could reduce the annual cost of meeting the 2025 greenhouse gas standards by $7 billion, and lower average new vehicle prices by $436. Thomas L. Darlington et al., *Modeling the Impact of Reducing Vehicle Greenhouse Gas Emissions with High Compression Engines and High Octane Low Carbon Fuels*, SAE Tech. Paper 2017-01-0906, at 8, Table 11 (Mar. 28, 2017).

[8] Economists estimate that a consumer would save $155 and $695 in fuel costs over the lifetime of a model year 2025 vehicle by using high-octane E25 in optimized vehicles instead of regular and premium E10, respectively. Dean Drake et al., Comparing the Cost of Two Different Grades of High Octane Motor Fuel in Future High Efficiency Vehicles 14 (2017).

[9] *Americans for Clean Energy v. EPA*, 864 F.3d 691, 700 (D.C. Cir. 2017).

applicable regulations."[10] To obtain the necessary certificate, automobile manufacturers must test new vehicle models for compliance with air toxic emissions standards using a special "test fuel" (or "certification fuel") whose properties are defined by EPA.[11] The same procedures and test fuel are used to ensure that manufacturers meet NHTSA and EPA's increasingly stringent fuel efficiency and greenhouse gas standards on a fleet-wide basis.[12]

The makeup of the test fuel therefore determines the kinds of engines that car companies are able to design, build, and sell. It also determines the kinds of fuel that may lawfully be sold, because the composition of commercial fuel is governed by the Clean Air Act's "sub-sim" law,[13] and in the past has interpreted this requirement to limit the ethanol content of market fuel to the ethanol content of the test fuel.[14]

EPA recognized in the 2014 Tier 3 rulemaking that a midlevel ethanol blend such as E30 "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."[15] Yet EPA has not approved a midlevel certification fuel, despite voluminous positive comments to which the Agency never responded. EPA has thus deprived automakers of the tool they need to improve efficiency and lower costs.

### B. EPA Raised the Possibility of a Midlevel Ethanol Test Fuel.

In the same rulemaking proceeding that EPA touted the benefits of midlevel ethanol blends, EPA suggested that the Agency would approve an alternative certification fuel "if manufacturers were to design vehicles that required operation on a higher octane, higher ethanol content gasoline (*e.g.*, dedicated E30 vehicles or [flexible-fuel vehicles] optimized to run on E30 or higher ethanol blends)."[16] And EPA invited manufacturers to request an alternative certification fuel pursuant to 40 C.F.R. § 1065.701(c).

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[10] *Ethyl Corp. v. EPA*, 306 F.3d 1144, 1146 (D.C. Cir. 2002); *see* 42 U.S.C. § 7522(a)(1) (prohibiting sale of vehicles without a certificate of conformity).

[11] *See* 42 U.S.C. § 7521 (authorizing EPA to prescribe emission standards); *id.* § 7525(a)(4)(A) (authorizing EPA to set and revise "test procedures" and test "fuel characteristics").

[12] *See 2017 and Later Model Year Light-Duty Vehicle Greenhouse Gas Emissions and Corporate Average Fuel Economy Standards*, 77 Fed. Reg. 62623, 62624 (Oct. 15, 2012) (2012 CAFE Rule).

[13] 42 U.S.C. § 7545(f)(1)(B).

[14] *Renewables Enhancement and Growth Support Rule*, Proposed Rule, 81 Fed. Reg. 80828, 80975 (Nov. 16, 2016) (to be codified at 40 C.F.R. § 80.1564(a)(3)) (hereinafter Proposed REGS Rule). *See infra* p. 8.

[15] *Control of Air Pollution from Motor Vehicles: Tier 3 Motor Vehicle Emission and Fuel Standards*, 79 Fed. Reg. 23414, 23528–29 (April 28, 2014) (hereinafter Tier 3 Rule).

[16] *Id.* at 23528.

At the same time, EPA suggested that an alternative test fuel must be "readily available nationwide" for EPA to approve it.[17]

### C. EPA's "Readily Available Nationwide" Standard Would Have Blocked a Midlevel Ethanol Test Fuel.

The auto manufacturers supported the idea of midlevel ethanol fuel, but they and other groups expressed concern that a request for an alternative certification fuel rule under 40 C.F.R. § 1065.701(c) would be thwarted by that rule's requirement that the proposed alternative certification fuel be "commercially available," and EPA's interpretation of that requirement to mean that the fuel must be "readily available nationwide."[18]

The Energy Future Coalition and Urban Air Initiative challenged the alternative certification fuel rule in the D.C. Circuit, arguing that EPA's "readily available nationwide" standard was an arbitrary and capricious catch-22: no fuel venders are going to offer an E30 fuel unless there will be cars to use it, and car companies cannot get permission to make the cars unless the fuel is already available.

### D. EPA Disavowed its "Readily Available Nationwide" Standard in Favor of Discretionary Consideration of Future Availability.

In the course of the litigation, EPA conceded that it could approve an automaker's application for alternative test fuels without requiring that the fuel be "readily available nationwide."[19] EPA characterized that language in the preamble as a nonbinding paraphrase of the rule itself. And EPA further conceded that the rule's "commercial available" standard is a discretionary "factor[] EPA would consider," rather than a "mandatory prerequisite" for approving a new test fuel.[20] At oral argument, EPA conceded that the rule's reference to "commercial availability" merely "codif[ies] the practice of the agency," which has been to consider a new fuel's potential to become commercially viable in the future.[21] Therefore, EPA has discretion to approve an alternative certification fuel that is not yet on the market, but is likely to be commercially viable.[22]

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[17] *Id.*

[18] 40 C.F.R. § 1065.701(c)(1)(ii); *see also* Energy Future Coalition & Urban Air Initiative, Comments on Proposed Tier 3 Rule, EPA-HQ-OAR-2011-0135-4353 (July 1, 2013), at 9.

[19] EPA Brief at 50, *Energy Future Coal. v. EPA*, No. 14-1123 (D.C. Cir. Feb. 11, 2015).

[20] *Id.* at 26.

[21] Transcript of Oral Argument 23, *Energy Future Coal. v. EPA*, No. 14-1123 (D.C. Cir. Mar. 20, 2015).

[22] *See* EPA Response to Pet'n for Reh'g at 7 n.3 ("The Agency has ample discretion to consider requests on a case-by-case basis, and may evaluate trends and future market projections when considering whether to approve an alternative test fuel that is not currently on the market."); EPA Brief at 44 ("EPA did not require strict compliance with the listed factors."); *id.* ("§ 1065.701(c) identifies 'commercial availability' of a proposed test fuel as a factor EPA will consider, but does not require that all such listed factors be met for approval.").

