December 3, 2022

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The Honorable Charles Rettig
Commissioner
Internal Revenue Service
1111 Constitution Avenue NW
Washington, DC 20224

RE: Notice 2022-58 (Docket No. IRS-2022-0029-0001)

Commissioner Rettig:

NATSO, Representing America's Travel Centers and Truckstops, and SIGMA: America's Leading Fuel Marketers (together, the "Associations") represent more than 80% of retail sales of motor fuel in the United States.[1] On behalf of the diverse and forward-thinking retail fuel industry, we are eager to work with the Internal Revenue Service ("IRS" or the "Agency") to help improve the environmental characteristics of transportation energy in the United States.

These comments begin with a high-level overview of retail fuel industry's perspective on alternative fuels policies – including the clean fuel tax credits that the IRS is tasked with implementing – and then specifically address many of the questions that were included in the Agency's request for information ("RFI") on the Clean Fuel Production Credit ("45Z") and the Clean Hydrogen Production Credit ("45V") under the Inflation Reduction Act ("IRA").[2]

Summary of Comments

- The retail fuel industry is an indispensable asset to lowering the carbon footprint of transportation fuel in the United States. The Associations believe the most expeditious and economical way to achieve environmental enhancements in transportation energy technology is through market-oriented, consumer-focused policies that encourage fuel retailers and marketers to offer more alternatives.

[1] NATSO currently represents approximately 5,000 travel plazas and truckstops nationwide, comprising both national chains and small, independent locations. SIGMA represents a diverse membership of approximately 260 independent chain retailers and marketers of motor fuel.

[2] Internal Revenue Service, Department of the Treasury, "Request for Comments on Prevailing Wage, Apprenticeship, Domestic Content, and Energy Communities Requirements Under the Act Commonly Known as the Inflation Reduction Act of 2022," (October 5, 2022); hereinafter referred to as "IRS RFI"*; available at* https://www.irs.gov/pub/irs-drop/n-22-51.pdf.

- Fuel retailers support robust biofuel and other alternative fuel incentives when those incentives result in meaningful benefits for consumers in the form of lower prices at the pump. Several existing federal policies are designed in this way, and the industry has responded with consequential investments that have expedited the country's transition to alternative fuels.

- The IRA instructs the IRS to develop policies that will have immediate, direct, and traceable impacts on the supply of, and the price that consumers pay for, gasoline and diesel. The Clean Fuel Tax Credit will "de-homogenize" what today are fungible products. Any program or incentive structure that is implemented before it is "ready for prime time" could potentially inject massive disruption and confusion into already-volatile motor fuel and biofuels markets. The consequences would be higher prices at the pump for consumers.

- The IRS should clarify that §45Z and §40B(e) require taxpayers to utilize either the CORSIA model or any other similarly stringent model that satisfies the lifecycle analysis criteria outlined 42 U.S.C. 7545(o)(1)(H). The IRS should further clarify that because the GREET model applies a significantly lower induced land use change ("ILUC") score than CORSIA, the GREET model is not "similar" to CORSIA, and thus the IRA does not permit the GREET model to be used by taxpayers claiming SAF tax credits. This outcome is consistent with Congressional intent and the broader statutory scheme in which those tax credits exist.

- Many of the Associations' members – particularly those with highway locations that service heavy duty commercial trucks – are actively expanding their hydrogen capabilities. Incorporating hydrogen into the nation's suite of clean energy options would leverage existing energy infrastructure to help decarbonize the transportation sector. Minimizing the price consumers pay for the fuel should be an essential element of hydrogen policy. A critical missing component is carbon intensity accounting as an enabler for market signals. The Associations' members have ample experience responding to those signals and leveraging government incentives – including tax incentives – to lower the price commercial fleets pay for fuel, while simultaneously displacing petroleum-based fuel with more environmentally attractive alternatives. They are eager to apply to hydrogen the lessons they have learned through that experience.

I. Overview of the Retail Fuel Industry and its Perspective on Alternative Fuels Policy

The retail fuel industry is an indispensable asset to lowering the carbon footprint of transportation fuel in the United States. Fuel retailers should be viewed as surrogates for the consumer in that they identify the most reliable, lowest-cost transportation energy available, and deliver that energy to every community in the country. When policy and market constructs align to make cleaner energy cost-competitive with traditional fuel sources, consumers demand those cleaner fuels. Fuel retailers respond to that demand.

