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We Fuel the Future

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VIA ELECTRONIC POSTING
https://ww2.arb.ca.gov/lispub/comm/bclist.php
Comment List: lcfs2024

August 27, 2024

Clerk of the Board
California Air Resources Board
1001 I Street
Sacramento CA, 95814

Dear Chairman Randolph and Board Members:

Kern Energy (Kern) is providing comments on the California Air Resources Board's (CARB) proposed amendments to the Low Carbon Fuel Standard (LCFS) regulation released on August 12, 2024. Kern is specifically providing comments on the following: (1) Near-term Increase in Program Stringency is Excessively Aggressive; (2) Restricting Feedstocks and New Pathways for Biomass-Based Diesel is Contrary to LCFS Program Goals; (3) Support for Maintaining Fossil Jet Fuel Exemption; (4) Sunsetting Credit Generation for Hydrogen Restricts Space for Innovation; (5) Operational Carbon Intensity (CI) Fluctuations Should Not Result in Immediate Penalization; (6) Temporary Pathway Credit True-up Provides Fair Treatment for New Fuel Production; and (7) Sustainability Requirements are Overly Broad and Will Result in the Unintentional Exclusion of Forest and Agricultural Residues.

Kern Energy is an independent, family-owned and operated transportation fuel company in the Southern San Joaquin Valley that has proudly fueled California for 90 years. At a capacity of 26,000 barrels per day, Kern is the only refiner producing both gasoline and diesel between the major refining complexes in the Bay Area and Los Angeles. While California is one of the most challenging operating environments in the world for a small refiner, Kern has thrived while many others have failed. As a renewable fuel pioneer, Kern understands what is needed to address California climate and environmental concerns. 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. Kern has been an active participant in the development and evolution of the LCFS since program inception, both actively engaging in the policy-making process and reliably serving the California market as a provider of liquid transportation fuels meeting California's strict standards. Kern appreciates CARB Staff's tremendous work throughout the rulemaking

process, particularly for demonstrating the significant contributions that lower CI liquid fuels have delivered toward achieving the state's climate goals and the continued need for these fuels for many years to come. It is critical that any changes to the LCFS support logical and attainable CI reduction targets while continuing to incentivize fuel producers like Kern to ensure the reliable delivery of ever cleaner and lower carbon transportation fuels to our communities.

1. **Near-term Increase in Program Stringency is Excessively Aggressive**

Staff proposes to modify Section 95484 (d) through (f) with an immediate increase in stringency to a 9% CI reduction in 2025, nearly double the 5% year-to-year increase presented in the initially proposed December 2023 amendments. This increase is additive to adjusting the overall CI reduction goal to 30% by 2030 and proposing the addition of an auto-acceleration mechanism that would accelerate the annual CI target by a year when specified market conditions are triggered. Staff note this change as intended to smooth the curve between the 2025 compliance target and the originally proposed 30% reduction in 2030, yet the effect is to create an immediate, near impossible burden to comply.

This additional increase has the effect of front-loading 2025 with an unreasonable compliance burden to refiners with little to no time to prepare, rather than spreading the burden across the full five years to 2030. The CI benchmark for gasoline in 2024 is 87.01 grams CO2 per megajoule (g/MJ). Under the 5% increased stringency scenario initially proposed in the 45-day package, this benchmark would drop to 80.55 g/MJ – a 6.46 g/MJ difference. Under the 9% stringency scenario currently proposed, this benchmark would drop to 76.6 g/MJ – an astounding difference of more than 10 g/MJ. CARB cannot expect refiners to adjust to this dramatic change in less than four months. To place additional context around the magnitude of this CI reduction, even under the current proposal, the next time a benchmark CI decline of 10 g/MJ would be realized is in six years.

