South Dakota Farmers Union

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VIA ELECTRONIC FILING (www.regulations.gov)

Andrew Wheeler, Acting Administrator
U.S. Environmental Protection Agency
EPA Docket Center (EPA/DC)
Air and Radiation Docket
Mail Code 28221T
1200 Pennsylvania Avenue, NW
Washington, DC 20460

ATTN: Docket ID No. EPA–HQ–OAR–2018–0283

Heidi King, Deputy Administrator
National Highway Traffic Safety Administration
Docket Management Facility, M–30
U.S. Department of Transportation
West Building, Ground Floor, Rm. W12–140
1200 New Jersey Avenue SE
Washington, DC 20590

ATTN: Docket ID No. NHTSA–2018–0067

Re: The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks; Notice of Proposed Rulemaking, 83 Fed. Reg. 42,986 (Aug. 24, 2018), and Extension of Comment Period, 83 Fed. Reg. 48,578 (Sept. 26, 2018)

Dear Acting Administrator Wheeler and Deputy Administrator King:

South Dakota Farmers Union (SDFU) represents family farmers and ranchers across the state of South Dakota, with a sprawling membership of nearly 19,000. I write as the united voice of this membership to comment on the proposed Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks ("Proposed Rule"), published at 83 Fed. Reg. 42,986. There is widespread agreement, not only among SDFU members but also among those who speak practically for our nation, regarding the need to move this country toward high octane fuels to take advantage of improved engine technologies for vehicles. Mid-level ethanol blends (*e.g.,* E30 and above) are proven to be the most economical high-octane fuels on the market today. Apart from the economic benefits received by the consumer, using these home-grown high octane fuels provides numerous, environmental, economic and energy security benefits. Our own domestic utilization of corn through

biofuel production helps stabilize and support an already shaky market place, which is particularly vital at a time when rural America is facing a major financial crisis in the agriculture industry. SDFU submits these comments to urge the according agencies to follow through on President Trump's promise to support ethanol by paving the way for mid-level ethanol blends. By making good on this promise President Trump will be supporting the very group of people that paved his way into office and the rural communities that these Americans call home.

SDFU supports the use of ethanol as a fuel additive for gasoline formulations to enhance octane levels, especially moving toward use of mid-level blends of ethanol. Use of higher ethanol blends will provide significant benefits to the rural community and beyond. It will provide a market for the farmers' production, expanding the economic benefits of diversifying crops and driving investments in rural communities. Disincentives to move toward higher ethanol blends by favoring other technologies limit these investments and benefits to farmers. These impacts can be addressed through support for high octane fuels.

The proposed rule does acknowledge the potential for high octane fuels, requesting comment on the benefits of increasing fuel octane levels. Ensuring the availability of high octane fuels is an important step toward better engine technology and, thereby, improved vehicle and fuel efficiency. Use of high octane, low carbon fuels, such as mid-level ethanol blends, promotes further air emission reductions, better oil conservation, and greater energy security. In addition, the modern biofuels industry has brought billions of dollars of capital investment, millions of dollars of new tax base, and many thousands of new good paying jobs with benefits to struggling rural communities. Using higher blends of ethanol also reduces costs to consumers, and automobile manufacturers often point to consumer preference as key to ensuring introduction of new technology.

i. STUDIES SHOW THE BENEFITS OF USING MID-LEVEL ETHANOL BLENDS AS A HIGH-OCTANE FUEL.

Automakers are looking at higher compression engines to improve thermal efficiency and thereby fuel economy. "Auto manufacturers support bringing high octane fuels to market that are aligned with future engine technologies and vehicles that are designed and optimized to take full advantage of the performance qualities of those fuels."[1] As one automaker stated: "Higher-octane fuels are the cheapest CO_2 reduction."[2] These engines and high octane fuels, specifically mid-level ethanol blends, are not "crystal ball" technologies, but are technologically feasible and economically reasonable means to achieve better fuel economy and reduced GHG emissions.

Increased volume of ethanol increases the octane level of gasoline across grades. In addition to its higher octane level, ethanol also features high sensitivity and high heat of vaporization, which increase engine efficiency.[3] In short, ethanol offers engine knock resistance at a lower cost than any other octane booster in gasoline. Higher ethanol blends can increase fuel octane without expensive refinery upgrades.