A. The Associations' Environmental Transportation Policy Principles

The Associations believe the most expeditious and economical way to achieve environmental advancements in transportation energy technology is through market-oriented, consumer-focused policies that encourage fuel retailers and marketers to offer more alternatives. With the right alignment

of policy incentives, the private sector is best equipped to facilitate a faster, more widespread, and cost-effective transition to alternative fuels in the coming years.

Policies attempting to improve the environmental characteristics of transportation energy in the United States should adhere to the following principles:

(1) Science should be the foundation for transportation climate policies – Any effort to improve transportation energy's emissions characteristics requires an accurate accounting of the lifecycle carbon intensity associated with particular fuels and technologies. This analysis should include everything from the acquisition of natural resources, engine and/or battery manufacturing, tailpipe emissions, and vehicle end-of-life consequences. Additionally, every sector of the economy should assume a burden of reducing carbon emissions.

(2) Establish performance goals without mandating specific technologies to allow for the benefits of innovation and technology development – Sound policy must recognize that the state of technology can change rapidly, and tie incentives for all fuels to technologies' lifecycle environmental attributes rather than the underlying technology itself. No one solution will decarbonize transportation energy and policies should incentivize multiple technologies. What policymakers think is the best solution today may be surpassed by subsequent ingenuity and innovation. Sound policy should not stifle innovation by mandating or putting thumbs on the scales for specific fuel solutions. Instead, policy should set performance goals and let the market – guided by consumers – innovate to find the best way to meet those goals.

(3) Develop competitive market incentives to ensure a level playing field and provide long-term consumer benefits – Fuel retailers today are best positioned to provide alternative sources of transportation energy because they are fuel agnostic and have a keen understanding of consumer preferences and tendencies. The industry made consequential investments in alternative fuels in response to existing incentives that allow them to offer those fuels at a price at which consumers are willing to buy them.

(4) Harness existing infrastructure to help commercialize new technology, maximize diverse investments, and achieve near-term and long-term emission reduction goals – It is far less expensive to leverage existing infrastructure than create entirely new supply chains and infrastructure. To the extent environmental objectives can be achieved by harnessing existing infrastructure, especially retail fuel assets, consumers will more seamlessly gravitate to new types of fuels and vehicles. American companies have spent more than sixty years building out a refueling infrastructure system that optimizes logistics and maximizes customer benefits. Deployment of new technology that compliments this infrastructure will (all else being equal) be less expensive and thus more likely to generate consumer loyalty.

(5) Set consistent, uniform national policy so that (i) the market has certainty to help it invest, and (ii) state policies do not create inconsistent or counterproductive measures – Federal policy should be designed to lower the cost of alternative fuels to make those sources of transportation energy more competitive with petroleum-based fuels. This is the only way to ensure that consumers will gravitate toward low carbon technologies.

Although some state incentive programs adopt this approach, others have vacillated between different approaches in a way that does not allow private market participants to plan long-term investments in alternatives. These inconsistent policies are ultimately self-defeating and should be avoided.

By adhering to these principles, transportation energy policies can create new jobs, accelerate the deployment of advanced alternative fuel infrastructure and vehicles, benefit consumers through a competitive and robust marketplace, and drive massive economic investment and improvements in air quality. These are objectives that fuel retailers and climate-conscious policymakers share.

B. Fuel Retailers' Perspective on the Clean Fuel Tax Policies in the IRA

In their effort to provide the most competitively priced fuel to customers – and thus increase their market share – many of the Associations' members buy and blend biofuels into the gasoline and diesel sold at their locations. Incorporating renewable fuels into their fuel supply is entirely consistent with their business model, and with the industry's history of adding new fuels to their offerings as they become available and economically attractive to consumers.

For these reasons, fuel retailers support robust biofuel incentives when those incentives result in meaningful benefits for consumers in the form of lower prices at the pump. The industry prefers long markets with a variety of supply options to offer their customers. Fuel retailers are agnostic as to what fuel they sell. They do have a strong bias in that they believe it is best for American consumers – and America's industrial and geopolitical position in the global marketplace – to have reasonably low- and stable-priced energy.