CARB is creating an impossible feat for regulated parties to comply even as the agency acknowledges the need for liquid fuels to meet state demand for many years to come. The LCFS proposed amendments already create a layering effect with the incorporation of the auto-acceleration mechanism, limitations to biomass feedstocks, and disincentives toward biomass-based diesel fuels. The longer runway associated with the 5% stringency allows fuel producers the time needed to continue advancing new technologies and innovations in ultra-low CI fuels and implementing projects that are already underway but take five or more years to engineer, construct, and commission. Kern understands that Staff may envision smoothing the curve as beneficial, but the reality is an opposite and detrimental effect. Kern supports requiring reductions in a ratable manner.

Kern is one of the smallest refineries in California and is one of only two remaining small refineries in the state producing finished transportation fuels. California Energy Commission data indicates that roughly 30 years ago a dozen small refineries operated in the state. The demise of over 80% of California small refiners over the last 30 years is due in large part to exponentially expanding regulatory burdens and accompanying compliance costs, which disproportionately harms small businesses. Using today's near-record low credit prices in the carbon market, Kern's estimated cost to comply with the newly proposed 10 g/MJ decline (9% stringency proposal) is greater than $13 million for 2025 alone – more than double Kern's estimate under the previous 5% stringency proposal. These single-year cost-to-comply estimates using current carbon credit prices should be seen as conservative, if not the minimum cost for Kern to comply. The agency's desired result from the layered stringencies in this regulatory action is to drive up the price of carbon, which leaves these compliance estimates nowhere to go but up. Kern expects to see these costs double again if/when the market responds to CARB's signal.

Kern urges CARB to continue consider giving consideration to small refineries for the disproportionate regulatory impact on these facilities and ways to alleviate that burden. As a smaller company operating a single facility, Kern is less able to absorb regulatory costs. Notably, reduced costs create opportunities to utilize funds for reinvestment in the facility and expanding a low-CI fuel portfolio – investments that are critical for Kern's long-term operation and success and critical to meeting the state's climate goals.

2. **Restricting Feedstocks and New Pathways for Biomass-Based Diesel is Contrary to LCFS Program Goals**

Staff proposes to add new subsection 95482(i) to "provide credits for biomass-based diesel produced from virgin soybean oil and canola oil for up to 20 percent of annual biomass-based diesel" and impose the carbon intensity of the applicable diesel pool benchmark to volumes of fuel produced from these feedstocks in excess of the limit. The presentation of this new subsection within the 15-day package as an opportunity to generate credits is disingenuous at best when what Staff is proposing is a cap on these feedstocks and the disincentive to produce lower CI renewable fuel. This proposal will handicap renewable fuel producers' abilities to diversify their feedstock portfolio, creating additional strain on already tight waste feedstock markets and prices and imposing unnecessary uncertainties of feedstock supply.

Kern has made significant and successive investments in its facility over the years to produce increasing amounts of renewable diesel. Waste feedstocks have become increasingly competitive to source, particularly those higher-quality feedstocks that can be processed without additional pre-treatment. These conditions are only expected to

become more severe as additional renewable diesel production capacity comes online. Placing a limit on the amount of any given renewable feedstock could jeopardize Kern's ability to maintain production volumes of lower CI renewable diesel as tallow and waste fats/oil supply become impossible to source. Kern was encouraged during the April 2024 public workshop when Staff acknowledged that renewable and conventional liquid fuels will continue to play a key role in the state's transportation fuel mix for many more years, particularly in the medium and heavy-duty sectors and even as California expands to additional and newer energy sources. Kern acknowledges CARB's preference to prioritize waste feedstocks over food-based crop-derived feedstocks, but this proposal is another attempt at picking winners and losers rather than letting the market set the signal.

Kern has further concerns about specific dates incorporated in effectuating this restriction. Staff's inclusion of a grandfathering clause to allow producers a longer runway for processing the higher amounts of these two feedstocks could be helpful if it were not based on calendar year 2023, an operational period that has already passed, and one in which operators had no knowledge that such a standard would be based. Operators had no ability to control their destiny without knowledge this would be an important determining factor in their future operation. Additionally, the proposed January 1, 2028, implementation date for grandfathered facilities gives only a narrow window to adjust their feedstock portfolio and secure sufficient additional volumes to replace these restricted sources. This will create yet another period of intense competition for limited supply of waste oils/fats available again creating immense strain and competition in the market.