Ethanol is also substantially cleaner than petroleum-based octane additives.[4] It reduces emissions of particulate matter and air toxics such as benzene, toluene, and xylene. Ethanol further provides GHG

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[1] Comments of the Alliance of Automobile Manufacturers on Draft Technical Assessment Report at 71, Sept. 26, 2016 (EPA-HQ-OAR-2015-0827-4089).
[2] Eric Brandt, *100-Octane, Super Premium Fuel is Coming to a Pump Near You*, The Drive, May 1, 2017, http://www.thedrive.com/news/9836/100-octane-super-premium-fuel-is-coming-to-a-pump-near-you.
[3] Ricardo, Inc., *The Draft Technical Assessment Report: Implications for High Octane, Mid-Level Ethanol Blends, Final Report*, at 24 (2016), *available at* https://ethanolrfa.org/wp-content/uploads/2016/09/ATTACHMENT-A_Ricardo-TAR-Report-for-RFA-Sept_20_2016.pdf.
[4] Testimony from the American Fuel Petrochemical and Manufacturers before the U.S. House Energy and Commerce Subcommittee on the Environment on April 13, 2018 acknowledged that increased octane levels at the refinery level, rather

emissions reductions, which is increasingly important as the carbon intensity of gasoline *is increasing* with greater use of unconventional fossil fuels. "Emissions from fossil fuel combustion comprise the vast majority of energy-related emissions," with an increase in emissions from the transportation sector largely attributed to increased vehicle miles travelled and motor gasoline consumption by light-duty vehicles.[5] At the same time, energy use in ethanol production and lifecycle GHG emissions have decreased with changes in farming practices and increased intensification (*e.g.*, higher yields).[6] As EPA has found, the land use, land-use change, and forestry sector resulted in a net increase in carbon stocks (*i.e.*, net CO2 removals).[7] This has occurred despite the loss of cropland and the struggle to retain existing agricultural lands against the ongoing pressures from urban and industrial expansion.

The results of climate change, brought on by GHG emissions to the earth's atmosphere resulting from human activity, will be detrimental to both human health and the economy. As a family farm organization, SDFU is particularly concerned with the challenges that climate change poses to family farmers' ability to pursue improvements in global food security.[8] Anticipated disruptions to agricultural production caused by climate include: rising temperatures; changes in precipitation; increasing frequency of extreme weather events; new pest, disease and weed pressures; and increases in heat stress on livestock. As formidable as these challenges may be, farmers, ranchers and rural communities can contribute to climate resilience and help circumvent serious harms to the economy and human health.[9] Efforts by farmers, ranchers and rural communities along this front are supported by the biofuels industry that eases the burdens on farmers and provides additional markets to facilitate a move toward sustainable practices and climate mitigation actions. The agencies should provide and enforce incentives that would support climate resiliency goals.[10]

Renewable fuels also displace petroleum, promoting energy security and independence. The agencies recognize the proposal can result in impacts to energy security due to increases in U.S. petroleum consumption from less stringent CAFE and GHG standards. 83 Fed. Reg. at 43,106. These effects represent potential additional costs of this proposed action. Increasing amounts of ethanol in the domestic fuel supply reduces this country's dependence on imported petroleum, strengthening energy security and avoiding these costs.

Studies presented to EPA throughout this rulemaking process show the benefits of using high octane fuels on vehicle efficiency.[11] A report issued by Oak Ridge National Laboratory, Argonne National Laboratory and the National Renewable Energy Laboratory cites increased vehicle efficiency, increased acceleration and significant reductions in GHG emissions among the demonstrated benefits of mid-level ethanol blend fuels.[12] The study found that vehicle manufacturers could benefit from high octane, low

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than blending higher levels of ethanol, also increase emissions at the refinery. *See also* Comments of the Renewable Fuels Association, dated Oct. 5, 2017, at 5 (EPA-HQ-OAR-2015-0827-9735).

[5] EPA, Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2016, at 3-1, 3-20 (2018).

[6] The draft Environmental Impact Statement (EIS) by NHTSA agrees (at 6-50). The draft EIS also acknowledges that the lifecycle GHG emissions associated with ethanol are on the decline and that increased blends of ethanol provide greater lifecycle GHG emissions reductions (at 6-31).

[7] EPA, Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2016, at 6-1.

[8] *See* M.E. Brown, *et al.*, *Climate Change, Global Food Security, and the U.S. Food System*, U.S. Global Change Research Program, at 111-112 (2015), *available at* http://www.usda.gov/oce/climate_change/FoodSecurity2015Assessment/FullAssessment.pdf.

[9] *See id*. at 112 (Throughout the food system, "effective adaptation can reduce food-system vulnerability to climate change and reduce detrimental climate change effects on food security…").

[10] A recent report by the United Nations Intergovernmental Panel on Climate Change identified the need for action at local levels and adaptation as needed to address climate change impacts (http://ipcc.ch/report/sr15/).

[11] *See, e.g.,* AIR, Inc., Evaluation of Costs of EPA's 2022-2025 GHG Standards with High Octane Fuels and Optimized High Efficiency Engines, Sept. 22, 2016, Attach. 1 to Comments of Minnesota Corn Growers Association, et al., Sept. 26, 2016 (EPA-HQ-OAR-2015-0827-4167).