In response to existing tax policies (such as the Biodiesel Tax Credit at 26 U.S.C. 40A) and other incentive programs (such as the Renewable Fuel Standard at 42 U.S.C. 7545(o)), fuel retailers have invested at least hundreds of millions of dollars in the physical and intellectual capital necessary to realign their operations with these policy signals. The Associations have aggressively advocated in support of these policies before Congress and executive agencies. We look forward to working closely with the IRS as it begins the IRA implementation process.

The IRA instructs the IRS to develop policies that will have immediate, direct, and traceable impacts on the supply of, and the price that consumers pay for, gasoline and diesel. The Clean Fuel Credit essentially instructs the Agency to assign unique tax benefits to asset-specific characteristics of a given biofuel production facility. The credit value of finished biofuels will differ depending on the source energy and feedstocks that are utilized at a given production facility, as well as the facility's operational parameters and supply chain.

This scheme will effectively "de-homogenize" what today are fungible products. In a low-margin business where tenths of a cent matter to the retailer and ten cents per gallon is extraordinarily consequential to the consumer base, the IRS must take special care to minimize impediments to what today are seamless price-discovery mechanisms. Any program or incentive structure that is implemented before it is "ready for prime time" could inject massive disruption and confusion into already-volatile motor fuel and biofuels markets. The consequences would undoubtedly be higher prices at the pump for consumers.

The Associations and their members are eager to be resources for the Agency as it implements these clean fuel policies. Our objectives are to maximize the climate benefits of renewable fuels and minimize fuel supply disruptions and inflationary consequences for consumers. These outcomes are best achieved via incentive structures that tether environmental attributes to consumer adoption through price, *i.e.*, when consumers pay less for fuels with more favorable emissions characteristics.

A tax incentive scheme that assigns greater value to alternative fuels that have more favorable lifecycle greenhouse gas emissions outcomes is an effective way to achieve this. The IRA's incentives for sustainable aviation fuel ("SAF") are misaligned with these principles in that they provide for a higher tax credit for SAF than for over-the-road biofuels, even when SAF's emissions benefits are inferior to over-the-road uses. As discussed in more detail below, however, Congress fortunately anticipated and sought to mitigate this perverse outcome by subjecting SAF, under both § 40B and § 45Z, to more stringent GHG emission modeling assessments than over-the-road fuels. Specifically, the IRA subjects SAF to the Carbon Offsetting and Reduction Scheme for International Aviation ("CORSIA") model, or any other similarly stringent model authorized by law, whereas over-the-road biofuels are explicitly required to use the Argonne GREET model, which looks far more favorably on SAF's emissions reductions than does CORSIA.[3]

II. Response to Specific IRS Questions in the RFI

A. Section 45Z, Clean Fuel Production Credit

i. *Section 45Z(b)(1)(B)(iii) provides that the lifecycle greenhouse gas emissions of sustainable aviation fuel shall be determined in accordance with the Carbon Offsetting and Reduction Scheme for International Aviation or "any similar methodology which satisfies the criteria under §211(o) of the Clean Air Act (42 U.S.C. 7545(o)(1)(H)), as in effect on the date of enactment of this section. What methodologies should the Treasury Department and IRS consider for the lifecycle greenhouse gas emissions of sustainable aviation fuel for the purposes of §45Z(b)(1)(B)(iii)(II)?*

The IRS should promptly clarify that §45Z(b)(1)(B)(iii) and §40B(e) require taxpayers to utilize either the CORSIA model or any other similarly stringent model that satisfies the lifecycle analysis criteria outlined 42 U.S.C. 7545(o)(1)(H). The IRS should further clarify that because the GREET model applies a significantly lower induced land use change ("ILUC") score than CORSIA, the GREET model is not "similar" to CORSIA, and thus the IRA does not permit the GREET model to be used by taxpayers claiming the SAF credits. This outcome is consistent with Congressional intent and the broader statutory scheme within which the SAF credits exist.

Biofuel producers today convert used cooking oil, animal fats, vegetable oils and other "feedstocks" into renewable diesel and biodiesel (hereinafter collectively referred to as "renewable diesel"). Those same feedstocks are used in the production of SAF as well.