Moreover, EPA said that until Model Year 2022, an automaker's application for an alternative test fuel can be evaluated without regard to commercial availability or any other "substantive criteria." In its brief to the Court, EPA identified 40 C.F.R. § 86.113-94(g) as an alternate mechanism for requesting and approving a new test fuel, separate from § 1065.701(c), which "need not be used by vehicle manufacturers until model year 2022."[23] Section 86.113-94(g) does not mention commercial availability or any of the other requirements of § 1065.701(c). Relying on that rule, EPA emphasized that manufacturers could get permission to use alternative test fuel "without specifying any substantive criteria."[24]

Despite EPA's concessions, which the D.C. Circuit relied on when it upheld the challenged rule,[25] EPA has not revised its regulations accordingly.

### E. EPA Should Repeal its Unnecessary "Commercially Available" Standard and Approve a Midlevel Ethanol Test Fuel.

The Antitrust Division's Competition Advocacy Program should urge EPA to repeal its unnecessary "commercially available" fuel standard to align with the commitment the Agency has already made in court. EPA could encourage an auto manufacturer's application by publicly reinforcing the interpretation it stated in litigation: immediate nationwide commercial availability is not a prerequisite for approval of an alternative certification fuel.

In addition, EPA need not wait for the auto industry to apply for a midlevel ethanol certification fuel. EPA should unilaterally approve a new test fuel on its own initiative, as the Agency has done in the past.

## II. EPA Should Correct its Fuel Economy Calculation To Stop Penalizing Ethanol.

EPA has admitted that part of its fuel economy formula is erroneous and that it unfairly penalizes gasoline-ethanol blends, contrary to statutory requirements. This harms competition, as it discourages manufacturers from seeking to design vehicles optimized for these fuels.

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[23] EPA Brief at 11.

[24] EPA Brief at 3; *see also id.* at 26 ("Tier 3 retained the existing alternative test fuel provision at 40 C.F.R. § 86.113-94(g), which does not specify criteria, such as commercial availability.").

[25] The D.C. Circuit held that it was "reasonable for EPA to require vehicle manufacturers to use the same fuels in emissions testing that vehicles *will* use out on the road." *Energy Future Coal. v. EPA*, 793 F.3d 141, 146 (D.C. Cir. 2015) (emphasis added).

Under the CAFE program, EPA calculates vehicle fuel economy in two steps.[26] EPA first measures the amount of carbon in the test fuel and in the exhaust emissions.[27] Then, using a complex fuel economy equation, EPA derives the fuel economy value.[28]

The current fuel economy equation includes adjustments meant to control for changes in the test fuel that affect fuel economy. These adjustments implement EPA's statutory obligation to make fuel economy testing on today's fuel comparable to fuel economy testing in 1975 by adjusting for changes in the test fuel that affect fuel economy.[29] This statutory requirement is intended to prevent EPA from changing the stringency of the CAFE standards through surreptitious changes in the test fuel, thereby ensuring that substantive changes in the CAFE standards happen in an accountable and transparent way.[30] EPA's current fuel economy equation fails to accurately adjust for changes in the test fuel, as required by law.

The current fuel economy equation includes an adjustment to account for changes in the test fuel's energy content.[31] Such an adjustment is necessary because energy content affects fuel economy: In general, a fuel with a higher energy content increases volumetric fuel economy, whereas a fuel with a lower energy content reduces volumetric fuel economy.[32] Thus, unless the equation accurately adjusts for changes in the energy content of the test fuel, fuel economy calculations for test fuels with a lower energy content (like the new E10 gasoline certification fuel) would reflect illusory losses in fuel economy.

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[26] Aron Butler et al., Analysis of the Effects of Changing Fuel Properties on the EPA Fuel Economy Equation and R-Factor, at 1, Memorandum to the Tier 3 Docket, EPA-HQ-OAR-2011-0135 (Feb. 28, 2013).

[27] 40 C.F.R. § 600.113-12(f)(1).

[28] *Id.* § 600.113-12(h)(1) ((5174 x $10^4$ x CWF x SG)/[((CWF x HC) + (0.429 x CO) + (0.273 x $CO_2$)) x ((0.6 x SG x NHV) + 5471)]); *see also id.* Pt. 600, App. II (sample fuel economy calculations).

[29] 26 U.S.C. § 4064(c) ("Fuel economy . . . shall be measured in accordance with testing and calculation procedures . . . utilized by the EPA Administrator for model year 1975 . . . or procedures which yield comparable results."); 49 U.S.C. § 32904(c) ("[T]he Administrator shall use the same procedures for passenger automobiles the Administrator used for model year 1975 . . . or procedures that give comparable results."); *see also General Motors Corp. v. Costle*, Nos. 80–3271, 80–3272, & 80–3655 (6th Cir. 1982) (Mem.) (requiring EPA to initiate a rulemaking that would establish an "adjustment factor" reconciling current test procedures with previous ones).

[30] *Ctr. for Auto Safety v. Thomas*, 847 F.2d 843, 846 (D.C. Cir.) (en banc) (Wald, C.J., concurring), *reh'g granted and opinion vacated on other grounds*, 856 F.2d 1557 (D.C. Cir. 1988) (per curiam) ("By inserting the comparability requirement, Congress meant to insure that auto manufacturers be credited only with real fuel economy gains, not illusory gains generated by changes in test procedures.").

[31] *Control of Air Pollution from Motor Vehicles: Tier 3 Motor Vehicle Emission and Fuel Standards*, Proposed Rule, 78 Fed. Reg. 29815, 29913 ("[T]he existing fuel economy equation for gasoline . . .contains an adjustment for the energy content of the test fuel to calculate fuel economy equivalent to what would have been determined using the 1975 baseline test fuel.") (hereinafter Proposed Tier 3 Rule).

[32] *See id.* ("Because ethanol has a lower energy content than gasoline, i.e., fewer British thermal units (Btus) or joules per gallon, and fuel economy is defined in terms of miles per gallon of fuel, it is almost certain that the same vehicle tested on a test fuel with 15 percent ethanol content will yield a lower fuel economy value relative to the value if it were tested on the current test fuel with zero ethanol content.").