[12] Tim Theiss, *et al.*, *Summary of High-Octane Mid-Level Ethanol Blends Study*, ORNL/TM-2016/42 (July 2016), Attach. to Comments of the Renewable Fuel Association, Sept. 26, 2016 (EPA-HQ-OAR-2015-0827-4174).

carbon fuels as a means to meet future fuel economy and GHG requirements, and serve as a way to increase torque in performance applications. That study also found that feedstock availability *and costs* are not expected to be obstacles to the substantial development of a high-octane fuel market, with E40 providing the greater fuel cost savings.

EPA, nonetheless, references purported challenges to transitioning to high octane fuels stemming from costs to consumers who drive vehicles designed for current regular octane grade fuel, contending the "net positive benefits could take many years."[13] But, in testimony before Congress, a representative of General Motors stated: "We believe increasing the minimum octane level in U.S. gasoline for new vehicles will be a win for all industries and, most importantly, consumers."[14] "We have an opportunity to play a large role in offering consumers the most affordable option for fuel economy improvement and greenhouse gas reduction. We believe a higher efficiency gasoline solution with a higher Research Octane Number (RON) is very important to achieving this."[15] Consumers would benefit from projected fuel cost savings, reduced price volatility, increased torque in performance applications, and the energy security and environmental attributes of mid-level ethanol blends.[16]

It is unclear whether the economics of using ethanol to increase octane was considered by the agencies in making these statements in the preamble to the proposed rule.[17] Ethanol is less expensive than gasoline, and it can decrease costs at the pump.[18] Moreover, use of ethanol provides numerous additional benefits than the petroleum-based alternatives. As noted above, the National Renewable Energy Laboratory found costs to not be a limiting factor to increase biofuel use through requiring higher octane fuels.[19]

It is also unclear if NHTSA adequately considered the potential for high octane fuel in assessing the alternatives in its draft EIS. Although considering several alternatives and purporting to include high compression engines, the draft EIS notes (at 2-24 n.29) that "NHTSA assumed that the proportions of total fuel production and consumption represented by ethanol and other renewable fuels (such as biodiesel) under each of the action alternatives would be identical to those under the No Action Alternative." While discussing mid-level ethanol blends, the draft EIS also focuses on use in flex fuel vehicles and E85 (at 6-30). But, mid-level ethanol blends are common blends, and have been used in non-FFVs without problems. The draft EIS also refers to the Renewable Fuel Standard as the program that promote biofuel use, but EPA has sought to reduce those required volumes based on purported concerns over use. In short, the agencies are not promoting the goals and intent of Congress in failing to take appropriate action under any of these programs. Regardless, NHTSA's acknowledgment that mid-level ethanol blends can be used as high octane fuels indicates that it should have considered the potential for increased ethanol use as a result of more stringent CAFE requirements, the Renewable Fuel Standard program notwithstanding. Not doing so ignores a key factor and does not allow proper assessment of the environmental impacts of the proposed alternatives, as required.

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[13] 83 Fed. Reg. at 43,041.

[14] Written Testimony of Dan Nicholson, General Motors Vice President of Global Propulsion, Before the House Committee on Energy and Commerce Subcommittee on Environment, Hearing on High Octane Fuels and High Efficiency Vehicles: Challenges and Opportunities, at 1, Apr. 13, 2018, *available at* https://docs.house.gov/meetings/IF/IF18/20180413/108122/HHRG-115-IF18-Wstate-NicholsonD-20180413.pdf.

[15] *Id.* at 2.

[16] *See* Renewable Fuels Association, *Energy Security*, https://ethanolrfa.org/issues/energy-security/ (last visited Oct. 13, 2018).

[17] Studies were submitted to EPA on Reconsideration showing the reduced costs of producing mid-level ethanol blends. *See, e.g.,* Comments of Growth Energy, dated Sept. 26,2016, at 6-7 (EPA-HQ-OAR-2015-0827-9724).

[18] *See, e.g.,* Presentation, The Changing Economics of Ethanol Blend Fuels, Scientific Update on Biofuels Sponsored by the Environmental and Energy Study Institute, Sept. 18, 2014, *available at* https://www.eesi.org/files/Dean-Drake-091814.pdf.

[19] Presentation, High Octane Fuels: Benefits and Challenges, Robert L. McCormick, NREL, Mar. 17, 2016, *available at* https://cleancities.energy.gov/files/u/news_events/document/document_url/158/CC_HOF_Webinar_Combined.pdf.

II. EPA CAN, AND SHOULD, UNDERTAKE REGULATORY REVISIONS TO PROMOTE MID-LEVEL BLENDS OF ETHANOL.

The agencies state "[v]ehicle manufacturers typically develop their engines and engine control system calibrations based on the fuel available to consumers."[20] Although available today, regulatory barriers to mid-level ethanol blends are preventing their wider use and, thus, limiting incentives for vehicle manufacturers to adjust their technologies.

