nacero
the new gasoline

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SUBMITTED VIA FEDERAL RULEMAKING PORTAL

Internal Revenue Service
CC:PA:LPD:PR (Notice 2022-58)
Room 5203
P.O. Box 7604, Ben Franklin Station
Washington, D.C. 20044

> **RE:** **Notice 2022-58 Request for Comments on Credits for Clean Hydrogen and Clean Fuel Production**

Dear Sir or Madam:

Nacero Inc. ("Nacero") appreciates the opportunity to submit the following comments in response to the Internal Revenue Service's ("IRS") Notice 2022-58, Request for Comments on Credits for Clean Hydrogen and Clean Fuel Production.

Our comments relate to (1) the use of the Greenhouse gases, Regulated Emissions, and Energy use in Transportation ("GREET") model for lifecycle greenhouse gas ("GHG") emissions computations of sustainable aviation fuel ("SAF"), (2) ensuring that the methodology for determining a taxpayer's SAF emissions rate is flexible and takes into account taxpayer-specific facts and circumstances, and (3) allowing a book and claim system to reduce a taxpayer's effective GHG emissions.

I.   Background

Nacero is developing large-scale facilities that will make zero sulfur SAF from natural gas and renewable natural gas ("RNG") with 100% renewable power and pre and post combustion carbon capture. By avoiding the supply, delivery, and food vs. fuel limitations of current SAF feedstocks, Nacero's facilities will materially increase the likelihood that the United States will meet its 2030 and 2050 SAF goals. Nacero's shovel ready, Penwell, Texas facility alone could supply 15% of the 2030 goal. Additional benefits include the estimated 50 million hours of construction labor needed to build facilities the size of Penwell, the 1 million hours per year of labor needed to operate them, the forecast $25 billion economic boost for the region that hosts them, and the reduced reliance on foreign oil that results from the use of a 100% domestic, non-petroleum feedstock.

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II. The GREET Model is a similar methodology to the CORSIA model that satisfies the criteria under section 211(o)(1)(H) of the Clean Air Act and should be available for determining lifecycle GHG emissions of SAF.

Sections 13203 and 13704 of the IRA provide two new tax credits for SAF – new sections 40B and 45Z of the Internal Revenue Code ("Code"), respectively – that are predicated on the reduction of GHG emissions. Under both new credits, lifecycle GHG emissions of SAF may be determined under (1) the Carbon Offsetting and Reduction Scheme for International Aviation ("CORSIA") model or (2) any similar method that satisfies the criteria under section 211(o)(1)(H) of the Clean Air Act (42 U.S.C. 7545(o)(1)(H)), as in effect on the date of enactment of the IRA.[1] For the reasons outlined below, the GREET model satisfies the statutory requirements for both Code section 40B and 45Z, but also provides a superior alternative to the CORSIA model in many respects.

The Environmental Protection Agency ("EPA") has developed rules for measuring GHG emissions of transportation fuels based on a life-cycle analysis of such fuels.[2] To effectuate these rules, the EPA adopted the GREET model,[3] developed by the Argonne National Laboratory, to calculate life-cycle GHG emissions of transportation fuels as a method that meets the criteria under section 211(o)(1)(H) of the Clean Air Act.[4] Accordingly, the EPA's acceptance of the GREET model demonstrates that it satisfies the criteria under section 211(o)(1)(H) of the Clean Air Act, thereby meeting the alternative standard to the CORSIA model for purposes of Code sections 40B and 45Z.

In looking at a variety of models and data sources to estimate landfill emissions, the EPA considered the GREET model, CORSIA model, and EPA Waste Reduction Model ("WARM").[5] While noting that the models differ in their default assumptions and can be applied for different purposes, the EPA found that these models and methodologies "*have many similarities,*"[6] thereby supporting the similarity in methodology requirement for GREET to be treated as an alternative standard for establishing the GHG emissions rate under Code section 40B and 45Z.

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[1] I.R.C. § 40B(e)(2); *id.* § 45Z(b)(1)(B)(iii)(II). While new Code section 40B is scheduled to expire at the end of 2024, the same emissions-reduction methodologies will continue to apply under new Code section 45Z beginning in 2025.

[2] In re Gas Co., LLC, 465 P.3d 633, 652 (Haw. 2020) (citing Clean Air Act § 211(o), 42 U.S.C. § 7545(o)(1)(H)).

[3] *GREET Model*, U.S. Dep't of Energy (2022), https://greet.es.anl.gov/ (last visited Dec. 2, 2022).

[4] In re Gas Co., LLC, 465 P.3d at 652 (citing Regulation of Fuels and Fuel Additives: Renewable Fuel Standard Program ("RFS"), 72 Fed. Reg. 23900, 23907 (May 1, 2007) (codified at 40 C.F.R. pt. 80)) (explaining how the EPA utilized GREET in calculating life-cycle GHG emissions for its RFS Program).