Because there is a <u>limited supply of feedstocks</u> – exacerbated by the ongoing War in Ukraine and global supply chain issues – biofuel producers will have to assess whether it is more profitable for

[3] *Compare* 26 U.S.C. 45Z(b)(1)(B)(iii) and 26 U.S.C. 40B(e) (SAF modeling) *with* 26 U.S.C. 45Z(b)(1)(B)(ii) (non-SAF biofuel modeling).

them to produce SAF or renewable diesel. Congress passed the clean fuel incentive policies within the IRA to help ensure that environmental outcomes govern that assessment.[4]

The SAF production process is similar to, though ultimately less efficient than, the renewable diesel production process.[5] The same amount of feedstock will yield fewer gallons of SAF than renewable diesel. The production of SAF also requires more energy inputs than the production of renewable diesel. The cost of saving one kilogram of carbon dioxide ("CO2") is higher for SAF than it is for renewable diesel. Every gallon of SAF delivers lower CO2 savings than every gallon of renewable diesel; the displacement of one millijoule (MJ) of fossil jet fuel removes less CO2 than the displacement of one MJ of fossil *diesel*.[6]

Given the relative inefficiencies of the SAF production process, the IRA provides the fuel a higher tax credit than it does other fuels that compete for the same feedstock and have equal or better environmental attributes. To "realign" this higher credit with §45Z's overarching "technology neutral," "emissions based" approach,[7] however, the IRA subjects SAF to a more stringent lifecycle emissions analysis than it imposes upon other transportation fuels.

CORSIA and GREET are the two most prominent models that evaluate SAF. If SAF utilizes GREET for purposes of establishing the fuel's tax credit value, it would face a lower ILUC value and would be advantaged relative to CORSIA. While there are a variety of differences between GREET and CORSIA, the most critical is their respective assessments of the induced land use change (ILUC) value for soybean oil. Soybean oil is a predominant feedstock today for renewable diesel and, conceivably in the future, SAF as well. The GREET model assigns a significantly lower ILUC value for soybean oil than does the CORSIA model.

CORSIA also offers a more comprehensive analysis of SAF than the GREET model. The GREET model lacks GREET data for approximately half of the feedstock and technology combinations that are available under CORSIA. For example, GREET does not have GREET data for used cooking oil and tallow, both of which are commonly used feedstocks for SAF in the United States.

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[4] Section 45Z's primary author, Senate Finance Committee Chairman **Ron Wyden** (D-OR), described the policy framework as creating **"emissions-based, technology-neutral credits to turbocharge investment in . . . clean transportation."** *See* "Wyden, Colleagues Introduce Legislation to Overhaul Energy Tax Code, Create Jobs, Combat Climate Crisis" (April 21, 2021) *available at* https://www.finance.senate.gov/chairmans-news/-wyden-colleagues-introduce-legislation-to-overhaul-energy-tax-code-create-jobs-combat-climate-crisis; *see also* Benjamin Storrow, "Cash, Tech, Speed: How the Senate Bill Boosts Clean Energy," E&E News, July 29, 2022, https://www.eenews.net/articles/cash-tech-speed-how-the-senate-bill-boosts-clean-energy/ (**"This is a fundamental change in terms of clean energy policy. No longer we're picking winners and losers. It's tech neutral,"** [Senator] Wyden said. **"So it's agnostic because you're not going to be able to predict the clean energy possibilities because there may be completely new emission reducers 15 years from now."**); *see also* Naomi Jagoda, "Senate Panel Deadlocks on Energy Tax Credits Bill." The Hill, May 27, 2021. https://thehill.com/policy/finance/555770-senate-panel-deadlocks-on-energy-tax-credits-bill/ (**"It replaces the old rules with a free-market, technology-neutral system in which reducing carbon emissions becomes the lodestar of America's energy future," [Senator] Wyden said**.)

[5] SAF requires more processing than renewable diesel due to the lower freezing point. This requires greater hydrogen input for SAF compared to renewable diesel, which in turn requires more natural gas usage.

[6] The baseline lifecycle emissions value for fossil jet fuel is 89 gCO2/MJ under California's LCFS program. The emissions factor for fossil diesel fuel is 97 gCO2/MJ.

