growth energy™
America's Ethanol Supporters

701 8th Street, NW, Suite 450, Washington, D.C. 20001
PHONE 202.545.4000 FAX 202.545.4001 GrowthEnergy.org

GROWTH ENERGY COMMENTS ON EPA'S PROPOSED RULE:
"REQUEST FROM STATES FOR REMOVAL OF GASOLINE VOLATILITY WAIVER"
APRIL 20, 2023

Docket ID No. EPA–HQ–OAR–2022–0513

Growth Energy appreciates the opportunity to provide comments to EPA in support of its proposed rule, entitled *Request From States for Removal of Gasoline Volatility Waiver*, to take action on petitions from governors of eight states to remove the one-pound per square inch (psi) Reid Vapor Pressure (RVP) waiver for summer gasoline-ethanol blends containing ten percent ethanol (E10).[1] Growth Energy is the world's largest association of biofuel producers, representing 91 biorefineries that produce nearly nine billion gallons annually of low-carbon renewable fuel and 112 businesses associated with the biofuel production process. Together, our members are working to bring better and more affordable choices at the fuel pump to consumers and protect the environment for future generations. We are committed to helping our country diversify its energy portfolio to support more green energy small businesses and jobs, sustain family farms, and reduce the costs of transportation fuels for consumers.

In light of the significant potential for biofuels to deliver lower-cost, low-carbon fuel options that make meaningful progress in reducing greenhouse gas (GHG) emissions and improving air quality, it is critical that EPA swiftly complete its statutory obligation to implement the governors' petitions to remove the one-psi RVP waiver.

RVP is a measure of the volatility—the propensity to evaporate—of gasoline. Removal of the one-psi waiver will lower the volatility at which the most common fuel blend in the market (E10) is sold during the summer in the petitioning states, effectively by reducing the volatility of the base gasoline into which ethanol is blended. Lower volatility will in turn decrease evaporative emissions that contribute to air pollution in those states. In addition, removal of the waiver facilitates a multitude of air quality improvements from potential increased availability of E15 gasoline blends. Further, higher blends of ethanol such as E15 displace fossil fuels, therefore reducing GHG emissions and lowering fuel costs for consumers.

Almost one year ago, on April 28, 2022, a bipartisan group of Midwestern Governors properly notified EPA of their intent to remove the one-psi RVP waiver and submitted technical

[1] 88 Fed. Reg. 13,758 (Mar. 6, 2023).

supporting information in accordance with the prescribed statutory procedure.[2] Once this "notification" is received, EPA "shall, by regulation" remove the one-psi waiver.[3] The Clean Air Act provides a strict deadline for EPA action on a governor's request to remove the waiver -- 90 days from date of receipt, a deadline that makes sense in light of the air quality concerns motivating that request.[4] Here, however, EPA failed to act for the better part of a year and now seeks to delay implementation of the rule for yet *another* year based on overstated fuel distribution concerns that were entirely avoidable had EPA met its statutory deadline to finalize the original rule.

On the substance, EPA correctly acknowledges that its role in implementing the governors' requests is non-discretionary and limited to confirmation that removal of the one-psi waiver would result in a reduction in emissions that contribute to air pollution in the petitioning state.[5] Here, EPA's proposal would implement the states' requests as required under Clean Air Act § 211(h)(5). This regulatory action would also be consistent with the nation's environmental and climate goals and supportive of the Renewable Fuel Standard (RFS) and its aims to increase the United States' energy independence and security by reducing our dependence on foreign oil and diversifying our energy sources, while creating American jobs, revitalizing rural economies, and adding much-needed competition in the vehicle-fuels market.

Growth Energy urges EPA to swiftly finalize this rulemaking with an effective date as soon as possible, but in any case prior to May 1, 2024. Because of the delay in this rulemaking, it is also essential that EPA immediately issue an emergency one-psi waiver so that retailers and consumers can continue to access this lower carbon, more affordable fuel choice this summer.

