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December 3, 2022

*Submitted via the Federal eRulemaking Portal at [www.regulations.gov](http://www.regulations.gov)*

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

Air Company appreciates the opportunity to respond to the US Department of the Treasury (“Treasury”) and the Internal Revenue Service (IRS) consultation on Credits for Clean Hydrogen and Clean Fuel Production. Air Company is the world’s leading carbon dioxide (CO<sub>2</sub>) utilization company, creating consumer and industrial products from CO<sub>2</sub>. Using carbon-free electricity to power our process, our systems convert CO<sub>2</sub> into valuable products such as sustainable aviation fuel (SAF), e-ethanol, and e-methanol.

**Power-to-Liquids SAF**

SAF is non-conventionally derived aviation fuel that can be made from either biogenic sources (e.g., SAF made from biological sources such as used cooking oils, plant oils) or from non-biological sources otherwise referred to as power-to-liquid (PtL) ‘eFuels’ or ‘synthetic fuels’. The PtL pathway utilizes CO<sub>2</sub> and hydrogen (produced through the use of renewable electricity) to synthesize a liquid fuel with favorable sustainability characteristics. Our pathway to produce SAF is through the PtL pathway as it converts electricity and CO<sub>2</sub> into a liquid hydrocarbon fuel that can be used instead of legacy fossil-based jet fuel (i.e., Jet A1). PtL SAF is considered a ‘drop-in’ fuel that utilizes existing supply chains, fueling infrastructure, and aircraft engines. We are proud to have established a partnership with the United States Air Force, with whom we completed a first-of-its-kind unmanned flight using our 100% unblended, drop-in CO<sub>2</sub>-derived PtL SAF.

**Importance of SAF for US GHG Emissions Reduction Goals**

For a hard-to-abate sector like aviation, there are not readily available technology alternatives to reduce GHG emissions, such as electric aircraft or hydrogen propulsion aircraft. It is widely accepted by the industry that medium to long-haul flying will be decarbonized through the scaling of production and increased use of SAF. PtL SAF offers unique environmental benefits not only when compared to jet fuel but also when compared to other SAFs derived from biological sources. PtL SAF harnesses renewable electricity which enables the pathway to achieve deep GHG emissions reductions on a lifecycle basis. PtL SAF produced from renewable electricity can reduce emissions on a lifecycle basis by up to 90% compared to fossil fuels (and in some cases greater than 90%). In addition to the reduction of total lifecycle CO<sub>2</sub> emissions, SAF reduces direct emissions: particulate matter by up to 90% and sulfur by 100%, compared with conventional jet fuel. PtL SAF pathway has unlimited potential for growth as long as producers can access renewable/emissions-free electricity for production of hydrogen and CO<sub>2</sub>. We believe that PtL SAF industry has an untapped growth potential in the United States, as long as producers can access necessary feedstocks at reasonable rates. The European Union has already recognized PtL opportunities (e.g., Norsk e-Fuel, German \$1.8 billion PtL fund), and the Inflation Reduction Act (IRA) tax credits have the potential to scale up the PtL industry in the US as well to secure its competitive advantage.

## Importance of IRA to PtL Producers

As in any innovative, pre-commercial process, production and associated supply chain costs of our renewables-powered industrial products are higher than for fossil fuel-based incumbents. Hydrogen produced via electrolysis is a critical step of our process, and we commend the passage of the hydrogen production tax credit (45V). We offer our comments in this letter with the focus on production of clean hydrogen from carbon-free electricity sources such as renewable energy and nuclear. CO<sub>2</sub> is another critical feedstock used as an input in our carbon conversion reactor, where it is combined with clean hydrogen to produce liquid fuel - PtL derived SAF. Therefore, multiple tax credits are relevant to our process in addition to 45V, namely the clean fuel production credit (45Z) for SAF and credit for carbon oxide sequestration (45Q). These tax credits can play a significant role in commercializing our products faster, displacing fossil fuel-based products sooner, and accelerating the reduction of US GHG emissions in line with the 1.5-degree global ambition.

With this comment letter, our intent is to work with the Treasury to ensure that these tax credits are implemented in a manner consistent with the intent of Congress and the Biden Administration to scale production of clean hydrogen and SAF in the US. There is also a need to increase the number of facilities capturing CO<sub>2</sub> in order to scale PtL SAF production utilizing the most innovative and cleanest technology pathways. We believe it is crucial for the IRS and the Treasury to implement the aforementioned tax credits in a manner that will offer comprehensive support to emerging clean energy technologies and its associated feedstocks/energy inputs. We welcome continued engagement on these topics and thank the Treasury and the IRS for this opportunity to provide input.

