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California Air Resources Board 1001 | Street Sacramento, CA 95814 Via Online Submission: https://ww2.arb.ca.gov/our-work/programs/low-carbon-fuel-standard/lcfs-meetings-and-workshops

Comments on Potential Changes to the LCFS Regulation

Dear California Air Resources Board ("CARB") Low Carbon Fuel Standard Program Staff:

Thank you for the opportunity to provide comments in response to the "Public Workshop to Discuss Potential Changes to the Low Carbon Fuel Standard" held February 22, 2023 (the "February Workshop"). We appreciate ARB hosting this workshop and continuing to engage with stakeholders on a number of critical issues affecting the future of the LCFS. As we have provided inputs to ARB with prior rulemaking workshops, SkyNRG Americas ("SkyNRG") is pleased to be able to provide comments on several areas of LCFS policy that we request be considered.

As noted in prior comments, SkyNRG has been developing sustainable aviation fuel ("SAF") capacity and production since 2009. SkyNRG will be among the first producers in the US of SAF and renewable diesel ("RD") at scale from cellulosic feedstocks such as biomethane. Our production process converts methane pulled from an interstate pipeline to an ethanol intermediate, which then is then further converted to drop-in fuels such as SAF and RD. This all occurs at a single production facility in which the methane is converted to liquid fuels. SkyNRG's plans necessitate withdrawing biomethane from commercial pipelines on a book-and-claim basis and in the same exact manner producers of hydrogen and CNG/LNG are doing in California today.

SkyNRG is dedicated to supporting the aviation industry's efforts to reduce its environmental impacts in transitioning from fossil jet fuel to sustainable aviation fuel in the coming decades. We are building facilities in the US and Europe to increase SAF capacity to assist with these goals. Critically, SAF is one of the few cost-effective and scalable tools for decarbonizing aviation in the next 20 to 40 years. SkyNRG offers a viable and attractive path to producing SAF from cellulosic sources and at commercial scale in the next five years, thereby helping to meet Governor Newsom's near-term goal of 20% clean fuels for the aviation sector by 2030 as well as the Biden administration's SAF Grand Challenge goals.

Responses to Workshop Presentation

Changes to the 2030 CI Targets and Related CARB Standard-Setting Processes: The LCFS clearly has been extremely successful in encouraging market investment in low carbon fuels and lowering emissions in the transportation fuel sector over the decade of its existence. To help ensure a healthy LCFS credit market



that can keep pace with these investments, we strongly support CARB's plans to strengthen the existing emission targets for 2030 and beyond.

Specifically, we agree with the following concepts discussed during the February Workshop:

- CARB should revise the 2030 compliance target to achieve at least a 35% reduction in greenhouse gas emissions.
- CARB should adopt near-term step-downs in compliance target stringency (e.g., from 2024-2027) to help draw down the LCFS credit surplus and encourage at least short-term improvements in LCFS credit prices due to the dramatic and consequential impacts of the recent oversupply of credits.
- CARB should adopt a target acceleration mechanism to automatically increase the stringency of compliance targets in response to predetermined market indicators and/or thresholds.
 - We encourage CARB to pursue an acceleration mechanism that would be triggered by circumstances similar to the present case of credit oversupply. This could be based on the size of the overall LCFS credit bank relative to predicted deficit forecasts. Codifying a self-implementing and timely adjustment to the CI standards will allow the program to respond more seamlessly and predictably in these circumstances, which in turn should promote credit price stability for the program.
 - We appreciate CARB's acknowledgement during the February Workshop that the target acceleration mechanism, if adopted, would only function to automatically increase, not relax, the standards then in-effect.
 - We encourage CARB to convene a workshop specifically on this topic after receiving stakeholder feedback, to introduce options under consideration to the broader regulated community.