EPA's current fuel economy equation creates such an illusion. The source of this error is a sensitivity measure known as the R-factor. The R-factor is a measure of "how vehicles respond to changes in the energy content of the fuel."[33] The current R-factor of 0.6, for example, implies that a 10% change in the test fuel's energy content causes only a 6% change in vehicle fuel economy.[34]

The current R-factor is based on outdated vehicle data from the 1980s.[35] Many studies since then have shown that a higher R-factor is required to accurately measure changes in fuel economy.[36] EPA itself has acknowledged that the current R-factor is wrong and suggested a corrected value might lie "between 0.8 and 0.9."[37] The auto industry has asked EPA to adopt an R-factor of 1.0.[38]

EPA has repeatedly promised to fix the R-factor, but it has never done so. In 2012, EPA assured automakers that it would fix the R-factor "in a timely manner" when it changed the test fuel.[39] In 2014, EPA updated its test fuel to reflect in-use gasoline with 10 percent ethanol,[40] but it refused to change the R-factor.[41] Instead, EPA kicked the can down the road, requiring automakers to use the outdated test fuel for fuel economy testing until at least 2020.[42]

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[33] Tier 3 Rule, *supra* note 15, 79 Fed. Reg. at 23531.

[34] *Id.* (stating that the R-factor's "value is presently set at 0.6"); Proposed Tier 3 Rule, *supra* note 31, 78 Fed. Reg. at 29913 (stating that the R-factor "account[s] for the fact that the change in fuel economy is not directly proportional to the change in energy content of the test fuel.").

[35] Butler et al., *supra* note 26, at 3 (citing 1985 studies).

[36] *Id.* at 3.

[37] *Id.* at 4–5.

[38] Tier 3 Rule, *supra* note 15, 79 Fed. Reg. at 23531 ("[T]he manufacturers commented that . . . EPA should finalize an appropriate test procedure adjustment in the Tier 3 rulemaking, including adoption of an 'R' factor of 1.0.").

[39] 2012 CAFE Rule, *supra* note 12, 77 Fed. Reg. at 62777–78 ("If the certification test fuel is changed to include ethanol through a future rulemaking, EPA would be required under EPCA to address the need for a test procedure adjustment to preserve the level of stringency of the CAFE standards. EPA is committed to doing so in a timely manner to ensure that any change in certification fuel will not affect the stringency of future GHG emission standards.").

[40] 40 C.F.R. § 86.113-15; 40 C.F.R. § 1065.710.

[41] Tier 3 Rule, *supra* note 15, 79 Fed. Reg. at 23531 ("While there has been some data evaluated to assess the impact of changing the emission test fuel on the 'R' factor, EPA did not propose a value in the NPRM and specifically stated that we would continue to investigate this issue and if necessary address it as part of a future action, as opposed to changing it in the Tier 3 final rule."); *id.* at 23532 (stating that current studies "will provide data need to assess the 'R' value" and stating that "EPA expects to have the needed data in early to mid 2015 and will then be in a position to conduct a thorough assessment of the impacts of different emission test fuels on Tier 3/LEV III vehicles and develop any appropriate adjustments and changes, in consultation and coordination with NHTSA.").

[42] 40 C.F.R. § 600.117(a).

The Antitrust Division's Competition Advocacy Program should urge EPA to finalize an R-factor of 1. This would allow automakers to use the new test fuel for CAFE compliance purposes without being unfairly penalized for using a test fuel with a lower energy content.[43] It would also give automakers the certainty they need to design vehicles optimized to use higher ethanol blends, increasing choices for consumers.

## III. EPA Should Reinterpret "Substantially Similar" in Light of Changed Circumstances to Embrace Midlevel Ethanol Blends.

In 2016, EPA proposed the Renewables Enhancement and Growth Support (REGS) Rule. If finalized, the REGS Rule would prohibit "the sale or introduction of gasoline containing greater than 15 volume percent ethanol . . . into any model year 2001 or newer . . . motor vehicle,"[44] with the exception of FFVs.[45] EPA implies that this policy is required by the "sub-sim" law, section 211(f) of the Clean Air Act.[46] It follows that EPA "would need to approve a new [sub-sim] waiver request for E16 or other higher-level ethanol blends to be used in [non-FFV] gasoline vehicles."[47]

The proposed REGS Rule's prohibition should not be finalized, because EPA's interpretation violates the plain meaning of the "sub-sim" statute and would impose a needless regulatory burden on ethanol producers, fuel retailers, and drivers. In addition, EPA should repeal prior interpretative rules misinterpreting section 211(f), and replace them with an interpretative rule clarifying that section 211(f) does not prohibit the sale of midlevel ethanol blends.

### A. The REGS Rule Is Based on a Misinterpretation of the Sub-Sim Law.

In the sub-sim law, Congress made it unlawful "to first introduce into commerce, or to increase the concentration in use of, any fuel or fuel additive for use by any person in motor vehicles . . . which is not substantially similar to any fuel or fuel additive utilized" in the certification of new motor vehicles.[48]

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[43] The error of the current R-factor and the necessary correction to the fuel economy equation is explained in detail in comments filed by Boyden Gray & Associates. Energy Future Coalition & Urban Air Initiative, Comments on Proposed Tier 3 Rule, EPA-HQ-OAR-2011-0135-4353 (July 1, 2013), at 41-43 & Appendix I, *available at* http://boydengrayassociates.com/comments-of-the-energy-future-coalition-and-urban-air-initiative-on-proposed-tier-3-motor-vehicle-emission-and-fuel-standards-july-1-2013/.

[44] Proposed REGS Rule, *supra* note 14, 81 Fed. Reg. at 80975.

[45] *Id.* (to be codified at 40 C.F.R. § 80.1564(a)(4)).

[46] *Id.* at 80830.

[47] *Id.* at 80831.

[48] 42 U.S.C. § 7545(f)(1)(B).