## About Air Company

In September 2022, Air Company announced the launch of our SAF produced via a cutting-edge PtL process. The importance of this innovative climate technology is underscored by commitments from global aviation partners to purchase over one billion gallons of AIRMADE SAF, including JetBlue, Virgin Atlantic, and Boom Supersonic.

Since 2017, we have been developing advanced catalytic hydrogenation reactor technology for CO<sub>2</sub> conversion with the goal to achieve world-scale production of sustainable commodity chemicals and fuels. Our thermochemical catalytic conversion process is inspired by and mimics photosynthesis but operates at a much higher rate to convert waste CO<sub>2</sub> coupled with hydrogen to derive sustainable chemicals (e.g., e-ethanol, e-methanol) and transportation fuels (e.g., SAF). Our entire product slate has a net-negative or net-neutral CO<sub>2</sub> footprint, depending on the product. While many other related processes often rely on multiple upstream unit operations and reactors in order to target the same products, Air Company's process is a single-step thermochemical conversion process that utilizes a novel family of proprietary heterogeneous catalysts. Air Company's catalyst composition and process technology have already been granted 2 patents with over 10 pending patent applications.

In 2021, we deployed our CO<sub>2</sub> hydrogenation technology at a pilot scale, and we are working to advance our solution to achieve commercial scale. In short, our production process includes the following key steps:

- Procurement and Utilization of Captured Industrial CO<sub>2</sub>: The CO<sub>2</sub> used in our production is captured and sourced from industrial plants.
- Electrolysis (hydrogen production): The green hydrogen used in our process is supplied through on-site water electrolysis using renewable energy. Our electrolyzer splits water (H<sub>2</sub>O) into hydrogen (H<sub>2</sub>) and oxygen (O<sub>2</sub>). The hydrogen gas is fed into our Carbon Conversion Reactor (with the captured CO<sub>2</sub>).
- Hydrogenation (CO<sub>2</sub> conversion): Our patented and proprietary Carbon Conversion Reactor (CCR) system is a packed-bed flow system where CO<sub>2</sub> is hydrogenated with green hydrogen (H<sub>2</sub>) and converted to sustainable chemicals and fuels.
- Distillation/Fractionation: Our distillation process separates the components of the two-phase reactor liquid effluent composed of normal paraffins and alcohols, namely ethanol, methanol, and water. The normal paraffins are further separated to fuel range hydrocarbons using traditional downstream fractionation methods.
- Further Refinement & Product Blending: As an additional downstream hydrocarbon process option, alcohols can be further upgraded, refined and blended into SAF.

Given the multi-stage production process (including production of hydrogen as feedstock for our process) that employs cutting-edge clean energy solutions, multiple tax credits are relevant to our process and applicable to separate process trains. Our comments below intend to clarify our eligibility for multiple tax credits, as well as provide input on several specific questions included in the RFI.

## 1. Coordination with 45Q

### a. *Coordination of Tax Credits Between CO<sub>2</sub> Capturing Facilities and CO<sub>2</sub> Offtakers.*

As a leading carbon conversion PtL company producing SAF for a hard to abate sector like aviation, we require clean hydrogen and CO<sub>2</sub> as feedstocks to manufacture our products. Access to these feedstocks, currently still scarcely and unevenly available across the country for a variety of reasons, is our priority. We currently do not operate our own carbon capture equipment and instead obtain CO<sub>2</sub> from a third party. Anthropogenic/industrial CO<sub>2</sub> procurement opportunities in the US are limited to few industrial and biogenic facilities capturing CO<sub>2</sub>, and such availability can vary by region. Delivering CO<sub>2</sub> to the CO<sub>2</sub> conversion facility is also challenging due to the limited availability of CO<sub>2</sub> pipeline infrastructure in the US and the high cost of other modes of CO<sub>2</sub> transportation.

