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VIA ELECTRONIC POSTING
https://ww2.arb.ca.gov/public-comments/sb-1075-technical-analysis-workshop

March 25, 2025

California Air Resources Board (CARB)
1001 I Street
Sacramento, CA 95814

**RE: Comments on February 25, 2025 SB 1075 Technical Analysis Workshop**

Kern Energy (Kern) appreciates the opportunity to provide comments on the Senate Bill 1075 Technical Analysis Workshop held by California Air Resources Board (CARB) Staff on February 25, 2025. The workshop's stated purpose was to inform the development of a report on hydrogen evaluating production, transmission, distribution, and end uses to accelerate progress toward the State's climate and energy goals, as required by SB 1075. Kern is commenting on pathways specific to co-produced hydrogen from naphtha reforming pathways, and urging CARB maintain maximum methodology optionality for assessing and allocating the carbon intensity of that co-produced hydrogen.

Kern Energy is an independent, family-owned, and operated transportation fuel producer located in the Southern San Joaquin Valley that has proudly fueled California for 90 years. Kern is the only refiner between the major refining complexes in the Bay Area and Los Angeles producing both clean gasoline and diesel according to California's strict standards. At a capacity of 26,000 barrels per day, Kern serves as a critical fuel supplier, reliably supplying the needs of the agricultural breadbasket and major transportation corridors of the state. While California's regulatory landscape has created one of the most challenging operating environments in the world for a small refiner, Kern has endured while many others have not. As a renewable fuel pioneer, Kern embraced the challenge presented by California's LCFS and the federal Renewable Fuel Standard, becoming just the second refinery in the U.S. to produce renewable diesel by co-processing bio-feed and the first small refiner in California to blend biodiesel.

Flexibility in Methodology for Allocating Carbon Intensity (CI) in Co-produced Hydrogen

Kern encourages CARB to maintain maximum optionality in developing and adjusting methodologies for assessing and allocating the carbon intensity of co-produced hydrogen on a case-by-case basis. As California's energy landscape continues to evolve, it is imperative policy and associated regulatory frameworks remain technology-neutral and open to emerging innovation and technologies. Refineries co-produce hydrogen within the process of naphtha reforming. This co-produced hydrogen can be separated from other refinery gases and used to produce clean or otherwise provide a low-emission source of energy. The co-production of hydrogen from naphtha reforming is distinct from other production processes designed to produce hydrogen, such as

steam methane reforming (SMR). SMR specifically targets hydrogen as the main product of the process, while the main objective of naphtha reforming is to upgrade low-octane hydrocarbons into high-octane gasoline, with hydrogen being produced as a co-product.

CARB's adopted methodology should account for the shared emissions between the reformed naphtha product and the hydrogen co-product, ensuring that the carbon intensity (CI) assigned to co-produced hydrogen accurately reflects its environmental impact without unfairly penalizing or benefiting either product. This is an important distinction that will incentivize zero-emission electricity generation from the reformed hydrogen co-product. For example, if hydrogen is used to produce electricity through a fuel cell, there are no incremental transportation fuels produced from that hydrogen, and the carbon intensity allocation should remain with the reformed naphtha product.

Kern further encourages CARB to work with facility operators to develop CARB to maintain maximum optionality in developing and adjusting methodologies for assessing and allocating the carbon intensity of co-produced hydrogen on a case-by-case basis approaches to determining the footprint of co-produced products from refineries and industrial operations. The emissions footprint of naphtha reforming is different than other processes and should be treated as such. Existing frameworks, like the GREET model used by CARB for the Low Carbon Fuel Standard, often handle co-products via allocation methods (e.g., energy-based, mass-based, or market-value-based) or system expansion (crediting avoided emissions elsewhere). However, these methods aren't universally standardized for refinery co-products like hydrogen and do not appropriately account for the carbon footprint of co-products. A one-size-fits-all approach does not work; collaboration with facilities to analyze their unique situation is imperative for emissions accounting, especially as the landscape of California's refinery and energy sectors continue to change.

The challenge will be in fairly distributing the greenhouse gas (GHG) emissions across all products of the reforming process. A simplistic approach—assigning all emissions to the primary product (gasoline) or equally to all outputs—could either underestimate or overestimate the CI of the co-produced hydrogen.

As always, Kern Energy is committed to working with CARB. Please do not hesitate to reach out to me at (661) 845-0761 should you need anything else or have questions.

Sincerely,

Melinda Palmer
VP – Regulatory & Public Affairs
Kern Energy