EPA has historically controlled ethanol levels in gasoline by interpreting the sub-sim law to "regulate the . . . *total concentration* of fuel and fuel additives."[49] Thus, in 2008, EPA declared that under CAA § 211(f), "it is illegal for owners or operators of retail gasoline stations to sell gasoline blended with more than 10% ethanol for use in gasoline-only vehicles and engines."[50] And in 2011, EPA granted a sub-sim waiver allowing the use of gasoline with 15% ethanol in model year 2001 and newer vehicles.[51] This waiver reaffirmed EPA's view that the sub-sim law limited the allowable concentration of ethanol in gasoline. As a condition of the waiver, for example, EPA required fuel manufacturers to adopt "[r]easonable measures . . . ensuring that consumers do not misfuel" by using gasoline with more than 15% ethanol in "vehicles or engines not covered by the waiver."[52]

Beginning this year (2017), automakers are required to certify light-duty vehicles using a test fuel that contains 10% ethanol—in excess of the 2.7% percent oxygen cap in EPA's obsolete definition of "substantially similar."[53] Even though ethanol is now undoubtedly a fuel additive used in certification, the proposed REGS Rule insists that E16–E83 blends "cannot legally be used in a conventional gasoline vehicle" without a waiver of the sub-sim law.[54]

### B. The Sub-Sim Law Does Not Limit the Concentration of Ethanol in Gasoline.

The sub-sim law prohibits increasing the concentration of fuel additives that are *not* substantially similar to a certification fuel,[55] but it does not limit ethanol content. To be sure, ethanol is a "fuel additive."[56] But ethanol is substantially similar to a fuel additive used in the certification of new vehicles. Indeed, ethanol itself *is* a fuel additive used in certification: the new gasoline test fuel, for example, contains 9.6% to 10% ethanol.[57] Whatever interpretations it may allow, the term "substantially similar" cannot reasonably be interpreted to *exclude* fuel

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[49] Proposed REGS Rule, *supra* note 14, at 80877–78 (emphasis added); *see Regulation of Fuels and Fuel Additives; Definition of Substantially Similar*, 56 Fed. Reg. 5352, 5354 (Feb. 11, 1991); Kelsi Bracmort, Cong. Research Serv., R40445, Intermediate-Level Blends of Ethanol in Gasoline, and the Ethanol 'Blend Wall' 7 (2011) ("EPA has defined gasoline content (by weight), effectively limiting the concentration to roughly 7.5% (by volume).").

[50] Letter from Adam M. Kushner, Air Enforcement Div., EPA, to Bob Greco, Dir. Downstream and Industrial Operations, API, at 1 (July 31, 2008).

[51] *Partial Grant of Clean Air Act Waiver Application Submitted by Growth Energy To Increase the Allowable Ethanol Content of Gasoline to 15 Percent*, 76 Fed. Reg. 4662, 4682 (Jan. 26, 2011) (hereinafter E15 Partial Waiver).

[52] *Id.*

[53] 40 C.F.R. § 1065.710(b)(2).

[54] Proposed REGS Rule, *supra* note 14, at 80843; *id.* at 80975 (to be codified at 40 C.F.R. § 80.1564(a)(3)).

[55] 42 U.S.C. § 7545(f)(1)(B).

[56] *See* 40 C.F.R. § 79.2(e) (defining additive).

[57] *Id.* § 1065.710(b)(2).

additives that are *identical* to those used in certification.[58] Yet that is exactly what EPA's interpretation does by capping ethanol blending despite its use in certification fuel.

### C. The Act's Structure Conflicts with EPA's Interpretation of "Substantially Similar."

EPA's interpretation of the sub-sim law is also "inconsistent with the administrative structure that Congress enacted into law."[59] A "telling indication that [EPA] has misconstrued the meaning of" the sub-sim law "is the plain language of a nearby provision, section 211(c)(1)."[60] That provision of the Act sets out the criteria that EPA is required to consider before "controlling or prohibiting the sale of fuel additives."[61]

Under section 211(c)(1), before controlling existing fuel additives, EPA must find that a fuel or additive (1) "causes, or contribute to, air pollution which may reasonably be anticipated to endanger the public health or welfare" or (2) causes "emissions products" that "impair to a significant degree the performance of any emission control device or system which is [or would soon be] in general use."[62]

Congress limited EPA's discretion in subparagraph 211(c)(2)(A) to the control of fuels and additives that "may reasonably be anticipated to endanger the public health," and required the Agency to consider all relevant "medical and scientific evidence . . . including . . . other feasible means of achieving the emission standards" required by the Act.[63] As the D.C. Circuit has explained, this provision requires EPA to consider whether the evidence shows that a fuel or fuel additive would "significantly increase the total human exposure" to pollution "so as to cause a significant risk of harm to human health."[64] EPA has no "power to act on hunches and wild guesses."[65]

In an adjacent provision, subparagraph 211(c)(2)(B), Congress similarly limited EPA's discretion to prevent damage to vehicle emissions controls by requiring the Agency to consider "scientific and economic data, including a cost benefit analysis comparing" feasible regulatory

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[58] *See United States v. Home Concrete & Supply, LLC*, 132 S. Ct. 1836, 1846 n.1 (2012) (Scalia, J., concurring in part and concurring in the judgment) ("It does not matter whether the word 'yellow' is ambiguous when the agency has interpreted it to mean 'purple' ") (citation omitted).

[59] *FDA v. Brown & Williamson Tobacco Corp.*, 529 U.S. 120, 125 (2001).

[60] *Ethyl Corp. v. EPA*, 51 F.3d 1053, 1061 (D.C. Cir. 1995) (citing 42 U.S.C. 7545(c)).

[61] *Id.*

[62] 42 U.S.C. § 7545(c)(1).

[63] *Id.* § 7545(c)(2)(A).

[64] *Ethyl Corp. v. EPA*, 541 F.2d 1, 32 (1976).

[65] *Id.* at 28. A determination of significant risk requires an examination of the "probability and severity" of the risk being regulated. *Id.* at 18.

alternatives, and to hold "public hearing[s] and publish findings" upon request.[66] Together, these requirements "establish[] a rebuttable presumption that the Agency should maintain a laissez faire posture with regard to fuel regulation."[67] EPA must show "why regulation, as opposed to no regulation, is necessary or otherwise advisable."[68]

Considered together, the detailed provisions of section 211(c) "demonstrate[] that Congress crafted a very definite scheme in which [EPA] was to consider certain criteria before . . . . prohibiting or controlling the manufacture or sale of fuel additives."[69]

The D.C. Circuit has rejected EPA's prior attempt to circumvent this "very definite scheme."[70] In *Ethyl Corp. v. EPA*, the Court rejected EPA's attempt to deny a sub-sim waiver for a fuel additive under 211(f)(4) because of "concern about the effects on public health that could result if EPA were to" grant such a waiver.[71] In rejecting EPA's claim that it could use section 211(f) to regulate fuels "in the public interest," the Court observed that the detailed scheme of regulation established by section 211(c) demonstrated that "Congress did not delegate to the Agency the authority to consider other factors 'in the public interest' such as public health when acting under section 211(f)(4)."[72]

As in *Ethyl*, the proposed REGS Rule's reliance on section 211(f) to regulate the concentration of ethanol in gasoline under a standard of its own making "operates in complete defiance of the plain terms of the statutory criterion and with no explanation whatsoever for the application of a different standard."[73] If EPA wishes to control the concentration of ethanol in gasoline, it "may initiate proceedings under section 211(c)(1)."[74]

### D. The Proposed REGS Rule Would Shift EPA's Burden to Fuel Manufacturers, Requring Them To Meet Irrationally Stringent Criteria.