These factors may result in high prices for CO<sub>2</sub> in some regions of the US where these constraints are particularly severe. This presents a challenge for CO<sub>2</sub> utilization companies that produce useful, but still niche and pre-commercial, products from CO<sub>2</sub>. CO<sub>2</sub> utilization industry (aside from the enhanced oil recovery industry which is never implied in this comment letter), when scaled, offers opportunities to reduce the amount of CO<sub>2</sub> emitted into the atmosphere, provide market demand for CO<sub>2</sub> capture, drive the displacement of legacy fossil fuel-based products, and help drive carbon removal if coupled with direct air capture (DAC). The availability of the 45Q incentive to CO<sub>2</sub> suppliers (i.e., facilities capturing CO<sub>2</sub>) is critical to scaling up CO<sub>2</sub> capture across the country, as well as to scaling the CO<sub>2</sub> utilization industry as the tax credit helps improve the availability of CO<sub>2</sub> on the market for CO<sub>2</sub> offtakers.

We believe that the legislative language would allow a CO<sub>2</sub> supplier that operates carbon capture equipment at its independent facility to claim the 45Q tax credit to offset the costs associated with installation and operation of carbon capture equipment, as well as with

transportation of CO<sub>2</sub>, while their CO<sub>2</sub> offtaker such as a CO<sub>2</sub> utilization company can claim the 45V tax credit for production of qualified green hydrogen – a process unrelated to CO<sub>2</sub> capture. However, **we request that the IRS makes a declarative statement that such an arrangement is acceptable, stating that a CO<sub>2</sub> utilization company that also produces hydrogen can be eligible for 45V while its CO<sub>2</sub> supplier, connected to the CO<sub>2</sub> utilization company via CO<sub>2</sub> utilization contract, is eligible to claim 45Q.**

The IRS should recognize instances when the capture facility and the CO<sub>2</sub> utilization facility might be co-located out of necessity to address the lack of CO<sub>2</sub> transportation infrastructure. We request that the IRS clarifies that independent industrial facilities, one of which performs CO<sub>2</sub> capture and another serves as a CO<sub>2</sub> off-taker, that might be located in the same geographical area and have a CO<sub>2</sub> offtake agreement in place but are owned and operated by separate companies and file taxes separately should *not* be treated as a single facility and should be eligible for separately claiming the 45Q tax credit (for the capturing facility) and 45V tax credit (for the CO<sub>2</sub> conversion facility).

Allowing CO<sub>2</sub> off-takers to claim the hydrogen production tax credit for a separate process unrelated to CO<sub>2</sub>, while its CO<sub>2</sub> supplier claims 45Q for CO<sub>2</sub> capture and utilization, is essential for the growth and commercialization of the PtL industry in the US. Should the IRS prohibit such an arrangement between independent parties and prohibit such business partners to *separately* claim applicable tax credits can also stifle the growth of the CO<sub>2</sub> point-source capture and DAC industries, counter to the US climate goals. Therefore, we request that the IRS clarifies that facilities eligible for claiming 45V for production of qualified hydrogen can be part of contracts and projects with CO<sub>2</sub> capturing facilities eligible for 45Q, regardless of whether such facilities are located in the same geographical area (co-located) or not.

Furthermore, for the purposes of all tax credits discussed in this letter, we recommend that the Treasury defines “facility” narrowly as the unit with relevant eligible equipment - whether it is carbon capture or direct air capture equipment unit, electrolyzer for production of green hydrogen, or carbon conversion unit for production of SAF.

*b. Power-to-Liquids Projects Relying on Hydrogen as Feedstock Should be Eligible for 45Q and 45V Tax Credits in Case of DAC.*

It is our interpretation that the language included under the IRA 45V that states “No credit shall be allowed under section 45V or section 45Q for any taxable year with respect to any specified clean hydrogen production facility or any carbon capture equipment included at such facility” was intended to deny the double benefit to “blue” hydrogen producers that use the steam methane reforming (SMR) process to produce hydrogen and subsequently capture CO<sub>2</sub> emissions as part of the same process. We will not provide comments on whether there are instances for a “blue” hydrogen producer to be able to claim both tax credits as we do not engage in “blue” hydrogen production at our facilities. However, this language raises concerns for PtL producers that manufacture useful products from two independent feedstocks – clean hydrogen (i.e., hydrogen produced via electrolysis of water powered by renewable or nuclear energy) and CO<sub>2</sub> – that are part of separate unrelated process trains. Should a PtL facility identify an opportunity to install and operate a carbon removal technology (e.g., direct air capture unit) on site where clean hydrogen is also produced, such as facility should be eligible for and allowed to claim both the 45Q tax credit for the DAC unit and the 45V tax credit for its

electrolyzer unit producing hydrogen as the two processes are independent of each other and relate to separate processes.

