Don Gilstrap
Manager, Fuels Regulations

February 14, 2024

Rajinder Sahota
Deputy Executive Officer – Climate Change and Research
California Air Resources Board
1001 I Street
Sacramento, CA 95814

Dear Ms. Sahota:

Re: Biogas & H2 Proposals

Chevron appreciates the opportunity to review and comment on the subject Low Carbon Fuel Standard rulemaking proposal.

Chevron is a major refiner and marketer of petroleum products and renewable fuels in the state of California and a regulated party under the Low Carbon Fuel Standard (LCFS). Chevron is also an international producer of lower carbon intensity fuels with a global integrated procurement, distribution and logistics network and 11 biorefineries in the U.S. and Europe.

Chevron is submitting multiple letters on key topics under the 2024 LCFS rulemaking. Following are our comments on the proposed amendments related to biogas and hydrogen.

<u>Key Messages</u>

- The 50% capacity limit on Hydrogen Refueling Infrastructure (HRI) credits will stall investment.
- Chevron supports book-and-claim accounting for hydrogen.
- The deliverability requirement and carbon intensity (CI) threshold for pipeline hydrogen are counterproductive.
- Reversing crediting for avoided methane runs counter to the goals of the LCFS and could cause backsliding.
- New deliverability requirements for biogas are unnecessary and will inhibit biogas investment.

<u>HRI Crediting</u>

The rationale that limiting HRI crediting to 50% of capacity will encourage wider scale growth is flawed. The current LDV HRI program does not have a capacity constraint, yet it has still fallen short of hitting the 2.5% obligation maximum each quarter due to the economic, technological, and permitting challenges of building hydrogen infrastructure. Shell's recent announcement that

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they will close several stations is illustrative of the challenges faced in this space[1]. For heavy- and medium-duty (MHD) fueling stations, these challenges are only amplified due to the high capital requirements, lack of available fueling technology, and large land use requirements. Chevron urges CARB to remove the capacity limit and continue with a 15-year crediting window to encourage growth. If there is a capacity constraint and a shorter pathway length, then the prospect of lower returns would likely limit program participation.

Chevron requests that CARB work with industry to develop a realistic solution to differentiate reporting between light-duty and MHD vehicles for HRI crediting purposes. Since these are public access locations, there are little to no means for tracking hydrogen vehicle size to identify if the vehicular weight is less than 8,500 lbs, or within 8,501 lbs to 14,000 lbs GVWR. Also, unlike CNG, separate nozzles are not used for light duty vs. MHD vehicles today. The newly developed NREL heavy duty fueling protocol may allow for separate nozzles for fueling, however it will take many years for the industry to transition.

Hydrogen Book-and-Claim
The proposal to allow book-and-claim accounting for dedicated hydrogen pipelines is a constructive addition to the LCFS. However, imposing carbon intensity (CI) and deliverability constraints are unnecessary. There is no rationale for treating the CI of hydrogen shipped via pipeline differently than hydrogen shipped by truck. This only serves to encourage inefficiency in the supply chain. The market will reward lower-CI hydrogen without the need for these constraints.

CARB's expressed intent is to align with practices being established under the Inflation Reduction Act (IRA). This is unnecessary and counterproductive. The IRA includes arbitrary carbon intensity thresholds set by Congress, and the Treasury department is just beginning to establish organizational capability in this space. By contrast, the LCFS program is far more advanced and mature than these new measures and operates well as a technology-neutral and market-based approach. This is evidenced by CARB's focus on CI as the vehicle for GHG reduction, as opposed to providing credit for only certain technologies.

Tier 1 Hydrogen Calculator
Chevron applauds CARB's work to establish a simplified Tier 1 calculator for hydrogen pathways. This will greatly increase speed to market implementation. CARB's incorporation of feedback from industry is appreciated as well. This enables a more accurate and realistic approach from the beginning.

Avoided Methane Crediting
Chevron disagrees with the sunsetting of avoided methane crediting for biogas pathways under the LCFS. This is a demonstrated, significant reduction in greenhouse gas emissions that would otherwise be released to the atmosphere. Additionally, limiting incentives for biogas and renewable natural gas producers to reduce methane emissions is inconsistent with the Subnational Methane Action Coalition's statement of purpose and the 2021 Global Methane Pledge.

It is encouraging, however, that CARB has set a timeline that will avoid near-term stranded investments and allow for the establishment of new policies to encourage biogas use in other

[1] California's Hydrogen Economy Dealt A Hammer Blow By Shell's Exit (forbes.com)

sectors. If new programs do not arise to direct biogas and renewable natural gas to stationary sectors, we urge CARB to revisit this proposal in a future rulemaking to avoid backsliding.

Biogas Deliverability Requirements

While we appreciate the reasonable implementation timeline for the newly proposed deliverability requirements, this also has the potential to deter growth and cause potential backsliding. The current approach to book-and-claim accounting is practical, aligns with other U.S. policies, and provides the most effective means of reducing GHG emissions, which are global in nature.

Thank you for the opportunity to comment on these matters. If you have any questions regarding our comments, please contact me at (925) 842-8903 or DGilstrap@chevron.com.

Sincerely,