I. EPA's Proposed Removal of the One-psi Waiver in Petitioning States is Well-Supported

As the petitioning states have demonstrated, universal usage of lower-volatility gasoline blendstock will decrease smog-forming evaporative emissions in summer months.[6] Specifically, all petitioning states have shown that removal of the waiver would reduce emissions of volatile organic compounds (VOCs), nitrogen oxides (NOx), and carbon monoxide (CO).[7] VOCs and NOx react in the atmosphere in the presence of sunlight during warm summer months to form ozone smog, a respiratory irritant. EPA's emphasis on VOC emissions reductions is reasonable and consistent with the role of volatility control to reduce ozone smog in summer months.[8] Most states have also demonstrated that reducing gasoline volatility will reduce evaporative emissions

[2] Iowa, Illinois, Kansas, Minnesota, Nebraska, North Dakota, South Dakota, and Wisconsin initially notified EPA in April 2022. Kansas and North Dakota later withdrew their requests and Ohio and Missouri submitted requests in June and December 2022, respectively.
[3] 42 U.S.C. § 7545(h)(5).
[4] 42 U.S.C. § 7545(h)(5)(B).
[5] 88 Fed. Reg. at 13,761.
[6] Yanowitz, J., *Emissions Impacts of the Elimination of the 1-psi RVP Waiver for E10*, (Nov. 9, 2021; updated May 9, 2022) EPA-HQ-OAR-2022-0513-0006.
[7] *Id.*
[8] *Id*. at 13,760 (noting that "it may be more appropriate to evaluate the impact of the 1-psi waiver on VOC emissions" as RVP "is a volatility control measure").

of hazardous constituents of the base gasoline, including benzene, toluene, ethylbenzene, and xylene (BTEX) emissions.[9] As EPA correctly concludes, the states' demonstrated reductions in multiple emissions categories, in particular including VOC emissions, amply support removal of the one-psi waiver.

In addition, and most importantly, eliminating the 1.0 psi waiver for E10 would create a level playing field for E10 and E15, where both blends would require the same lower-volatility base gasoline blendstock. By creating such a level playing field for E10 and E15, the proposed rule encourages the production and sale of E15 year-round. To elaborate briefly, the 1990 Clean Air Act Amendments specify that during the high ozone summer driving season gasoline blends may not be sold at an RVP exceeding 9.0 psi, unless such blends contain 10 percent ethanol, in which case they may be sold at 10.0 psi.[10] The Court of Appeals for the District of Columbia recently determined in litigation brought by the oil industry that this one-psi waiver only applies to E10, and not to higher-ethanol blends such as E15, notwithstanding EPA's ample scientific data demonstrating that E15's RVP is actually *lower* than E10's when using the same base gasoline blendstock.[11] As a result, E10 currently may be sold at up to 10 psi during the summer in most areas,[12] but E15 may be sold at only up to nine psi.

This discrepancy stifles the availability of E15 as refiners have not produced a lower-volatility blendstock for E15 in the summer months. Since E10 represents 98 percent of the fuel in the market and may be sold at the higher 10 psi level, refiners have been unwilling to produce a lower-RVP blendstock to accommodate E15 fuel blends. Removing the one-psi waiver will allow E10 and E15 to be sold using the same, lower-RVP blendstock, thereby removing the barriers to the year-round availability of E15. As explained further below, year-round use of E15 results in numerous air quality benefits, reduced greenhouse gas emissions, and a lower-cost fuel option for consumers.

In sum, the notification and supporting documentation that eight states submitted in April 2022 triggers EPA obligations to issue regulations implementing the removal of the one-psi waiver.[13] The states' materials included ample technical documentation to support a transition to a nine psi RVP standard applicable to all gasoline and gasoline blends in the petitioning states. The proposed rule appropriately resolves EPA's duty to remove the waiver; however, as discussed further below, the proposal fails to make the regulations effective within the deadline prescribed by the statute.

II. E15 Consumption Creates Substantial Benefits in Air Quality, Greenhouse Gas Emissions, and Fuel Price

A. Air Quality

[9] 88 Fed. Reg. at 13,761, Table V-1.
[10] 42 U.S.C. § 7545(h)(1).
[11] Am. Fuel & Petrochemical Manufacturers v. Env't Prot. Agency, 3 F.4th 373, (D.C. Cir. 2021).
[12] EPA imposes more stringent RVP limitations in ozone nonattainment areas, and the 1-psi waiver does not apply in areas requiring reformulated gasoline.
[13] 42 U.S.C. § 7545(h)(5).

Removal of the one-psi waiver improves air quality in two ways. First, as explained above, removing the waiver reduces the RVP of E10 and as a result decreases E10's evaporative emissions. But even more significantly, removal of the one-psi waiver creates parity between E15 and E10 fuels in the marketplace, which supports increased consumption of E15.