For example, we rely on CO<sub>2</sub> and clean hydrogen to produce PtL SAF, and, technically, we have an option to either procure those feedstocks from a third party or integrate feedstock production/generation. Procuring hydrogen from a third-party faces hydrogen transportation and storage challenges, not to mention the scarcity of clean hydrogen in the US at this time. For these reasons, it may be more practicable to produce clean hydrogen onsite from clean electricity, and that hydrogen will subsequently serve as a feedstock for production of PtL SAF. Meanwhile, it is currently more practicable to obtain CO<sub>2</sub> from a third party (on a post capture, compressed, and pressurized basis). However, as the cost of DAC comes down over time, it may become prudent for a PtL producer to install DAC equipment onsite to secure and control the CO<sub>2</sub> supply. However, the inability to claim both 45Q and 45V for the same project (if it is treated as the same facility), in this case, would undermine such arrangements and create an environment prone to inefficiencies where, for example, a CO<sub>2</sub> offtaker would be forced to always obtain CO<sub>2</sub> from a third party, restricting where facilities can be located due to infrastructure constraints and geographical limitations, introducing the challenging and less efficient CO<sub>2</sub> transportation component, not to mention the potential for stifling the development of the DAC industry.

IRA recognizes the importance of feedstocks necessary for clean hydrogen production and indicates that a hydrogen production facility may choose to install its own power generation to ensure electricity supply, which is evident in the sub-section titled “Credit for Electricity Produced From Renewable Resources Allowed If Electricity Is Used To Produce Clean Hydrogen”. This subsection of the IRA allows a facility to claim both the hydrogen production tax credit and an investment or production tax credit for renewable electricity even if both are owned by the same taxpayer (and, presumably, are co-located). This subsection points to the recognition that emerging technologies/industries face unique challenges associated with their supply chains and feedstocks, and the government support is needed throughout the supply chain to help scale up new industries, particularly those helping to decarbonize hard-to-abate sectors. For PtL producers such as Air Company, the challenge with obtaining CO<sub>2</sub> as a feedstock is akin to the electricity procurement challenge for green hydrogen production. We request that the IRS considers allowing facilities that own/operate DAC and produce clean hydrogen to be eligible for 45Q and 45V tax credits.

## **2. Coordination of 45V with 45Z**

IRA states the clean fuel production credit (45Z) does not apply to facilities for which the credit for production of clean hydrogen under section 45V is allowed. It is our understanding that this provision was developed to ensure that a facility that produces hydrogen as transportation fuel is not eligible for two tax credits for the same process and the same output. However, this language, unless clarified by the IRS, will inadvertently disadvantage PtL producers that generate clean hydrogen onsite that serves as a feedstock/input into the carbon conversion reactor, such as the one used by Air Company, to produce PtL SAF. In this particular instance, hydrogen is a feedstock and PtL SAF is an output. Each process – electrolyzation of water with clean electricity to produce hydrogen and carbon conversion combining hydrogen and CO<sub>2</sub> to produce SAF – relies on independent, high-CAPEX pieces of equipment, and is separate from one another (e.g., the two processes can be performed in different geographic locations). Therefore, we ask the IRS to clarify that in such instance – where hydrogen serves as a

feedstock and not the final product going to the market for the purposes of 45Z – a facility can be eligible for claiming both 45V and 45Z.

This recognition is critical for producers of SAF using hydrogen as a feedstock, not as the type of final transportation fuel. Notably, as referenced above, the IRA legislative language recognizes that a facility can be eligible to claim tax credits applicable to both feedstocks and outputs, as indicated by the compatibility of 45V with renewable electricity production tax credit. Therefore, we request that the IRS clarifies that for processes such as PtL where hydrogen is used as a feedstock and not an output, a facility can be eligible for both the hydrogen production tax credit (45V) for its hydrogen production and clean fuel production tax credit (45Z) for PtL SAF production.

Additionally, and as noted above, the Treasury should consider defining a “facility” narrowly as the unit with relevant equipment that has its own independent outputs - whether it is carbon capture or DAC equipment unit, electrolyzer for production of green hydrogen, or carbon conversion unit for production of PtL SAF.