The implications of EPA's subversion of the Clean Air Act's fuel regulation scheme are significant. Under section 211(c), it is EPA who bears the burden of finding that a fuel additive will "cause[], or contribute[], to air pollution" that will either "impair . . . any emission control

[66] 42 U.S.C. § 7545(c)(2)(B).

[67] *Amoco Oil Co. v. EPA*, 501 F.2d 722, 736 (D.C. Cir. 1974).

[68] *Id.*

[69] *Ethyl Corp.,* 51 F.3d at 1061.

[70] *Id.*

[71] *Id.* at 1057.

[72] *Id.* at 1061.

[73] *Id.* at 1063.

[74] *Id.* at 1064.

device" or "endanger the public health or welfare."[75] By misconstruing section 211(f) to control fuel additive concentration, EPA unlawfully shifts its burden to fuel manufacturers who, to get a sub-sim waiver, must "establish" that the requested concentration "will not cause or contribute to a failure of any emission control device."[76]

That is a very difficult burden to meet, because EPA has also misinterpreted the sub-sim law's waiver provision to require that the fuel be as clean as the test fuel used during vehicle certification testing (which manufacturers design their vehicles for), instead of the actual fuels sold to consumers in the marketplace.[77] As a result, fuel manufacturers could fail to establish that higher ethanol blends warrant a waiver even if they could clearly demonstrate that they would reduce vehicle emissions in the real world. This result is clearly anticompetitive, as it discourages new fuels even when they are cleaner than the petroleum-based fuels available in the marketplace.

EPA should correct its interpretation and recognize that the sub-sim law does not limit the concentration of ethanol in gasoline. This would remove an anticompetitive regulatory barrier to the penetration of higher ethanol blends, and it would preserve EPA's authority to promulgate any appropriate fuel controls under section 211(c).

## IV. EPA Should Correct its Discriminatory Interpretation of the 1 psi RVP Waiver.

Most drivers have no access to E15—a cleaner, more cost-effective, and higher octane fuel than the E10 that prevails in the market today—even though E15 has been a legal fuel for several years. In 2011, EPA approved E15 for use in Model Year 2001 and newer vehicles under a waiver pursuant to the "sub-sim" law, section 211(f)(4) of the Clean Air Act.[78] EPA aimed to remove unwarranted regulatory barriers to using biofuels. But that commendable purpose has been frustrated: E15 has failed to achieve widespread market acceptance, because EPA misinterprets the 1 psi RVP waiver statute, section 211(h)(4), to apply only to gasoline with between 9 and 10 percent ethanol, arbitrarily limiting the times of year in which E15 may be used.

EPA can correct this discriminatory and counterproductive regulation of E15 by giving section 211(h)(4) its most logical interpretation and extending the 1 psi RVP waiver to all fuels containing 10 percent ethanol, including E15.

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[75] 42 U.S.C. § 7545(c)(1).

[76] *Id.* § 7545(f)(4).

[77] E15 Waiver, *supra* note 51, 76 Fed. Reg. at 4665 (acknowledging that by comparing it to certification test fuel, EPA was requiring E15 to "have somewhat lower evaporative emissions" than "currently available in-use fuel."). Prior to 2011, EPA correctly interpreted section 211(f)(4) to require a comparison to market fuel, not certification fuel. *See, e.g.*, *Fuels and Fuel Additives; Reconsideration of Waiver Granted Under Section 211(f) of the Clean Air Act*, 51 Fed. Reg. 39800, 39802 (Oct. 31, 1986). EPA changed its interpretation in 2011 without explanation.

[78] E15 Partial Waiver, *supra* note 51, 76 Fed. Reg. at 4662.

This interpretation of the statute would give effect to Congress's intent and avoid the economically and environmentally detrimental results of EPA's current interpretation. It would also carry out the President's Executive Orders on regulatory costs and outdated rules;[79] energy independence and clean air;[80] and American agriculture and renewable fuels.[81]

### A. EPA's Interpretation of the 1 psi RVP Waiver Unreasonably Excludes Blends Over E10.

To control fuel volatility, the 1990 Clean Air Act Amendments prohibited the sale of gasoline with Reid Vapor Pressure in excess of 9 pounds per square inch (psi).[82] Recognizing that this standard would impose a substantial burden on gasoline blended with ethanol, Congress simultaneously allowed a 1 psi waiver "[f]or fuel blends containing gasoline and 10 percent denatured anhydrous ethanol."[83] This ratified EPA's preexisting regulatory allowance of a 1 psi RVP waiver for gasoline containing "at least 9% ethanol."[84] EPA's rule placed no upper limit on the ethanol content of fuel eligible for the 1 psi waiver, but required only that the ethanol content "not exceed any applicable waiver conditions" under the sub-sim law.[85]

In 1991, EPA amended this rule, restricting the 1 psi waiver to gasoline with an ethanol content of "at least 9% and *no more than 10%* (by volume) of the gasoline."[86] At the time, replacing the reference to "any applicable waiver conditions" with a "no more than 10%" requirement had no immediate practical effect: Ethanol was not present in the certification fuel and was only allowed in the market at a maximum concentration of 10 percent, by virtue of a sub-sim-waiver pursuant to section 211(f)(4).[87] Those circumstances have changed with

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[79] Executive Order 13,771, 82 Fed. Reg. 9339 (Feb. 3, 2017); Executive Order 13,777, § 3(d)(v), 72 Fed. Reg. 12,285 (Mar. 1, 2017).

[80] Executive Order 13,783, 82 Fed. Reg. 16,093 (Mar. 28, 2017).

[81] Executive Order 13,790, 82 Fed. Reg. 20237 (Apr. 28, 2017).