[5] Renewable Fuel Standard (RFS) Program: RFS Annual Rules, 86 Fed. Reg. 72436-01 (Dec. 21, 2021).

[6] *Id.*(emphasis added).

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Not only does the GREET model meet the statutory requirements as an alternative emissions-rate computation methodology, but also produces a superior measure of GHG emissions. For example, unlike CORSIA, the GREET model takes into account factors like better land management, which is a critical climate tool through which innovative practices in regenerative agriculture are now used to keep more carbon sequestered in the soil. In addition, the GREET model also accounts for natural and mechanical carbon capture and sequestration to prevent carbon emissions into the atmosphere. By taking these factors into account, the GREET model provides a more comprehensive assessment of the fuel's overall impact on GHG emissions.

Eligibility for the new credits under Code sections 40B and 45Z, as well as the amount of each credit, is tied to a fuel's lifecycle GHG emissions, as determined through a lifecycle analysis. This structure for both credits demonstrates Congress' intent that the production of SAF minimize the associated GHG emissions with resulting tax credit reflecting the full lifecycle reduction in such emissions. Accordingly, an accurate, complete, and consistent measurement is essential to the effectiveness of the credits as well as achieving the IRA's climate objectives.

As the credits for SAF production are scheduled to transition from Code section 40B to section 45Z in 2025, taxpayers would benefit from a consistent application of the GREET model as an alternative methodology under both provisions. Moreover, a consistent approach would reduce administrative and compliance burdens within Code section 45Z itself, especially where a taxpayer produces both aviation and non-aviation fuels. Code section 45Z(b)(1)(B)(ii) specifically calls for the emissions rate for non-aviation fuels to be determined under the GREET model, while clause (iii) allows for an alternative to the CORSIA model to be applied to determine the rate for aviation fuel, as discussed above. It makes little sense for taxpayers to have to apply different GHG-emissions methodologies simply because fuels are produced for different purposes when a single methodology can accurately assess the emissions rates. The alternative allowed under 45Z(b)(1)(B)(iii)(II) provides an opportunity for the GREET model to be applied consistently, thereby reducing compliance burdens.

For the foregoing reasons, we request that Treasury and the IRS designate the GREET model as a qualifying and similar methodology to the CORSIA model for purposes of determining the GHG-emissions rate under Code sections 40B(e)(2) and 45Z(b)(1)(B)(iii)(II).

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III.   The methodology for determining a Taxpayer's emissions rate should be flexible and take into account facts and circumstances relevant to each taxpayer.

The clean-fuels credit under Code section 40B is based on a taxpayer's determination that its fuel meets the lifecycle GHG emissions-reduction percentage, subject to the registration and third-party compliance verification requirements in subsection (f). As such, Code section 40B largely adheres to the traditional approach of each taxpayer determining its qualification and claiming the credit on an annual tax return, subject to IRS review on audit.

In contrast, Code section 45Z requires the Secretary to publish annually a table that sets forth the emissions rate for similar types and categories of transportation fuels based on the amount of lifecycle GHG emissions. The provision modifies the general rule in the case of non-aviation and aviation fuels, as discussed above, with the latter being determined based on either the CORSIA method or a similar methodology satisfying the criteria under section 211(o)(1)(H) of the Clean Air Act.[7] In the case of a transportation fuel for which an emissions rate has not been published, a taxpayer may file a petition with the Secretary for determination of the emissions rate with respect to such fuel.[8]

The tech-neutral provisions in the IRA demonstrate Congress' intent, in line with President Biden's overall climate goals, to work towards a country that is carbon-free with net-zero emissions.[9] In keeping with that intent, Treasury and the IRS should ensure that taxpayers are incentivized through the clean-fuels credits to apply GHG-reduction practices across their fuel's complete lifecycle, in order to achieve the IRA's emission-reduction goals. This is particularly important in the context of the new clean-fuels provisions and the transition from Code section 40B to Code section 45Z.

Taxpayers, however, are unlikely to take steps to reduce GHG emissions for inputs and processes that are not measured and taken into account. For example, the lifecycle emissions of an electric vehicle (EV) need to take into account the climate impact of battery (and battery component) production, use and disposal.[10]

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[7] I.R.C. § 45Z(b)(1)(B)(i).

[8] I.R.C. § 45Z(b)(1)(D).

[9] *FACT SHEET: President Biden Sets 2030 Greenhouse Gas Pollution Reduction Target Aimed at Creating Good-Paying Union Jobs and Securing U.S. Leadership on Clean Energy Technologies*, The White House (Apr. 22, 2021), https://www.whitehouse.gov/briefing-room/statements-releases/2021/04/22/fact-sheet-president-biden-sets-2030-greenhouse-gas-pollution-reduction-target-aimed-at-creating-good-paying-union-jobs-and-securing-u-s-leadership-on-clean-energy-technologies/ (last visited Dec. 2, 2022).