EPA and NHTSA should remove regulatory barriers to the adoption of high-octane, mid-level ethanol blends. While EPA can use its authority under the Clean Air Act to approve and require specific octane levels,[21] like 100 RON, lifting some of these regulatory barriers to mid-level ethanol blends will assist in facilitating and speeding up moving toward high octane fuels. SDFU believes other comments will further address EPA's authority to approve and require higher octane in fuels under its Clean Air Act authority in Sections 202 and 211, which SDFU supports.[22] These comments focus on several actions that can and should be taken today, such as approval of mid-level ethanol blends for vehicle certification, updating fuel economy formulas, and granting Reid Vapor Pressure (RVP) waiver relief for all ethanol blends over 10 percent.

A. EPA Should Ease the Ability to Use Mid-Level Ethanol Blends as Certification Fuel.

EPA has acknowledged that mid-level ethanol blends can be approved as certification fuel under 40 C.F.R. §1065.701.[23] While we support allowing petitions for alternative certification fuels, such as E30, SDFU encourages EPA to streamline the approval process for mid-level ethanol blends, as high octane fuels.[24] EPA can make findings to facilitate use of mid-level ethanol blends as certification fuel, but may need to make regulatory changes to ensure flexibility to use mid-level ethanol blends more generally.

Section 1065.701(c) lists criteria to obtain EPA approval to use fuels not specified as a test fuel in EPA's regulations. In particular, concerns have been raised with EPA's purported interpretation of the criteria that the fuel be "commercially available."[25] In the preamble to the Tier 3 rule, EPA indicated that manufacturers can petition for approval of a higher octane, higher ethanol content test fuel "if they can demonstrate that such a fuel would be used by the operator and would be readily available nationwide, [and] vehicles would not operate appropriately on other available fuels."[26] While EPA made these statements in the preamble to the Tier 3 rule, the regulatory language provides only that there be a demonstration that the fuel "is commercially available." Being available simply means that the fuel is "accessible, obtainable."[27] Mid-level ethanol blends are obtainable in commerce today.[28] For example,

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[20] 83 Fed. Reg. at 43,040.

[21] *See, e.g.,* Comments of Renewable Fuels Association, dated Oct. 5, 2017, at 8-12 (EPA-HQ-OAR-2015-0827-9735).

[22] For example, as explained in the CFDC et al. Comments, and the comments cited therein, EPA also has authority to approve mid-level ethanol blends for use under Clean Air Act section 211(f), 42 U.S.C. § 7545(f). Starting in 2017, gasoline emissions certification fuel now contains 10 percent ethanol. As such, section 211(f)(1) no longer limits ethanol blending in market fuel, as any ethanol blend, including mid-level ethanol blends, are "substantially similar" to a certification fuel. Moreover, given that the effects of gasoline/ethanol blends like E20, E25, and E30 are already well-known, it makes little to no sense for EPA to interpret the requirements of section 211 as rigidly and burdensome as it has done in the past for new fuels. EPA should issue an updated interpretation of "substantially similar" to confirm the ability to use these fuels.

[23] 79 Fed. Reg. 23,414, 23,528 (Apr. 28, 2014) ("Tier 3 Rule").

[24] The automobile industry has also supported streamlining this process. *See* Comments of Alliance of Automobile Manufacturers on Regulatory Reform, Issue 2.2, May 15, 2017 (EPA-HQ-OA-2017-0190-37160).

[25] 40 C.F.R. §1065.701(c)(1)(ii).

[26] 79 Fed. Reg. at 23,528.

[27] *available*, https://www.merriam-webster.com/dictionary/available.

[28] *See, e.g.,* Holly Jessen, *E25, E40 for the masses*, Ethanol Producer Magazine, Feb. 4, 2016, http://ethanolproducer.com/articles/12998/e25-e40-for-the-masses. Currently, these mid-level ethanol blends are limited to use in FFVs.

E25 and E30 are considered "common offerings" at retail stations, and current infrastructure can be used.[29] Further, ASTM International has established specifications for high octane fuels, containing up to 50 percent ethanol (for test fuel) (D8076). This indicates that mid-level ethanol blends are commercially available. Moreover, the D.C. Circuit noted that, if EPA allowed the use of E30 as a test fuel, there would be "substantial reason to think that at least some vehicle manufacturers would use it."[30] It is unreasonable for EPA to interpret the phrase "commercially available" to mean "readily available nationwide," as retailers and distributors will not broadly sell a fuel "nationwide" unless a substantial share of automobiles on the road nationally are certified and approved to use the fuel. Thus, EPA should clarify that a fuel need not be "readily available nationwide" as a condition of approval of new certification fuel petitions and, indeed, could make a determination that mid-level ethanol blends are already commercially available.