[82] Clean Air Act Amendments of 1990, § 216, 104 Stat. 2399, 2489 (Nov. 14, 1990), *codified as amended at* 42 U.S.C. § 7545(h)(1) (emphasis added). Reid Vapor Pressure, or RVP, "is a standard measure of fuel volatility at 100°F." Proposed REGS Rule, *supra* note 14, 81 Fed. Reg. at 80851. "Volatility is a measure of the propensity of a liquid to evaporate." *Id.*

[83] Clean Air Act Amendments of 1990, § 216, 104 Stat. 2399, 2490 (Nov. 14, 1990), *codified at* 42 U.S.C. § 7545(h)(4).

[84] *Volatility Regulations for Gasoline and Alcohol Blends Sold in Calendar Years 1989 and Beyond*, 54 Fed. Reg. 11868, 11884 (Mar. 22, 1989) (hereinafter Phase I Volatility Rule).

[85] *Id.* Thus, EPA's regulation provided that higher ethanol blends would qualify for a 1 psi RVP waiver whenever they were substantially similar to a certification fuel or were granted a waiver under the sub-sim law.

[86] *Regulation of Fuels and Fuel Additives: Standards for Gasoline Volatility; and Control of Air Pollution From New Motor Vehicles and New Motor Vehicle Engines: Standards for Particulate Emissions From Urban Buses*, 56 Fed. Reg. 64704, 64710 (Dec. 12, 1991), *codified at* 40 C.F.R. § 80.27(d)(2) (emphasis added).

[87] *See Regulation of Fuels and Fuel Additives: Standards for Gasoline Volatility; and Control of Air Pollution From New Motor Vehicles and New Motor Vehicle Engines: Standards for Particulate Emissions From Urban Buses*, Proposed

EPA's approval of the E15 sub-sim waiver in 2011 and the introduction of ethanol into the gasoline certification fuel in 2017. But EPA's interpretation of section 211(h)(4) is stuck in 1991.

### B. EPA Should Reinterpret the 1 psi RVP Waiver Statute to Cover All Fuel Containing 10 Percent Ethanol, Including E15.

#### 1. The 1 psi RVP Waiver Statute Is Not Limited to E10.

During the previous Administration, EPA maintained that the 1 psi waiver statute excludes blends with more than 10 percent ethanol, insisting that "a 1 psi RVP waiver was granted by Congress in 1990 to gasoline-ethanol blends of a least 9 volume percent *and no greater than* 10 volume percent ethanol."[88] But Congress did not limit the waiver to E10. Congress granted a 1 psi RVP waiver to "fuel blends containing gasoline and 10 percent denatured anhydrous ethanol."[89] And E15 fuel blends contain gasoline and 10 percent denatured anhydrous ethanol.

The text of section 211(h)(4) contradicts EPA's interpretation.[90] When Congress adopted the 1 psi waiver statute, it included a special affirmative defense for downstream fuel sellers and carriers who can show that, among other things, "the ethanol portion of the fuel blend does not exceed its waiver condition under" section 211(f)(4).[91] E15 blends comply with this requirement: the "ethanol portion" of an E15 blend "does not exceed" the 15 percent ethanol concentration allowed by the sub-sim waiver that EPA granted under section 211(f)(4). This safe harbor confirms Congress's intent to extend the 1 psi RVP waiver to blends containing more than 10 percent ethanol, as long as they are consistent with the sub-sim law.[92] Congress could have limited the affirmative defense to fuel blends with *no more than* 10 percent ethanol; instead, Congress tied it to compliance with section 211(f), which empowers EPA to approve higher levels of ethanol.

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Rule, 56 Fed. Reg. 24242, 24245 (May 29, 1991) ("Compliance with the conditions of a fuel waiver under section 211(f)(4) of the CAA requires that the ethanol portion of the gasoline blend cannot lawfully be any greater than 10 percent (by volume).").

[88] Proposed REGS Rule, *supra* note 14, 81 Fed. Reg. at 80851 n.95 (emphasis added). For a detailed explanation of EPA's interpretation, see *Regulation to Mitigate the Misfueling of Vehicles and Engines With Gasoline Containing Greater Than Ten Volume Percent Ethanol and Modifications to the Reformulated and Conventional Gasoline Programs*, 76 Fed. Reg. 44406, 44433–35 (July 25, 2011) (hereinafter Misfueling Rule).

[89] 42 U.S.C. § 7545(h)(4).

[90] *Id.*

[91] *Id.* (second sentence).

[92] In the Misfueling Rule, EPA asserted that the reference to section 211(f)(4) in the deemed to comply provision somehow implies that Congress limited the 1 psi RVP waiver to no more than 10 percent ethanol. 76 Fed. Reg. at 44434. That is illogical. If Congress wanted to limit the 1 psi waiver to E10, it would have specified fuels containing *no more than* 10 percent ethanol, instead of cross-referencing section 211(f)(4), which allowed EPA to approve higher levels of ethanol.

Any notion that Congress intended to limit the 1 psi RVP waiver to E10 was refuted in 2005. In that year, Congress added section 211(h)(5), allowing States to exempt themselves from the 1 psi waiver's application to "*all* fuel blends containing gasoline and 10 percent denatured anhydrous ethanol."[93] If the 1 psi waiver applied only to E10 and excluded higher ethanol blends, Congress's use of the word "all" would have been superfluous.[94]

2. **EPA's Interpretation of the 1 psi RVP Waiver Statute Violates Congress's Intent.**

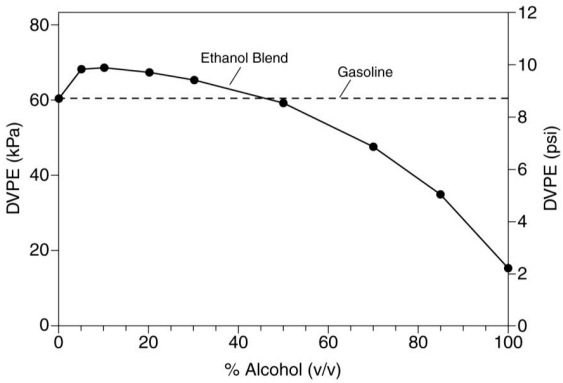

Figure 1. Source: Memorandum from Robert L. McCormick, National Renewable Energy Laboratory, to Kristy Moore, Renewable Fuels Association (Mar. 26, 2012), http://bit.ly/2oGf3QH.