### **3. LCA Boundary.**

- a. *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 production from various resources?*

When defining the LCA boundary for clean hydrogen production via electrolysis, it is important to go back to the source of any material and energy inputs. The main input for hydrogen production via electrolysis is electricity, hence electricity source should be included in the boundary. Different electricity sources have varying associated GHG emissions and therefore including it in the boundary is important. For hydrogen produced via water electrolysis, the gate ends with the gaseous hydrogen product. The reason the gate should end there and not farther downstream is the different scenarios for the gaseous hydrogen product. While some “green” hydrogen producers may compress the hydrogen, store it, and sell it as a product, other producers may compress and feed it directly into another production process. The emissions associated with compression and storage or compression and transportation to another production process should be accounted for at a further gate, and should not be included in the LCA boundary for the purposes of 45V, which aligns with the proposed Clean Hydrogen Fuel Standard. For example, if the gaseous hydrogen is compressed and utilized in Fischer-Tropsch fuel production pathway, the compression and transportation emissions should be accounted for under the fuel life cycle.

### **4. Hydrogen Production Verification.**

- a. *If a taxpayer serves as both the clean hydrogen producer and the clean hydrogen user, rather than selling to an intermediary third party, what verification process should be put in place (for example, amount of clean hydrogen utilized and guarantee of emissions or use of clean electricity) to demonstrate that the production of clean hydrogen meets the requirements for the § 45V credit?*

We recommend annual third-party verification to confirm the amount of hydrogen produced at the facility. This can be verified through the measurement of mass flow rate of hydrogen leaving

the product stream of the electrolyzer during normal operation conditions. Then the total amount of hydrogen produced can be determined based on the operation time.

#### **5. Electricity Supply and Verification.**

- a. *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?*

For electricity delivery (delivery of energy inputs for hydrogen production via electrolysis), we recommend flexible verification options including:

- Contracting under a power purchase agreements (PPA), both physical and virtual;
- Purchasing electricity from the grid through a retail contract (applicable where the grid has high renewable penetration);
- Purchasing of renewable energy certificates (RECs); and/or
- Behind-the-meter electricity supply contract for on-site electricity generation.

Each of the above are well-established electricity procurement pathways with either (1) verifiable certification programs (central registries), and/or (2) verifiable and trackable methodologies, and all should be available and viable means for electricity procurement. We recognize that electricity demands required for electrolysis will need to be verified on an annual basis which can be done through the above listed avenues. This would be consistent with the approach taken internationally under the Australian - 'Hydrogen Guarantee of Origin Scheme' (*currently in consultation*) and Europe's 'CertifHy GO' scheme.

Furthermore, it is critical that hydrogen producers are not penalized for utilizing on-peak renewable energy, as developing these technologies require to an extent a continuous energy supply (with some flexibility relating to the plant's turndown ratio and capability). Instead, incentivizing off-peak usage is critical to scaling the "green" hydrogen industry compared to penalizing on-peak use, particularly if hydrogen production (as a load) can provide ancillary network benefits, such as load management.

- b. *What granularity of time matching (that is, annual, hourly, or other) of energy inputs used in the qualified clean hydrogen production process should be required?*

We recommend annual verification of electricity supply and demand matching for ease of documentation and reporting, recognizing that electricity settlement is based on 5-minute increments so as to balance accurate data with administrative burdens on hydrogen producers. This level of reporting and granularity would be consistent with international guarantee of origin hydrogen schemes and practically pair well with PPA electricity procurement, which will be one of the most critical means of renewable energy acquisition for hydrogen production. As PPAs are typically measured and monitored on an annual basis, it would be practicable to align the time matching with annual granularity.

- c. *Flexibility in Electricity Procurement Pathways for the Purposes of 45V is Key*

Maximizing renewable energy availability and ensuring flexibility in the procurement of clean energy is critical to scaling clean hydrogen production in the US. As "green" hydrogen-producing

facilities are dependent on access to clean electricity and its continuous supply (with some technical flexibility), the producers should not be rigidly constrained by narrow electricity procurement options to meet the LCA requirements for the purposes of 45V and requirements should not be more restrictive than those in development in other leading markets (e.g., the EU). It is critical that the procurement of electricity via PPAs (along with RECs) is allowed under the 45V framework and hydrogen producers are not required to develop its own electricity generation due to significantly larger upfront capital requirements, potential land constraints further limiting where PtL facilities can be located (already constrained by access to CO<sub>2</sub> feedstock), entirely different expertise required for developing such projects, and additional project risks such as supply chain interruptions currently affecting the renewable energy industry. Furthermore, in locations where the grid has a high amount of renewable penetration, electricity procurement should be allowed through a direct retail contract with an energy retailer. Such risks could flow through to existing and potential incoming investors and might otherwise deter investors from pursuing domestic projects under restrictive and narrow hydrogen production (i.e., guarantee of origin schemes) frameworks.