EPA also should consider providing more flexibility to allow the market to determine the best mid-level ethanol blend to meet octane needs. The purported requirement for someone seeking to use an alternative certification fuel to demonstrate that "vehicles would not operate appropriately on other available fuels"[31] discourages flexibility and innovation, and it deters engine makers from pursuing approval of alternative certification fuels. EPA's regulations note that EPA can require, for engines designed to operate on different fuel types, use of "the most representative fuel mixture."[32] Thus, seeking approval of E30 should not necessarily prohibit the ability to use E25 or E40 blends that meet the same high-octane level and is representative of emissions from those fuels. This gives retailers and automakers more flexibility in sales and engine design.

To maintain this flexibility, EPA also should reconsider the provisions for ethanol flex fuels in its proposed Renewables Enhancement and Growth Support (REGS) Rule. In particular, EPA proposed to list as a prohibited activity the following: "Sell, introduce, cause, or permit the sale or introduction of gasoline containing greater than 15 volume percent ethanol (*i.e.,* greater than E15) into any model year 2001 or newer light- or medium-duty gasoline motor vehicle."[33] To the extent mid-level ethanol blends are used as certification fuels, they should not be limited to flexible fuel vehicles (FFVs). This may require additional regulatory action that could slow the process of approving mid-level ethanol blends in newer model vehicles. Moreover, once EPA approves the certification fuel, the manufacturer should be able to make a determination that the approved fuel can be appropriately used in other model year vehicles. In other words, it should not be required to go through a waiver process for the fuel to be used in other model year vehicles under 42 U.S.C. §7545(f). Indeed, there is evidence that mid-level ethanol blends do not adversely impact non-FFVs on the road today,[34] and EPA treats all gasolines as being of homogenous composition.

We understand that allowing for flexibility may result in the need to update EPA's fuel registration process under 40 C.F.R. Part 79. EPA's fuel registration requirements can be an obstacle to approval of new fuels. The environmental and human health benefits of ethanol have been thoroughly analyzed and are well understood. The same is true for information on emissions impacts, materials compatibility, and

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[29] U.S. Department of Energy (DOE), *Alternative Fuels Data Center: Ethanol Blends*, https://www.afdc.energy.gov/fuels/ethanol_blends.html (last updated Mar. 27, 2018); DOE, *Clean Cities Blog: Key Considerations for E85 and Other Ethanol Blend Infrastructure*, July 20, 2016, https://cleancities.energy.gov/blog/key-considerations-for-e85-and-other-ethanol-blend-infrastructure. The Renewable Fuels Association estimated over 4000 retail stations as offering flexible fuel and mid-level ethanol blends. RFA, *Pocket Guide to Ethanol*, at 3 (2018), http://www.ethanolresponse.com/wp-content/uploads/2018/02/2018-RFA-Pocket-Guide-to-Ethanol.pdf.

[30] *Energy Future Coal. v. EPA*, 793 F.3d 141, 146 (D.C. Cir. 2015).

[31] 79 Fed. Reg. at 23,528.

[32] 40 C.F.R. §1065.701(c)(3).

[33] 81 Fed. Reg. 80,828, 80,975 (Nov. 16, 2016) (proposed 40 C.F.R. §80.1564(a)(3)). EPA would exclude use of higher ethanol blends in FFVs from this proposed prohibition.

[34] SDFU incorporates by reference its comments on EPA's REGS proposal (EPA-HQ-OAR-2016-0041-0301).

effects on "driveability." EPA should simplify and streamline its statutory fuel registration requirements to allow flexibility in use of mid-level ethanol blends.[35]

B. The R-Factor Used to Assess Fuel Economy Should be Adjusted to Account for Ethanol Content in Fuels.

Vehicle fuel economy is measured in two steps. First, the amount of carbon in the test fuel and in the exhaust emissions is measured. Then, the fuel economy value is derived using a complex fuel economy equation (40 C.F.R. §600.113-12).

The current fuel economy equation includes adjustments meant to control for changes in the test fuel from testing in 1975 that affect fuel economy.[36] One adjustment is known as the R Factor, which is intended to represent the response of a typical vehicle's fuel economy to small changes in the fuel's energy content.[37] The current equation in the regulations uses an R-factor of 0.6 based on data from the 1980s. This factor fails to adequately adjust for changes in the test fuel with increased ethanol volume, as required by law.[38]

EPA has found that the ethanol content of a fuel can affect the R-Factor. In response to comments on the Tier 3 rule, EPA acknowledged that changes may be warranted.[39] EPA can and should update the R-factor to address use of higher ethanol blends. There is sufficient information to show that the current factor is too low, and should be closer to 1.[40] "With [a] correct R Factor, high-octane mid-level blends can offer real CAFE as well as GHG benefits."[41] Making this adjustment would allow automakers to use the new test fuel for purposes of compliance with the fuel economy requirements without being unfairly penalized for using a test fuel with a lower energy content.