EPA's needlessly restrictive interpretation of the 1 psi RVP waiver provision is "unmoored from the purposes and concerns" of the Clean Air Act.[95] The purpose of section 211(h) is to control the volatility of commercial gasoline.[96] But EPA's interpretation ensures that only the most volatile gasoline-ethanol blends are sold. As shown in Figure 1 and acknowledged by EPA, "the addition of ethanol to gasoline" above 10 percent ethanol "decreases blend volatility."[97] In addition, as EPA has recognized, higher ethanol blends lower the reactivity (*i.e.*, the tendency to form ozone) of the resulting emissions.[98] By restricting the 1 psi waiver to gasoline with no more than 10 percent ethanol, EPA's interpretation discourages the sale of a less volatile fuel with less reactive emissions, undermining the objectives of the RVP control program and increasing ozone pollution.

EPA's interpretation also violates all of Congress's purposes in providing a 1 psi waiver for ethanol blends. Congress granted that waiver to achieve the "beneficial environmental,

[93] Energy Policy Act of 2005, Pub. L. 109-58, § 1501(c), 119 Stat. 594, 1074–75 (2005), *codified at* 42 U.S.C. § 7545(h)(5).

[94] In the Misfueling Rule, EPA said this State exemption provision (section 211(h)(5)) would provide States with no relief from the 1 psi waiver (section 211(h)(4)) if section 211(h)(4) were interpreted to include blends of more than 10 percent ethanol. 76 Fed. Reg. at 44434–35. This argument is circular. Both provisions use the same phrase ("fuel blends containing gasoline and 10 percent denatured anhydrous ethanol"), so the exemption in section 211(h)(5) covers the same class of fuels as the waiver in section 211(h)(4).

[95] *Judulang v. Holder*, 565 U.S. 42, 64 (2011).

[96] Congress enacted the volatility program to reduce "commercial gasoline volatility." S. Rep. No. 101-228, at 109 (1989).

[97] Proposed REGS Rule, *supra* note 14, 81 Fed. Reg. at 80851.

[98] *See* EPA, Report to Congress on Public Health, Air Quality, and Water Resource Impact of Fuel Additive Substitutes for MTBE 63 (Feb. 2009) ("With additional ethanol use, the ethanol content of VOC should increase. Ethanol is less reactive than the average VOC. Therefore, this change should . . . reduce ambient ozone levels.").

economic, agricultural, energy security and foreign policy implications" of ethanol blending.[99] Congress determined that a small increase in evaporative emissions was justified by ethanol's countervailing reduction of tailpipe emission: "ethanol burns cleaner than pure hydrocarbon gasoline and thus cause[s] fewer tailpipe emissions."[100] Congress recognized that these benefits of ethanol blending could not be achieved without a waiver because of the high "cost of producing and distributing" a "sub-nine pound RVP gasoline" blendstock.[101] Instead of fulfilling Congress's intent, EPA's restrictive interpretation limits the beneficial implications of ethanol blending. It irrationally requires E15 blenders to purchase costly sub-9 psi RVP blendstocks that refiners are unwilling to sell, and it thereby increases tailpipe pollution and dependence on foreign petroleum.

3. **EPA's Interpretation of the 1 psi RVP Waiver Statute Irrationally Harms Small Businesses, American Agriculture, and Drivers.**

EPA's interpretation has serious deleterious consequences for American farmers, fuel producers, fuel retailers, and drivers who would benefit from competition among a range of fuels options. Every summer (the period of greatest gasoline demand) nearly a thousand retailers must stop selling E15 because EPA applies a more stringent RVP standard to E15 than it does to E10.[102] Small business owners have testified before EPA about the real-world burdens imposed by EPA's interpretation. As the owner of a convenience store in Nevada, Iowa, recently explained:

> The only problem I have with the E15 comes every June 1st. On that day, I need to restrict the sales of E15 to flex fuel vehicles only. And on that day, I begin trying to explain to my customers the complex regulations that make the fuel that they buy one day off limits the next day. They are frustrated and I am frustrated. And let me tell you, when summer driving season starts, my E15 sales drop like a rock.[103]

Because EPA's current interpretation of the 1 psi RVP waiver provision is not required by statute, deprives the public of a potential environmental benefit, and harms small business and American agriculture, the Antitrust Division's Competition Advocacy Program should urge EPA to revoke that interpretation and affirm that the statutory waiver extends to all gasoline containing 10 percent ethanol, including higher ethanol blends.

[99] S. Rep. No. 101-228, at 110 (1989).

[100] *Id.*

[101] *Id.*

[102] EPA, Transcript of Public Hearing, Renewables Enhancement and Growth Support Rule at 25:7–9 (Dec. 6, 2016).

[103] *Id.* at 28:15–22, 29:16.

### C. EPA Should Correct Its Outdated 2010 Lifecycle Analysis.

EPA's outdated lifecycle analysis of the greenhouse gas (GHG) benefits of corn ethanol puts U.S. ethanol at a competitive disadvantage in the global market. EPA should jettison its erroneous model and adopt the recent lifecycle analysis performed by USDA using the best available science.

In its March 2010 RFS Rule, EPA performed a lifecycle analysis of renewable fuel GHG emissions, as required by statute.[104] EPA concluded that by 2022, corn ethanol produced by biorefineries using natural gas and corn oil fractionation technology would achieve annual lifecycle GHG emissions savings of just 21 percent compared to 2005 gasoline.[105] EPA "recognize[d] that as the state of scientific knowledge continues to evolve in this area, the lifecycle GHG assessments for a variety of fuel pathways will continue to change."[106] EPA therefore committed to "further reassess . . . the lifecycle estimates" on an ongoing basis,[107] and to incorporate "any updated information we receive into a new assessment of the lifecycle GHG emissions performance of the biofuels being evaluated in [the 2010] rule."[108]

As summarized in a recent report commissioned by USDA, "a large body of information has become available since 2010—including new data, scientific studies, industry trends, technical reports, and updated emission coefficients—that indicates that . . . actual emissions . . . differ significantly from those projected" by EPA's 2010 lifecycle analysis.[109] Whereas EPA's outdated analysis estimated that corn ethanol would only be 21 percent less carbon-intensive than gasoline in 2022, USDA's up-to-date analysis shows that corn ethanol is

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[104] *See Regulation of Fuels and Fuel Additives: Changes to Renewable Fuel Standard Program*, 75 Fed. Reg. 14670, 14785 (Mar. 26, 2010) (hereinafter 2010 RFS Rule) (representing that the 2010 LCA included the "most up to date information currently available on the GHG emissions associated with each element of the full lifecycle assessment"); 42 U.S.C. § 7545(o)(1)(H) (requiring EPA to perform a lifecycle analysis to determine whether renewable fuels meet the required GHG reduction thresholds under the RFS program).

