



March 22, 2024

Adam Saul
Climate Pollution Reduction Program
Washington Department of Ecology
P.O. Box 47600
Olympia, WA 98504-7600

RE: Proposed Rulemaking for Chapter 173-424 WAC – Clean Fuels Program (CFP)

Dear Mr. Saul,

SkyNRG Americas (“SkyNRG”) is eager to provide initial comments on the impending rulemaking of Chapter 173-424 WAC – Clean Fuels Program (CFP) to the Washington Department of Ecology (“Ecology”). As we move towards the formal comment period in Fall/Winter 2024, we offer our availability as a resource to provide insights and expertise to help inform Ecology about the potential implications and opportunities for integrating sustainable aviation fuel (SAF) into the state’s CFP.

SkyNRG background

Since 2019 SkyNRG has been a global leader in Sustainable Aviation Fuel (SAF), scaling up SAF demand and production capacity for the industry to meet its 2050 net zero commitment. SkyNRG has supplied SAF to over 90 customers across the world and is now developing dedicated production facilities to support the shift from fossil jet fuel to SAF both in Washington state and Europe.

As road transportation modes continue to electrify, aviation’s share of the state’s emissions inventory will materially increase through 2035 and beyond. The aviation sector is one of the most difficult industries to decarbonize due to unique operational and safety requirements that necessitate energy dense fuels, highlighting the critical role of low carbon liquid fuels for the future of the aviation sector. Given the growing share of aviation’s emissions, SAF is an essential contributor to the state’s goal of reducing GHG emissions by 95% by 2050.¹

SkyNRG will be among the first producers of SAF and renewable diesel (RD) at commercial scale from cellulosic feedstocks such as biomethane, often referred to as renewable natural gas (RNG). Together with our existing technology partners, our production process converts RNG to SAF and RD at an integrated SAF production facility. SkyNRG’s plans necessitate withdrawing biomethane from common carrier pipelines on a “book-and-claim” basis, similar to how biomethane is used for the production of renewable hydrogen and biomethane-based compressed natural gas (CNG), liquified compressed natural gas (L-CNG) and liquid natural gas (LNG), all of which are eligible for credit generation under the CFP. Further, ESSB 5447 specifically enables the use of biomethane on a “book-and-claim” basis to produce SAF and RD in the CFP.

¹ <https://ecology.wa.gov/air-climate/climate-commitment-act>



Book-and-claim biomethane to SAF and RD

SkyNRG has selected Washington as the location for our first U.S. project based on several factors including the state's CFP and ESSB 5447 which establishes a tax credit for in-state production and use of SAF.

In particular, recognition under ESSB 5447 of biomethane as an eligible feedstock for SAF and RD using indirect or book-and-claim accounting is crucial to our decision to site in the state as SkyNRG sees biomethane as one of the only widely available, economic and sustainable feedstocks that is produced in Washington. Biomethane resources are diverse, produced in the state in large volumes, and widely distributed through existing gas grid infrastructure. Book-and-claim accounting is the only feasible means of accessing these volumes due to the manner in which biomethane is delivered to customers in Washington and throughout North America.

The concept of book-and-claim accounting is especially important as Washington considers program changes to align with the California and Oregon low carbon or clean fuel program requirements. Last month, SkyNRG provided comments to the California Air Resource Board (CARB) on the proposed rulemaking for its Low Carbon Fuel Standard (LCFS) program. Among the issues addressed with CARB was the concern over geographic and deliverability requirements for biomethane, which could potentially restrict its availability rather than expanding it. Specifically, CARB has proposed a requirement demonstrating that eligible biomethane is carried through the common carrier pipelines that physically flow within California or toward end use in California. This was an effort to harmonize book-and-claim policies for low carbon intensity (CI) electricity and biomethane and to direct biomethane to sectors that are difficult to decarbonize. However, we argued that this would have the opposite effect, and limit growth of SAF. Geographic and deliverability limitations would almost certainly stifle investment in biomethane resources and reduce opportunities for the state to achieve its climate goals. As Ecology aims to incorporate SAF into its regulatory framework, we encourage not imposing this kind of narrow geographic or deliverability requirement of biomethane for the production of SAF. To produce SAF at scale, SAF producers must be able to leverage methane capture opportunities in the state and around the country.

Further study needed on changes to avoided methane crediting

As SkyNRG works to build SAF production capacity in the state, the company will continue to explore a wide range of biomethane feedstock opportunities from organic waste streams, including food wastes, yard and landscaping wastes, industrial and wastewater sludges, and a variety of animal wastes. Many untapped waste streams are novel as it relates to CFP pathways, but nonetheless can readily be converted to transportation fuels including SAF and RD through technologies that are commercially proven and readily suitable for producing low carbon fuels from biomethane pathways.