There has been support for making this change for several years. The purpose of the fuel economy requirements is to reduce petroleum consumption. Increased use of ethanol does just that. EPA should promote energy independence by supporting mid-level ethanol blends, and EPA must do so by no longer penalizing use of ethanol in certification fuel.

C. EPA Should Also Revise its Reid Vapor Pressure Requirements to Remove Restrictions on Use of Higher Ethanol Blends.

Ethanol itself has a low Reid vapor pressure (RVP) rating. It is the petroleum gasoline portion of the fuel that can cause the RVP to increase. At higher blends, such as E30, the RVP should not be an issue, as the higher volume of ethanol counteracts potential increases based on the petroleum gasoline. Nonetheless, EPA should consider its options to remove any obstacles to sale of ethanol blends above E10 based on the RVP requirements in 42 U.S.C. §7545(h).

EPA's regulations currently restrict the 1 psi waiver exemption for ethanol blends to fuels with an ethanol content of "at least 9% and no more than 10% (by volume) of the gasoline."[42] But the statutory

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[35] With approval of alternative certification fuels, EPA should also adjust the formula used for determining fuel economy to ensure an appropriate R-factor and a multiplier in recognition of the lower carbon content of the proposed certification fuel.
[36] EPA-HQ-OAR-2011-0135-0604.
[37] *Id.* at 3.
[38] 77 Fed. Reg. 62,624, 62,777-62,778 (Oct. 15, 2012).
[39] EPA, Control of Air Pollution from Motor Vehicles: Tier 3 Motor Vehicle Emission and Fuel Standards Summary and Analysis of Comments, at 4-353 (Mar. 2014).
[40] *See* Brian West, Oak Ridge National Laboratories, DOE, *High Octane Fuels Can Make Better Use of Renewable Transportation Fuels*, Presentation at Biomass 2014, Washington, DC, July 29-30, 2014, slide 11, *available at* https://www.energy.gov/sites/prod/files/2014/11/f19/west_biomass_2014.pdf.
[41] *Id.*
[42] 40 C.F.R. §80.27(d)(2).

ethanol waiver for RVP applies to "fuel blend*s containing*" gasoline and 10 percent denatured ethanol.[43] Increasing the volume of ethanol should *reduce* the fuel's volatility.[44] By restricting the 1 psi waiver to gasoline with no more than 10 percent ethanol, EPA's interpretation discourages the use of higher ethanol blends even though ethanol itself has a lower volatility and numerous air quality benefits to burning petroleum-based gasoline, undermining the objectives the RVP control program and increasing pollution.

SDFU applauds President Trump's recent directive to EPA to address the RVP waiver for E15, and we urge EPA to implement that directive as soon as possible.[45] We also believe, however, that EPA should not restrict higher blends of ethanol for year-round use under 42 U.S.C. §7545(h). The unnecessary (and undue) restrictions on E15 have substantially slowed deployment of E15, and EPA should take actions to support transition to higher blends to move toward more efficient engines.

The ethanol and automotive manufacturing industries have also suggested an alternative approach to issuing a broader waiver; that is, imposing lower RVP limits on the petroleum gasoline blendstock. While EPA referenced potential adverse impacts on fungibility of fuel, there is precedent showing the gasoline blendstock can be set at a lower RVP to protect against exceeding 9 psi to address air quality concerns.[46]

III. EPA SHOULD INSTITUTE CREDITS TO SUPPORT VEHICLES THAT PROMOTE INCREASED USE OF RENEWABLE FUELS.

Congress established policies, which were intended to work together, to promote production of U.S. biofuels and, thereby, energy independence. These policies include the Renewable Fuel Standard (RFS) program and revisions to the Corporate Average Fuel Economy (CAFE) standards. The RFS program, in particular, has worked to support growth in the use of renewable fuels, including ethanol, since 2005. EPA's GHG emission regulations should work hand-in-hand with the RFS program, supporting biofuels.

Despite the requirements in the RFS to promote increased production of renewable fuel, EPA has, in recent years, sought to reduce the statutory volumes based on concerns over *use*. In particular, EPA has sought to limit the program based on a so-called ethanol "blendwall," and may be in the process of resetting the statutory volumes based on waivers it has issued for the overall volumes, which includes "conventional" ethanol, and advanced biofuels, which includes "advanced" ethanol. EPA has, nonetheless, pointed to the RFS to explain why it need not support renewable fuels under its GHG requirements.[47] EPA then essentially ignores how increased use of ethanol can support compliance with the proposed and future CAFE and GHG standards. The agencies should restore or include incentives can be provided to automakers to ensure vehicles being produced consider the increased use of renewable fuels.