[10] *Alternative Fuels Data Center*, U.S. Department of Energy (2022), https://afdc.energy.gov/vehicles/electric_emissions.html (last visited Dec. 2, 2022); *see also Environmental Life*

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The table of annual values referred to in Code section 45Z(b)(1)(B)(i) suggests a one-size-fits-all approach for taxpayers producing fuel based on a listed feedstock, with no incentive value for taxpayer-specific investments in emission-reduction technology or other processes. As a result, a taxpayer that uses conventional natural gas as a feedstock to create SAF would end up with the same score as a taxpayer who uses environmentally more beneficial avoided flare gas. Taxpayers may have very different well-to-gate arrangements for acquiring feedstock and other inputs as well as for producing their fuels, and these differences should be taken into account.

An alternative approach, consistent with the phrase "[s]ubject to clauses (ii) and (iii)" at the outset of Code section 45Z(b)(1)(B)(i), would be to treat the required table as a safe harbor, with taxpayers permitted to demonstrate under the CORSIA model or another similar methodology (preferably the GREET model, as discussed above) that their particular production process and overall fuel lifecycle analysis achieves a lower emission rate. Such an approach would also be consistent with the provision in Code section 45Z(b)(1)(D) that allows taxpayers to apply for a provisional emissions rate since the taxpayer would be demonstrating that its specific fuel is different from, and therefore not included in, the table to be provided under the general rule.

For such a taxpayer-specific approach to maximize the incentive value of the clean-fuels production credit, fuel producers must be permitted to factor into the applicable GHG-emissions model the inputs and processes particular to the taxpayer applying the model. For example, rather than using national average for electricity inputs, taxpayers should have the flexibility in the model to include their specific sources such as on-site wind or solar or offsetting credits purchases through available book-and-claim systems. Similarly, a taxpayer should be permitted to reflect other factors like carbon-capture in the lifecycle analysis for its specific clean fuel to produce an accurate, complete, and consistent measurement of that fuel. The resulting credit would then reflect the specific incentive value for the enhanced GHG-emissions reductions.

While the details of and standards applicable to the petition process are not statutorily defined, it should be designed in an efficient manner that provides taxpayers with the flexibility to account for their innovative processes while not overburdening the IRS with additional compliance responsibilities. In effect, such a process is inherently part of the registration requirement under Code section 4101 for clean-fuels producers claiming the credits under either Code sections 40B[11] or 45Z[12] with the certification to be provided by a third-party compliance validator.

Cycle Impacts of Automotive Batteries Based on a Literature Review, Institute for Climate, Energy and Society (2022), https://www.mdpi.com/1996-1073/13/23/6345 (last visited Dec. 2, 2022).

[11] I.R.C. § 40B(f).

[12] I.R.C. § 45Z(f)(1)(A).

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The IRA was designed to encourage the reduction of carbon and GHG emissions, so the framework cannot simply be made on an apples-to-apples basis that assumes that all fuels produced from a particular feedstock are the same or taxpayers will not adopt additional carbon- and emissions-reduction processes and new technologies in their production methods.

IV.   A book and claim system should be permitted to allow a reduction in a taxpayer's effective GHG emissions.

In line with having flexibility methodologies for determining an SAF's emissions rate to take into account facts and circumstances relevant to each taxpayer, a book and claim system should be permitted to allow a reduction in a taxpayer's effective GHG emissions. This is consistent with Congressional intent, as evidenced by the statements of Senators Wyden and Carper,[13] and also properly incentives companies for reducing emissions through indirect book accounting methods. Nacero expects to use significant amounts of RNG as a feedstock to make SAF (which has a D-3 RINS code and reduces GHG emissions by at least 60 percent),[14] but the ability for it to use a book and claim system is necessary to make the production of SAF economical. This would add the needed certainty as to the economics of the SAF credit and would encourage a nationwide market for cleaner feedstock.

To verify any GHG emission reductions pursuant to a book and claim system, it is recommended that Treasury establish accounting and documentation rules so that taxpayers maintain sufficient evidence of their claimed GHG emission reductions.

V.   Conclusion

Thank you for considering Nacero's views and recommendations. If you have any questions or would like to discuss the forgoing in greater detail, please do not hesitate to contact Tom Tureen at tnt@nacero.co.

Sincerely,

/*Tom Tureen*/
Thomas N. Tureen
Chairman

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[13] 168 Cong. Rec. S4165-03, S4166.
[14] 40 C.F.R. § 80.1426, Table 1 Line M.