For large facilities producing hydrogen via electrolysis, a combination of procurement options will likely be required, which should be eligible under the 45V framework. Restricting the ways a hydrogen producer can procure renewable/carbon-free energy could impede the growth of the clean hydrogen industry by increasing the costs of clean electricity procurement (and associated grid infrastructure needs) and potentially delaying projects and deterring project investment as noted above. Currently, the average cost of renewable electricity procured through PPAs is increasing in the US, interconnection delays are increasingly prominent, and limitations associated with on-site renewable generation are significant (e.g., land availability, high construction costs in the period of high inflation, limited availability and high cost of battery storage, coupled with supply chain shortages and delayed lead times). These challenges can be particularly damaging to innovative, pre-commercial companies, their investors, employees, and local regional communities where opportunities to manufacture products exist. Therefore, we believe it is important to allow a variety of electricity procurement pathways that will offer flexibility to clean hydrogen producers (i.e., hydrogen production via electrolysis) and thus help advance the growth of this nascent industry in the United States.

## **6. Clean Electricity Investment Credit (48E) as Applicable to Hydrogen**

- a. Clarification is Needed on 48E Applicability to Equipment Producing Hydrogen Carrier Liquids

The Clean Electricity Investment Credit is applicable to energy storage technologies, including hydrogen. IRA identifies “energy storage technology” as property which stores energy, in the case of hydrogen. Therefore, we request that the Treasury clarifies whether equipment that produces hydrogen carrier fuels such as methanol can qualify for the 48E investment tax credit. Such equipment would include carbon conversion reactors/hydrogenators which combine CO<sub>2</sub> with clean hydrogen and have ability to produce methanol.

## **7. Clean Fuel Production Credit**

- a. Establishment of Emissions Rate for the Purposes of 45Z Should Allow Producer-Specific Submissions

The Treasury is required to develop and annually publish a table setting forth the emissions rate for similar types and categories of transportation fuels based on the amount of lifecycle GHG



emissions. While this approach may be appropriate for the majority of SAF producers, it likely will be challenging to establish one rate for emerging fuel production pathways such as PtL SAF. Further, we believe that the intent of 45Z is to encourage continuous efficiency improvements and GHG emissions reductions, which could be stymied by the fixed-rate approach as it would disincentivize producers within the same general pathway to improve their processes should there be no flexibility to submit a producer-specific pathway.

We recommend that in case an emissions rate identified by the Treasury for a particular pathway is different from the actual emissions rate for a particular producer, such producer is allowed to apply for an individual emissions rate approval. Such a provision is important for incentivizing continuous innovation and deeper emissions reductions, which we believe was the Congressional intent for 45Z. We also recommend that the lifecycle methodologies used to determine the credit value for various SAF pathways provide for granular carbon intensity calculation and recognize coproduct credits (for example, emissions mitigation from substitution of coproducts). To ensure consistency of individual submissions and LCA boundaries, we recommend that the Treasury also recognizes the GREET model for evaluating LCA GHG emissions for SAF for the purposes of 45Z, which is a model commonly used for assessing LCAs for other transportation fuels that is also in line with airline customer expectations.

It is widely accepted by industry that the US is a leading global market for low carbon fuels and PtL innovation, in particular PtL SAF which should remain the prerogative towards 2030 and thereafter. IRA has a great potential to accelerate the industry's growth, positioning the US as a global leader in the space of clean synthetic fuels. To conclude, we would like to reiterate the importance of the tax credits discussed in this letter to the growth of the PtL industry in the US. The growth of PtL SAF production is critical to meeting requirements and targets set by the airlines and their corporate customers, as well as to meeting investors' sustainability demands. It is worthy to take into consideration the following potential benefits of implementing the IRA in a manner that recognizes the importance of PtL producers and addresses the considerations raised in this letter:

- Contribution to meeting the Biden Administration SAF Grand Challenge's 3-billion-gallon target by 2030;
- Creation of well-paying jobs and contribution to regional economic growth;
- Strengthening of US fuel security (for both commercial airline use and government use);
- Ability to meet US airline climate targets and commitments;
- Decoupling domestic fuel availability from GHG emissions increase; and
- Ability to position the US as a leading PtL producer, as well as attract investment that might otherwise be directed towards foreign PtL SAF markets.

We appreciate your consideration of our recommendations and we welcome further engagement on the issues raised in this letter.

Sincerely,

Natalia Sharova  
Climate Policy Manager