One way to promote mid-level ethanol blends, and thereby higher-octane fuels, is to restore meaningful credits for FFVs and to establish a new incentive for engines optimized for efficiency on mid-level ethanol blends. FFV production has been impacted by EPA's unfair treatment compared to other alternative fuel vehicles. Incentives to stimulate the production of vehicles that produce the benefits sought, and reduce costs to consumers, are appropriate. As such, EPA should restore an equitable utility

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[43] 42 U.S.C. §7545(h)(4) (emphasis added); *see also id.* §7545(h)(5)(A) (providing States ability to apply 9 psi RVP requirement to "*all* fuel blends containing gasoline and 10 percent denatured anhydrous ethanol") (emphasis added).
[44] *See also* 42 U.S.C. §7545(h)(4)(C) (allowing additional "alcohol or other additive" so long as RVP of the *ethanol* portion of blend is not increased).
[45] https://www.whitehouse.gov/briefings-statements/president-donald-j-trump-expanding-waivers-e15-increasing-transparency-rin-market/.
[46] 81 Fed. Reg. at 80,851.
[47] 77 Fed. Reg. at 62,823.

factor for FFVs through MY2025 and adjust the "F Factor" upward to account for greater penetration of E85 in the marketplace. Based on EPA's current restrictions on mid-level ethanol blends, FFVs remain an important incentive to sell mid-level ethanol blends, supporting continued investment in retail and infrastructure to expand use as part of any transition to high octane fuels.

In addition, EPA has acknowledged that raising octane levels could enable "LDGHG standards that go beyond the 2025 standards."[48] Thus, automakers that take action to move ahead of the curve should be able to obtain credits toward meeting the GHG/CAFE requirements. Such incentives could be tied to use of higher ethanol blends as a certification fuel, thereby supporting those efforts to provide mid-level ethanol blends at the pump but also better ensure the benefits of these higher performing engines. But, EPA should not unduly restrict such incentives as it did with FFVs. Providing such incentives will create better benefits and move the country toward more efficient vehicles and higher octane, lower carbon fuels. It is also consistent with EPA's interpretation of its authority under section 202 to provide incentives to push new technologies and with the CAFE requirements, which support credits for moving the envelope forward. Introduction of these better performing fuels and engines are needed, and we believe consumers will reap the benefits and continue their use.

IV. EPA'S EMISSIONS MODELING SHOULD BE ADJUSTED TO BETTER ACCOUNT FOR THE BENEFITS OF ETHANOL FOR AIR QUALITY.

A. Ethanol Provides Air Quality Benefits, Which May Not Be Accurately Reflected in EPA's Current Models.

Ethanol, a renewable fuel, changes the emissions profile of gasoline, creating a cleaner, safer motor vehicle fuel. Real-world evidence shows use of ethanol blends reduces emissions of carbon monoxide, particulate matter, air toxic chemicals, and greenhouse gases compared to burning petroleum gasoline. With higher octane fuels, and related engines discussed above, the motor fuel can burn even more efficiently. This results in better overall air quality than when vehicles burn conventional gasoline, significantly improving public health.

Concerns have been raised regarding the models used by EPA to determine emissions from fuels. Third-party reviews have shown that MOVES2014 may be inadequate as a tool for estimating the exhaust emissions of gasoline blends containing more than 10 percent ethanol. The model's results for mid-level ethanol blends have been shown to be inconsistent with other results from the scientific literature for both exhaust emissions and evaporative emissions, including results from real-world emissions testing.[49] The problems with MOVES2014 have been tied to the model's use of data that misrepresents the actual parameters and composition of mid-level ethanol blends. EPA should consider conducting a new study that better reflects mid-level ethanol blends and update its model.

B. Recent Assessments Show Continued Improvements in GHG Lifecycle Analysis, Finding Greater Emissions Reductions for Ethanol Compared to Petroleum Gasoline Than EPA Has Estimated.

The Energy Independence and Security Act of 2007 required EPA to conduct lifecycle GHG emissions analysis to identify the renewable fuels eligible to meet the various categories under the RFS

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[48] EPA Presentation, *EPA's Regulatory Authority to Address Octane*, MSTRS Meeting, May 5, 2015, at 6, *available at* https://www.epa.gov/sites/production/files/2015-05/documents/050515mstrs_machiele.pdf.