[7] *See supra* n.4 and accompanying text.

The SAF-specific tax credit provisions contained within §§45Z and 40B (hereinafter collectively referred to as the "SAF tax credits") establish separate, higher tax credits for SAF relative to other biofuels that compete for the same feedstock. These provisions do not refer to the GREET model; they do explicitly refer to the more stringent CORSIA model.[8] The provisions in 45Z that apply to *non-SAF* biofuels explicitly instruct the Agency to utilize GREET for purposes of establishing tax credit values for those fuels.[9] Congress was clearly aware of the GREET model's viability as a means of analyzing a fuel's emissions attributes; it nevertheless chose not to refer to GREET but instead to CORSIA in the SAF tax credit provisions.

Although the SAF tax credits do permit SAF to utilize other methodologies that satisfy the criteria under Clean Air Act ("CAA") §211(o)(1)(h), they explicitly require any such methodology to be "similar" to CORSIA.[10] GREET is not "similar" to CORSIA. Were the Agency to allow SAF to utilize the GREET methodology, it would effectively disregard the inclusion of the word "similar" in §45Z(b)(1)(B)(iii). In fact, under such an interpretation, all potentially applicable methodologies that satisfy the CAA §211(o)(1)(h) criteria would be available to SAF. The word "similar" would not alter the statute's meaning or impact. This interpretation of §45Z would run counter to the universally accepted canon of statutory construction that "every word and every provision should be given effect. None should be ignored and none should needlessly be given interpretation that causes it to … have no consequence."[11]

Similarly, §45Z(b)(1)(B)(ii) specifically limits the use of GREET to non-aviation fuel.[12] Applying GREET to aviation fuel as a "similar methodology" under §45(b)(1)(B)(iii) would be directly contrary to that. The IRS does not have the regulatory authority to override the restriction of GREET in paragraph (ii). Doing so would render the limitation in paragraph (ii) meaningless.

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[8] *See* §45Z(b)(1)(B)(iii) and §40B(e).

[9] *See* § 45Z(b)(1)(B)(ii) ("In the case of any transportation fuel which is not a sustainable aviation fuel, the lifecycle greenhouse gas emissions of such fuel shall be based on the most recent determinations under the Greenhouse gases, Regulated Emissions, and Energy use in Transportation model developed by Argonne National Laboratory, or a successor model as determined by the Secretary."; *see also* § 45Z(c)(1)(B) ("The term "lifecycle greenhouse gas emissions" shall only include emissions through the point of production (well-to-gate), as determined under the most recent Greenhouse gases, Regulated Emissions, and Energy use in Transportation model (commonly referred to as the "GREET model") developed by Argonne National Laboratory, or a successor model as determined by the Secretary.")

[10] *Supra* n.8.

[11] Antonin Scalia & Bryan A. Garner, Reading Law (2012) at 174. (Noting the example of the Securities Act of 1933, which defines the term "prospectus" as "any prospectus, notice, circular, advertisement, letter, or communication, written or by radio or television, which offers any security for sale or confirms the sale of any security." If the term "communication" were interpreted to refer to any type of written communication, the limiting words "notice, circular, advertisement, letter" would serve no independent purpose in the statute. However, if "communication" were interpreted to refer to oral statements made through radio or television, then all the words in this section of the statute.") *See Gustafson v. Alloyd Co.*, 513 U.S. 561, 577-78 (1995).

[12] 26 U.S.C. 45Z(B)(1)(B)(ii) ("In the case of any transportation fuel which is not a sustainable aviation fuel, the lifecycle greenhouse gas emissions of such fuel shall be used based on the most recent determinations under the Greenhouse gases, Regulated Emissions, and Energy use in Transportation model developed by Argonne National Laboratory, or a successor model (as determined by the Secretary).")

Congress chose not to refer to GREET when establishing the SAF credits. GREET is explicitly invoked in every other provision of the IRA where credits are provided for renewable fuel.[13] Congress's clear intent was to subject SAF to the more stringent CORSIA model, or any "similarly" stringent model that is consistent with CAA §211(o)(1)(h).