[105] 2010 RFS Rule, *supra* note 104, 75 Fed. Reg. at 14786 ("The results for this corn ethanol scenario are that the midpoint of the range of results is a 21% reduction in GHG emissions compared to the gasoline 2005 baseline."); *See* Renewable Fuel Standard Program, Regulatory Impact Analysis 469–70 (2010) (hereinafter 2010 RFS RIA).

[106] 2010 RFS Rule, *supra* note 104, 75 Fed. Reg. at 14765.

[107] *Id.* ("Therefore, while EPA is using its current lifecycle assessments to inform the regulatory determinations for fuel pathways in this final rule, as required by the statute, the Agency is also committing to further reassess these determinations and lifecycle estimates."); *accord id.* at 14785.

[108] *Id.*

[109] ICF, A Life-Cycle Analysis of the Greenhouse Gas Emissions of Corn-Based Ethanol 166 (Jan. 12, 2017), at 4–5; *see also* Steffen Mueller, Energy Resources Ctr., Request for Correction of Information Concerning the U.S. Environmental Protection Agency's Lifecycle Analysis of Ethanol and Gasoline Under the Renewable Fuel Standard, RFC 16004 (Apr. 11, 2016), http://bit.ly/2hR4ETL.

actually 43 percent cleaner today, and that corn ethanol's advantage will grow to 48 percent by 2022.[110]

EPA has an opportunity to update its lifecycle analysis in its triennial Biofuels Report to Congress. The Energy Independence and Security Act of 2007 requires EPA to submit a Biofuels Report to Congress every three years on the environmental impacts of the RFS.[111] But EPA has not submitted a Biofuels Report since 2011.[112] Following a program evaluation by EPA's Inspector General, which determined that EPA was not meeting its statutory obligations, EPA agreed to submit a new Biofuels Report to Congress by the end of 2017.[113] In December of 2017, EPA announced that it "is currently working on the Second Triennial Report to Congress . . . and expects to deliver that report in the spring of 2018."[114] EPA can use its forthcoming report to adopt USDA's more accurate lifecycle analysis of corn ethanol's GHG emissions, so that EPA can accurately estimate the benefits of high-octane midlevel ethanol blends.

EPA cannot avoid reconsidering corn ethanol's lifecycle analysis. EPA will be required to evaluate "the impact of the production and use of renewable fuels on . . . climate change" when it modifies the mandatory blending volumes of cellulosic and advanced biofuels under the Renewable Fuel Standard.[115] There is no good reason to omit that information from the Triennial Report, which is required to address "[e]nvironmental issues, including air quality" and "[r]esource conservation issues . . . including impacts on forests, grasslands, and wetlands."[116] EPA's outdated land-use change assumptions are a primary cause of the inaccuracy of its 2010 lifecycle analysis.

Correcting EPA's lifecycle analysis would promote international competition by signaling to U.S. trading partners that U.S. corn ethanol is a cost-effective means of meeting their carbon-reduction goals. Approximately 42 countries have adopted biofuel blending mandates. But they must be persuaded that U.S. corn ethanol imports are consistent with their climate and sustainability policies.

U.S. ethanol exports already face significant headwinds. Major trading partners, including Brazil and China, have placed protectionist tariffs on U.S. ethanol. These tariffs

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[110] ICF, *supra* note 109, at 168.

[111] Energy Independence and Security Act of 2007, Pub. L. 110-140 § 204, 121 Stat. 1492, 1529 (Dec. 19, 2007).

[112] EPA, Office of Inspector General, EPA Has Not Met Certain Statutory Requirements to Identify Environmental Impacts of Renewable Fuel Standard 4 (Aug. 18, 2018) ("ORD issued its first report to Congress in December 2011. . . . [T]here have been no subsequent reports since 2011.").

[113] *Id.* at 14.

[114] Renewable Fuel Standard Program – Standards for 2018, Response to Comments 179 (Dec. 2017).

[115] 42 U.S.C. § 7545(o)(2)(B)(ii), *cited in* 42 U.S.C. § 7545(o)(7)(F).

[116] 42 U.S.C. § 7545 note, Pub. L. No. 110-140, § 204, 121 Stat. 1529 (2007).

have been aided and abetted by foreign trade groups that falsely claim U.S. corn ethanol does not reduce GHG emissions and could interfere with national climate-change mitigation goals.[117] Unless EPA corrects its lifecycle analysis, U.S. ethanol exports may face increased tariffs or regulatory restrictions in these and other foreign markets.

## CONCLUSION

EPA and DOT will soon be proposing new greenhouse gas and fuel economy standards through model year 2025.[118] EPA's Final Determination that new standards are needed acknowledged that high-octane gasoline-ethanol blends could "deliver significant improvements in reducing GHG emissions once fully deployed."[119] But EPA's own regulations stand in the way. The Competition Policy and Advocacy Section should take this opportunity to advocate for reform of EPA's anticompetitive fuel regulations. The Section should urge EPA, contemporaneously with its greenhouse gas standards, to announce a regulatory reform agenda to eliminate each of the regulatory barriers addressed by these comments. Midlevel ethanol blends could help automakers attain those standards and provide significant consumer benefits—but only if EPA regulations are revised to eliminate the government-mandated monopoly and open the fuel market to competition.

[117] *See, e.g.*, Ale Rosete, *Brazil's May Ethanol Imports Up More than Six Fold on the Year*, Platts (7 June 2017), https://www.platts.com/latestnews/agriculture/saopaulo/brazils-may-ethanol-imports-up-more-than-six-21967462 ("Sugarcane industry UNICA is seeking the introduction of an ethanol import tariff of 16%, citing higher greenhouse gas emissions of corn ethanol, and arguing the imports will compromise emissions targets under the COP21 agreement signed by Brazil in November.").

[118] *See* Office of Information and Regulatory Affairs, Rulemaking to Establish Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy, https://www.reginfo.gov/public/do/eAgendaViewRule?pubId=201804&RIN=2060-AU09 (projecting a notice of proposed rulemaking in June 2018).

[119] *Mid-Term Evaluation of Greenhouse Gas Emissions Standards for Model Year 2022–2025 Light-Duty Vehicles*, 83 Fed. Reg. 16077, 16082 (Apr. 13, 2018).