[49] *See, e.g.,* Roger Wayson, *et al.*, *Evaluation of Ethanol Fuel Blends in EPA MOVES2014 Model* (Jan. 2016), *available at* http://www.ethanolrfa.org/wp-content/uploads/2016/01/RFA-MOVES-Report.pdf; Steve VanderGriend, Urban Air Initiative, Ethanol's Emissions Effects in MOVES2014, Presentation for MOVES Model Review Work Group Mar. 7th, 2018 meeting, *available at* https://www.epa.gov/sites/production/files/2018-04/documents/02-ethanol-emissions-effects-moves2014-2018-03-07.pdf.

program. EPA conducted this analysis for corn-based ethanol as part of the 2010 RFS rulemaking. Since that time, published studies and more recent data have improved the understanding of corn ethanol's lifecycle GHG impacts.[50] As noted above, U.S. farmers have responded to demand and concerns by moving toward sustainable practices *and intensification*, not land expansion. The land use aspect of EPA's analysis has not been experienced in the real world.[51]

Despite these advancements in lifecycle analysis, EPA has chosen not to acknowledge the significant overall benefits of increased ethanol use with respect to GHG reductions compared to petroleum-based gasoline. While requests to update the RFS lifecycle analysis have been rejected by EPA to date, the RFS statute includes specific parameters of how that analysis must be conducted, and this should not limit EPA's analysis of GHG benefits of ethanol blends. These newer studies and data show greater emissions reductions associated with corn ethanol, which is even more pronounced where more unconventional sources and heavier crudes are being used for gasoline today than in 2005 – the baseline used under the RFS. EPA, however, has declined to consider the significant GHG impacts of burning petroleum gasoline and the benefits of increasing use of renewable fuels beyond tailpipe emissions.

V. THE EPA/NHTSA REGULATIONS DO NOT PREEMPT STATE INCENTIVES AND REQUIREMENTS PROMOTING INCREASED USE OF BIOFUELS.

The proposed rule purports to outline the agencies view of preemption under the Clean Air Act and the Energy Policy and Conservation Act (EPCA). States and local governments have long implemented and expanded incentives for production and use of biofuels. Courts have upheld these incentives against claims of federal preemption. These incentives are not expressly preempted by the Clean Air Act or the EPCA, and they support the goals of Congress and the purposes of the regulations. While vehicle efficiency and GHG emission reductions may be significant benefits of these incentives, these state and local requirements do not regulate fuel economy or GHG emissions. Although SDFU takes no position on whether the agencies' discussions properly reflect a preemption analysis and would defer such determinations to courts, the agencies should clarify that their comments on preemption of requirements "related to" fuel efficiency and CO2 emissions are preempted do not address incentives intended to promote biofuel production and use.

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Rural America and the family farmers and ranchers at the heart of their economies, make up the backbone of this country. As mentioned earlier, biofuels play an important role in supporting family farms, which continue to face significant pressure to stay in production from various sides and a struggling economy. SDFU strongly encourages EPA to make appropriate regulatory changes to support increased use of mid-level ethanol blends, which are high octane, low carbon fuels. As has been shown by numerous studies, ethanol provides significant air quality benefits, in addition to providing much needed jobs and creating stability in markets providing benefits and promoting investments in the rural

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[50] *See, e.g.,* ICF, *A Life-Cycle Analysis of the Greenhouse Gas Emissions of Corn-Based Ethanol*, Report prepared for U.S. Department of Agriculture (Jan. 2017), *available at* https://www.usda.gov/oce/climate_change/mitigation_technologies/USDAEthanolReport_20170107.pdf.

[51] *See, e.g.,* Bruce A. Babcock and Zabid Iqbal, *Using Recent Land Use Changes to Validate Land Use Change Models*, Iowa State University Center for Agricultural and Rural Development, Executive Summary (2014), *available at* http://www.card.iastate.edu/products/publications/pdf/14sr109.pdf ("The contribution of this study is to confirm that the primary land use change response of the world's farmers from 2004 to 2012 has been to use available land resources more efficiently rather than to expand the amount of land brought into production. … Our conclusion that intensification of agricultural production has dominated supply response in most of the world does not rely on higher yields in terms of production per hectare harvested. Any increase in yields in response to higher prices would be an additional intensive response."); *see also* Renewable Fuels Association, *USDA Data Show Cropland Reductions in Counties with Ethanol Plants from 1997-2012*, April 3, 2017, *available at* http://www.ethanolrfa.org/wp-content/uploads/2017/04/USDA-Data-Show-Cropland-Reductions-in-Counties-with-Ethanol-Plants-from-1997-2012-1.pdf.

economy. Virtually all parties, including EPA, acknowledge the GHG and fuel economy benefits of high octane fuels in more efficient engines, and the cost-effectiveness of using higher ethanol blends to meet the goals of these requirements.

On behalf of our membership, I thank you in advance for your consideration of these comments.

Sincerely,

Doug Sombke, S.D. Farmers Union President