Higher ethanol-blended fuels such as E15 have myriad air quality benefits as compared to lower level ethanol-blends. Ethanol boosts octane in fuel without the harmful impacts of alternative octane-boosting fuel additives such as methyl tert-butyl ether (MTBE), lead, and aromatics (including benzene, toluene, ethylbenzene, and xylene) or olefins. Indeed, the level of aromatics in fuel decreases by about seven percent for every 10 percent by volume increase in ethanol content.[14] Decreasing aromatics in fuel has direct impacts on tailpipe emissions, with higher-ethanol fuels resulting in lower emissions of black carbon (BC), particle number (PN), benzene, toluene, ethylbenzene, m/p-xylene and o-xylene (BTEX), and olefins such as 1-3 butadiene.[15] As a whole, there is "considerable support from the emissions and epidemiological literature" that substitution of ethanol for aromatics in higher-ethanol blends of fuel results in net public health benefits.[16]

Use of higher ethanol blends also reduces total hydrocarbon (THC), carbon monoxide (CO), and particulate matter (PM) emissions. For PM emissions in particular, recent studies have demonstrated substantial benefits from higher blends of ethanol in fuel. For example, one 2022 study observed 15-18 percent decreases in PM emissions for each 10 percent increase in ethanol content.[17] California Air Resources Board (CARB) and the University of California Riverside found even greater benefits, concluding that the five percent increase in ethanol content between E10 and E15 fuels reduced PM emissions by 17 percent in cold-start and 54 percent in hot running phases.[18] The California study further details several additional air quality benefits from the use of E15 as compared to E10:

- Cold-start and weighted THC emissions showed statistically significant reductions of six percent and five percent, respectively, for E15 compared to E10.
- For the cold-start nonmethane hydrocarbon emissions, E15 showed a statistically significant reduction of seven percent compared to E10.
- Particle number emissions for E15 were 12 percent lower than E10, at a statistically significant decrease.
- For ethylbenzene emissions, E15 showed a statistically significant reduction of 11 percent compared to E10.

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[14] Kazemiparkouhi et al., *Comprehensive US database and model for ethanol blend effects on regulated tailpipe emissions*. 812 Science of The Total Environment 151426, (Mar. 2022) https://www.sciencedirect.com/science/article/pii/S0048969721065049.

[15] MacIntosh, et al., *Response to Proposed Renewable Fuel Standard (RFS) Program Standards for 2023–2025*, Environmental Health & Engineering (Feb. 10, 2023) EPA-HQ-OAR-2021-0427-0796.

[16] *Id.*

[17] Kazemiparkouhi et al. 2022.

[18] Karavalakis, Durbin, & Tang, Final Report, *Comparison of Exhaust Emissions Between E10 CaRFG and Splash Blended E15*, Prepared for: California Air Resources Board (CARB), Growth Energy Inc./Renewable Fuels Association (RFA), and USCAR (Jan. 2022).

- NOx emission differences were not statistically significant between the two fuels.
- Non-methane organic gas (NMOG) emissions trended lower for E15 compared to E10. Like NMOG, ozone forming potential showed a decreasing trend for E15 compared to E10, indicating that the introduction of E15 in the California gasoline market will likely not contribute to increases in ozone formation.[19]

B. GHG Emissions

Biofuels are also crucial to decarbonizing the transportation sector. Over 99 percent of in-use light duty vehicles and even higher percentages of medium- and heavy-duty vehicles, maritime vessels, and aircraft are currently powered by liquid fuels.[20] The collective transportation fleet is expected to continue to be powered by liquid fuels for decades.[21] Therefore, the most immediate pathway to meaningfully reduce GHG emissions in the transportation sector is to decarbonize liquid fuels through the displacement of conventional petroleum fuels with biofuels and biofuel blends. And immediate climate action is necessary—if the U.S. is to meet its climate commitments, it must decarbonize the liquid fuel that over 99 percent of vehicles currently rely on by replacing petroleum gasoline with ethanol and other low-carbon biofuels.

Increasing the concentration of renewable content in the national fuel mix has the greatest potential to reduce GHG emissions in the transportation sector this decade. Corn ethanol reduces GHG emissions by 46% compared to gasoline.[22] Indeed, ethanol consumption has already been a primary driver of transportation sector GHG emissions reductions in the United States, with Argonne National Laboratory estimating roughly 544 million metric tons of CO_2e emissions avoided from 2005-2019 due to ethanol usage.[23] A switch from E10 to E15 nationwide would result in an **additional GHG savings of 17.62 million tons per year**, the equivalent of removing approximately 3.85 million vehicles from the road.[24]