CARB Should Expand, Not Contract, Opportunities for Biomethane: As we have noted in prior comments, biomethane has been one of the great success stories of the LCFS program and its goals of significantly reducing emissions. The share of LCFS credits generated for biomethane-based fuel has steadily grown over the last decade, fueling further investment in biogas capture and refinement projects at landfills, dairies and livestock operations, and wastewater treatment plants around the state and across the country. Methane captured voluntarily by these project owners and developers has proven the success of market-based mechanisms to encourage significant emission reductions.

We recognize that state policy may be driving CARB to consider certain changes to the biomethane provisions of the LCFS program. We implore the agency to move carefully in making changes to the existing LCFS framework to avoid unintended consequences. Specifically, we believe the LCFS amendments to be proposed later this year should adhere to the following principles:

• CARB should recognize "book-and-claim" opportunities for biomethane used as feedstock for fuels other than hydrogen. As noted, SkyNRG plans to produce SAF and RD from biomethane, but rarely can we (nor other fuel producers) co-locate with the sources of biomethane at a scale which is commercially viable. We will be wholly dependent on the ability to allocate the and bundle environmental attributes of biomethane produced elsewhere to offset the gas supply at our SAF production facilities. Adopting a book-and-claim opportunity for biomethane used to produce SAF and RD will ensure real, quantifiable methane emission reductions can be paired with fuel production facility locations chosen for their optimal economic, environmental and logistical circumstances.



CARB should also recognize "book-and-claim" opportunities for hydrogen and related products produced through technologies other than steam methane reforming ("SMR"). SMR is hardly the only, let alone the best performing, technology for producing hydrogen. While SMR may have been the most familiar technology when CARB first recognized book-and-claim opportunities for biomethane under the LCFS, CARB should not restrict innovation by making it the only technology eligible for such benefits. Any hydrogen production technology capable of providing reliable carbon intensity scoring in the GREET model should be eligible for book-and-claim benefits. In addition, other products co-produced with hydrogen (such as carbon oxides produced via oxidation and gasification technologies) should likewise be eligible for book-and-claim attribution; if not, then it is unlikely that the biomethane could be fully allocated to outputs from the hydrogen production process, thereby reducing the economic benefit of capturing the biomethane in the first instance.

"Book-and-claim" accounting has been an indispensable ingredient to incentivizing the development of biomethane resources and unlocking their emission reduction potential. CARB should avoid taking steps that pick winners and losers in technology development and deployment as it will send the wrong signal to companies looking to innovate, and it risks the progress in new technology development that has been achieved over the last decade. Allowing book and claim accounting for biomethane to be used as feedstock for production of all transportation fuels will assist in accelerating and increasing low carbon fuels for the market.

Further Study on Changes to "Avoided Methane Emissions" Credits is Necessary: As SkyNRG continues to build sustainable jet fuel production capacity, the company will continue to explore a wide range of biomethane feedstock opportunities from organic waste streams, including food wastes, yard/landscaping wastes, industrial and wastewater sludges, and a variety of animal wastes. Many untapped waste streams are novel as it relates to LCFS pathways, but nonetheless can readily be converted to transportation fuels through technologies that are commercially proven and readily suitable for producing low carbon fuels from biomethane pathways.

CARB should encourage the capture and productive re-purposing of emissions from organic waste streams processed through anaerobic digestion, regardless of the source of the waste stream. To this end, CARB should avoid making changes in the present amendments that limit opportunities to include avoided emissions in CI calculations. We believe the consequences of setting premature sunset dates for avoided emission credits in biomethane pathways merits more comprehensive study by CARB staff. CARB should solicit further stakeholder input from broad stakeholder groups and thoroughly investigate the profound impacts that such limits would have on the development and deployment of methane capture projects, on prices of biogas and natural gas markets more generally, and on LCFS credit availability.

Thank you again for the opportunity to offer comments on the February Workshop. We look forward to working with CARB staff throughout this rulemaking process.

Sincerely,

John Plaza CEO SkyNRG Americas, Inc.