Use of the CORSIA methodology is aligned with the environmental community's position on SAF.[14] It is also consistent with the Biden Administration's broader approach to regulations that govern air travel. The Environmental Protection Agency ("EPA") explained the rationale in a recent rulemaking:

> "Due to the international nature of the aviation industry, there is an advantage to working within ICAO to secure the highest practicable degree of uniformity in international aviation regulations and standards. Uniformity in international aviation regulations and standards is a goal of the Chicago Convention, because it ensures that passengers and the public can expect similar levels of protection for safety and human health and the environment regardless of manufacturer, airline, or point of origin of a flight. Further, it helps reduce barriers in the global aviation market, benefiting both U.S. aircraft engine manufacturers and consumers."[15]

The CORSIA methodology is the only mechanism by which domestic SAF will achieve uniformity with international aviation regulations and standards and align with the Biden Administration's vision for decarbonizing air travel.

ii. *Sale Definition – What factors should the Treasury Department and the IRS consider in determining whether an unrelated person purchases transportation fuel for use in a trade or business for purposes of §45Z(a)(4)(B)? What factors should the Treasury Department and the IRS consider in determining whether fuel is sold at retail for purposes of §45Z(a)(4)(C)?*

For the Clean Fuel Tax Credit scheme to function properly, there must be meaningful guardrails to prevent fraud. The Agency should ensure that fuel producers are unable to run the same molecules through a production process multiple times and receive multiple tax credits for each "run" if ultimately only a single quantity of the underlying fuel is ever sold as a transportation fuel. The Associations have serious concerns that such guardrails may not be put in place within the context of a broader, coherent scheme by 2025. We are eager to work with you to address the various complexities associated with developing these anti-fraud provisions.

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[13] *Supra* n.9.

[14] *See* International Council on Clean Transportation et al., "Crop-Based Biofuels under the Sustainable Aviation Fuel Grand Challenge" *available at* https://theicct.org/wp-content/uploads/2022/06/SAF-Grand-Challenge-crop-based-fuels-letter-vf.pdf. ("In order for sustainable aviation fuels to play a key role in decarbonizing flight, they must have low-cycle emissions and adhere to widely accepted sustainability criteria established by the International Civil Aviation Organization (ICAO)…. [W]e urge the Biden Administration to . . . ensure that any qualifying SAF meet – and is certified to comply with – ICAO's Sustainability Criteria for CORSIA Eligible Fuels and other relevant traceability requirements.")

[15] *See* Environmental Protection Agency, "Control of Air Pollution From Aircraft Engines: Emission Standards and Test Procedures," 87 FR 72312, (November 23, 2022); *available at* https://www.govinfo.gov/content/pkg/FR-2022-11-23/pdf/2022-25134.pdf

iii. *Coordinating Rules. Section 45Z(f)(4) states that under regulations prescribed by the Secretary, rules similar to the rules of § 52(d) apply in the case of estates and trusts. Section 45Z(f)(5) states that rules similar to § 45Y(g)(6) apply to patrons of agricultural cooperatives. Section 45Z(f)(6)(A) states that rules similar to the rules of § 45(b)(7) apply for the prevailing wage requirement. Section 45Z(f)(7) states that rules similar to the rules of § 45(b)(8) apply for the apprenticeship requirement. Is the application of the cross-referenced rules for purposes of the § 45Z credit adequately clear? What aspects of the cross-referenced rules should apply to the § 45Z credit without modification and what aspects should be modified?*

The Clean Fuel Credit scheme outlined in §45Z entails a materially heightened level of complexity and expense associated with introducing renewable fuel into commerce relative to current tax and incentive regimes. The Agency's above question is evidence of such complexity. The Associations' members are reviewing this question, but do not have sufficient input to provide at this time. We will contact the Agency to provide a supplemental response to this question in the coming weeks.[16]

iv. *Multiple Owners. How should production from a qualifying facility with more than one person having an ownership interest in such facility be allocated to such persons for purposes of §45Z(f)(2)? Should rules similar to the rules under § 45(e)(3) apply for this purpose? If so, which aspects of § 45(e)(3) should apply without modification for this purpose and which aspects should be modified?*

As a general matter, facility owners should be able to decide how the tax credit should be allocated within the ownership structure.