In its recent rule making, CARB proposed sunseting avoided methane crediting opportunities.² We believe that this type of phase out policy is premature given the opportunity for capture and productive repurposing of emissions from organic waste streams processed through landfill gas capture, anaerobic digestion and waste-water treatment facilities, all of which create significant sources of biomethane in the state. To this end, we strongly encourage Ecology, as we have CARB, to avoid making changes in the CFP program that limit opportunities to include avoided methane emissions in CI calculations when considering SAF production from these unique feedstocks.

The GHG emissions reductions resulting from CNG fleets being the default for many medium- and heavy-duty applications are attributed, in part, to incentives of clean fuels programs and has resulted in improved air quality for constituents. SAF is at a similar crossroads. By allowing for avoided methane crediting for biomethane as a feedstock, there is the potential to see SAF become the default fuel for aviation, much like the transition in the CNG fleet space. Biomethane has continued potential to reduce GHG emissions in Washington, and recognizing its potential as a feedstock is essential to the continued scale-up of lower carbon fuels for the aviation sector in the state.

Inclusion of jet fuel as a deficit generator in the CFS

CARB also proposed obligating aviation in its latest LCFS rulemaking for intrastate flights. We support this inclusion and further advocated for CARB to extend this requirement to interstate flights to require that all jet fuel uplifted into California generate debits. We believe that adopting a similar measure in Washington, if legal under federal law, could serve as a potent tool for Ecology to align its CFP with other LCFS programs and achieve greater carbon reductions.

Harmonize verification with other SAF programs

Ecology should align third party verification requirements with those of existing federal and international SAF regulatory programs. Because SAF producers rely on stacked incentives to narrow the price gap with fossil jet fuel, they participate in a variety of regulatory programs at all levels of government, including state clean fuel standard programs, the federal Renewable Fuel Standard (RFS) program, tax credits under the Inflation Reduction Act, and the International Civil Aviation Organization's Carbon Offsetting Reduction Scheme for International Aviation (CORSA). As such, SAF producers are already subject to multiple, separate, and overlapping sets of detailed regulations for tracking, verifying, and independently certifying the details of feedstock sustainability and lifecycle assessment.

Given that state clean fuel standard incentives can only be claimed in a single state and not stacked—as a given batch of fuel can only be consumed in one place—we strongly urge Ecology to prioritize alignment with the federal and international incentives that can be stacked by allowing existing certification schemes, such as EPA Quality Assurance Plans under the RFS program, International Sustainability and Carbon Certification (ISCC CORSA), or the Roundtable on

² For projects that break ground after December 31, 2029, CARB staff is proposing that pathways for avoided methane crediting be available through 2040 for biomethane used as a transportation fuel, and through 2045 for biomethane used to produce hydrogen.



Sustainable Biofuels (RSB CORSIA) to meet Washington requirements. In doing so, Ecology will ensure the highest degree of quality and accuracy while imposing the least additional administrative burden on SAF producers.

Further recognition of the air quality and climate benefits of SAF

Finally, SAF contributes multiple benefits to communities and the climate. We encourage Ecology to continue exploring additional measures that can further incentivize the use of SAF. For example, measures crediting the benefits of reductions in nitrogen oxides (NOx) and fine particulate matter (PM 2.5) could reflect local air quality benefits to communities.³ Ecology could also consider a CO₂ equivalent metric to account for the reduction of non-CO₂ impacts such as the combined warming from contrails and contrail-induced cirrus.⁴ As clean fuel policies seek to encourage greater uptake of SAF, additional measures quantifying the air quality and climate benefits can encourage and accelerate this transition.

Thank you again for the opportunity to provide comments on the proposed rulemaking. We sincerely look forward to an ongoing collaboration with Department of Ecology staff.

Sincerely,

A handwritten signature in blue ink, appearing to read 'John Plaza', is positioned above the typed name.

John Plaza
President & CEO
SkyNRG Americas, Inc.

³ See CARB, Staff Report: Initial Statement of Reasons (ISOR). December 19, 2023. <https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2024/lcfs2024/isor.pdf>. Page 57.

⁴ D.S. Lee, et al. The contribution of global aviation to anthropogenic climate forcing for 2000 to 2018. *Atmospheric Environment* 244, 117834 (2021). <https://doi.org/10.1016/j.atmosenv.2020.117834>.