C. Fuel Price

For motorists, the value proposition of E15 is clear, and it gives consumers an additional choice at the pump that allows an additional pathway to market for homegrown ethanol. Reliance on petroleum energy sources can lead to substantial swings in fuel prices, as seen during the 2022 summer driving season as prices skyrocketed in response to the Russian invasion of Ukraine, inflation, and other factors. During this period, E15 provided consumers with a significantly

[19] *Id.*
[20] *The U.S. National Blueprint for Transportation Decarbonization: A Joint Strategy to Transform Transportation*, U.S. DOE, DOT, EPA, & HUD, (Jan. 2023) at 57–58, https://www.energy.gov/sites/default/files/2023-01/the-us-national-blueprint-for-transportation-decarbonization.pdf.
[21] *Id.*
[22] Scully, et al., *Carbon intensity of corn ethanol in the United States: state of the science*, 16(4) Environmental Research Letters, 043001 (Mar. 2021).
[23] Uisung Lee et al., *Retrospective Analysis of the U.S. Corn Ethanol Industry for 2005– 2019: Implications for Greenhouse Gas Emission Reductions*, (May 4, 2021), https://doi.org/10.1002/bbb.2225.
[24] *GHG Benefits of 15% Ethanol (E15) Use in the United States*, Air Improvement Resources, Inc. (Nov. 2020).

lower-cost fuel option at the pump, with savings of $0.16/gallon[25] nationwide and up to $0.96/gallon[26] in certain locations. If E15 were to replace E10 on a nationwide basis, consumer spending on motor fuel would decrease by **$20.6 billion.**[27] The cost savings available to consumers from the additional choice of E15 at the pump would substantially offset any marginal price increases associated with requiring refiners to produce a lower volatility base gasoline for ethanol blending.[28] As fuel costs make up a greater share of total expenditures for lower income populations, these communities would particularly benefit from increased availability of lower-cost E15 fuel.

III. EPA Should Promptly Finalize The Proposed Regulations with an Effective Date As Soon As Practicable

The Clean Air Act requires that EPA promulgate regulations removing the one-psi RVP waiver "not later than 90 days after the date of receipt of a notification from a Governor [requesting to opt-out]."[29] Further, these regulations "shall take effect on the later of (I) the first day of the first high ozone season for the area that begins after the date of receipt of the notification; or (II) one year after the date of receipt of the notification."[30]

As noted above, Iowa, Illinois, Minnesota, Nebraska, South Dakota, and Wisconsin each notified EPA of their opt-out to the one-psi RVP waiver on April 28, 2022.[31] Per statutory deadlines, EPA was required to issue regulations by July 27, 2022 that should have taken effect one year from the date of the petition, April 28, 2023. EPA acknowledges that the states' requests were submitted to EPA with enough time that "a summer of 2023 effective date may have been possible."[32] Yet for inexplicable reasons, EPA has grossly surpassed the 90-day deadline to promulgate regulations.

EPA should mitigate its violations of the Clean Air Act timing requirements by promptly finalizing the proposed regulations with an effective date as soon as practicable, but in any case no later than May 1, 2024. Further unlawful delay would continue to harm consumers, air quality, and the climate. In the interim, it is critical that EPA immediately issue an emergency one-psi waiver. This action would provide relief, flexibility, and certainty in the fuel markets as we are seeing continued high gasoline prices in the petitioning states.

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[25] *Consumer Savings from Year-Round Nationwide E15 Use,* ABF Econ. (Oct. 13, 2022) at Table 1, https://growthenergy.org/wp-content/uploads/2022/10/ABF-E15-Consumer-Savings101322.pdf.
[26] *This Summer, E15 Helped Americans Save Up to $1 Per Gallon*, Growth Energy (2022), https://growthenergy.org/wp-content/uploads/2022/10/One-Sheeter_DigitalB.pdf.
[27] *Consumer Savings from Year-Round Nationwide E15 Use* at 2.
[28] *Technical Support Document for the Proposed Removal of the 1-psi Waiver*, EPA OTAQ Staff (Feb. 27, 2023) at Table 6-1, EPA-HQ-OAR-2022-053-0032 (projecting cost increases of 1.5 cents/gallon).
[29] 42 U.S.C. § 7545(h)(5)(B).
[30] *Id.* § 7545(h)(5)(C).
[31] Ohio later submitted a petition request on June 10, 2022 and Missouri on December 21, 2022.
[32] 88 Fed. Reg. at 13,759.

We appreciate EPA's consideration of these comments and urge the agency to swiftly implement the elimination of the one-psi RVP waiver in the petitioning states, as required under the Clean Air Act.

Sincerely,

Chris Bliley
Senior Vice President of Regulatory Affairs
Growth Energy