B. Section 45V, Clean Hydrogen Production Credit

Many of the Associations' members – particularly those with highway locations that service heavy duty commercial trucks – are actively expanding their hydrogen capabilities. At least in the heavy duty space, the commercial opportunities in hydrogen are more crystallized and compelling than other so-called "zero emission" fuel technologies.

Unlike light duty electric vehicle purchases, which can be motivated by non-pecuniary concerns, commercial decisions to invest in heavy duty vehicles will be grounded in economics. Businesses will not buy hydrogen vehicles at scale unless the cost of doing so is less than the lifetime costs of diesel trucks. Minimizing fuel costs should therefore be an essential element of hydrogen policy.

Incorporating hydrogen into the nation's suite of clean energy would leverage existing energy infrastructure to help decarbonize transportation fuel. Hydrogen is flexible and can utilize many pathways and energy sources for application. A critical missing component is carbon intensity accounting as an enabler for market signals.

[16] *See generally* IRS RFI, *supra* n.2 ("Consideration will be given, however, to any written comment submitted after December 3, 2022, if such consideration will not delay the issuance of guidance.")

The Associations' members have ample experience responding to those signals and leveraging government incentives – including tax incentives – to lower the price commercial fleets pay for fuel, while simultaneously displacing petroleum-based fuel with more environmentally attractive alternatives. Our comments below apply to hydrogen the lessons we've learned through that experience.

i) *Section 45V defines "lifecycle greenhouse gas emissions" to "only include emissions through the point of production (well-to-gate)." Which specific steps and emissions should be included within the well-to-gate system boundary for clean hydrogen produced from various sources?*

Renewable power that is purchased to produce or liquefy hydrogen should qualify and be permitted to improve the carbon content of the hydrogen that is produced. Procuring "renewable energy credits" ("RECs") is another way to accomplish this, so long as there is no double-counting of RECs within power markets.

ii) *How should qualified clean hydrogen production processes be required to verify the delivery of energy inputs that would be required to meet the estimated lifecycle greenhouse gas emissions rate as determined using the GREET model or other tools if used to supplement GREET?*

Power purchase contracts or the verified purchase of RECs could facilitate such verification. There should be protocols that outline best practices in data reporting, monitoring, verifying, tracking, and traceability. These protocols should be written in concert with industry. It is likely to require novel equipment and reporting guidelines. Care must be taken to guard against double-counting and fraud.

Production facilities may not always be located adjacent to renewable sources of energy. Companies currently are capable of calculating the carbon intensity of electricity being sent to the facility at every moment and can ensure that the power is carbon-free. Embedding these capabilities within §45V will enable hydrogen production facilities to operate on carbon-free power throughout the day (even when the wind is not blowing and the sun is not shining). Facilities should be permitted to invest in and utilize market structures to source carbon-free power.

If there is any ambiguity about the prospect of "wheeling" power in this way for clean hydrogen production, it may restrict the location of qualifying hydrogen production plants to be adjacent to or behind the meter of a clean power plant. Geographically this would be limiting. The ability to freely wheel the power to where it is needed provides the flexibility required to site large scale clean hydrogen production. This would not avoid transmission charges associated with the wheeling, but would nevertheless clarify the connection and application of the credit and leave the economic decision to the parties.

iii) *How should lifecycle greenhouse gas emissions be allocated to co-products from the clean hydrogen production process? For example, a clean hydrogen producer may valorize steam, electricity, elemental carbon, or oxygen produced alongside clean hydrogen.*

If the benefits are quantifiable, those benefits should be embedded in the underlying value of the finished fuel. As federal and state policies evolve, the government and private industry's ability to quantify and apply such benefits will be increasingly important. The final approach should be suitable for evaluating facility-level analysis, and be harmonized and consistent with stakeholder buy-in.

iv) *How should lifecycle greenhouse gas emissions be allocated to clean hydrogen that is a by-product of industrial processes, such as in chlor-alkali production or petrochemical cracking?*

It should be a lifecycle, well-to-gate analysis. Methodological choices can greatly influence emissions results. Consistency in methodology is necessary. Stakeholder engagement is key.

Thank you for the opportunity to provide these comments. We look forward to working with you on these important issues.

Sincerely,

David H. Fialkov
Executive Vice President, Government Affairs
NATSO, Representing America's Travel Centers and Truck Stops
SIGMA: America's Leading Fuel Marketers