The 15-day package notes this proposed addition will allow California to displace up to 100% of current fossil diesel demand with cleaner alternative diesel. However, Staff is also proposing amendments to Subsection 95488(d) that would restrict the approval of new fuel pathways beyond 2031. These two provisions appear to be in direct conflict because no new pathways would ensure no lower CI fuels are added to the program to replace these existing soy and canola-based fuels. Even if the number of zero-emission vehicles (ZEVs) exceeds a given threshold, it is perverse and counterintuitive to omit consideration for new pathways with lower CIs that would otherwise replace existing pathways and fuel supplies for the remaining diesel engines continuing to travel California's highways and power the state's economy.

Again, this proposal to limit liquid renewable fuels is contrary to the agency's stated goals. CARB should let the market dictate demand for biomass-based fuels, which would naturally follow the actual progress of ZEV adoption rather than setting arbitrary dates around hopeful ambition. Kern believes the proposed addition of Subsection 95482(i) and amendments to Subsection 95488(d) should be eliminated from the final regulatory amendments. At a minimum, the 2023 performance year and 2028 grandfathered

implementation dates should be pushed out three years to afford producers sufficient time to plan and react to such a significant change.

3. **Support for Maintaining Fossil Jet Fuel Exemption**

In Section 95482(a), Staff proposes to remove "Fossil Jet Fuel" from the list of transportation fuels applicable under the LCFS. Significant strides are being made in the production of sustainable aviation fuel (SAF), but the reality persists that supply is insufficient to meet demand, and fossil jet fuel still plays a significant role in providing for safe, affordable and reliable operation within the aviation sector. Kern supports and appreciates Staff's decision to maintain jet fuel in the list of those fuels found within Section 95482(a) and specifically list fossil jet fuel as exempt in Section 95482(c). Kern is encouraged by Staff's commitment to finding alternative ways to reduce emissions from the aviation sector.

4. **Sunsetting Credit Generation for Hydrogen Restricts Space for Innovation**

Staff proposes to add new subsection 95482(h) to remove LCFS credit generation eligibility for hydrogen produced using fossil gas as a feedstock, effective January 1, 2031. Kern opposes this addition and encourages CARB to take a comprehensive, inclusive approach to meeting the hydrogen needs of a clean energy future. CARB has consistently acknowledged the need and support for advanced technologies, and a broad portfolio of fuels to meet the state's climate goals. While the projected operational timeline for projects funded under the hydrogen hubs grants may appear to support expanded hydrogen production in California, the elimination of a viable, immediately available option before these projects have been realized is short-sighted and again demonstrates a willingness to pick winners and losers.

The production of fossil hydrogen with carbon capture and/or other advanced technologies should be seen as a positive contribution to expanding the supply of low-carbon hydrogen in California, able to supplement production via steam electrolysis, biomass gasification, and steam methane reforming of biomethane. Kern does not utilize steam methane reformers to make hydrogen from fossil gas. Instead, Kern's refining operation produces hydrogen as a byproduct from our gasoline production facilities. Currently combusted on-site as fuel gas in industrial heaters, Kern is actively working with innovative partners on an advanced technology that would capture this hydrogen for use in on-site fuel cells to produce electricity – that is, replacing electricity from cogeneration and the state's grid with zero CI electricity produced on-site by effectively using this existing energy source. Further, use of this captured hydrogen would allow for the replacement of diesel-powered engines in fixed generators and mobile equipment with clean hydrogen-fueled internal combustion

engines or hydrogen-powered fuel cells, supporting the move to zero-emission applications in the heavy duty and industrial sectors.

CARB must remain open to a broad array of technologies and avoid adopting policies that stifle innovation. Imposing barriers and prohibitions to the mobilization of existing industry and infrastructure only serves to hamper the development of key solutions and discourage contributors focused on improving our shared climate improvement goals. Kern urges CARB to eliminate this new subsection before final approval of LCFS amendments.

5. **Operational CI Fluctuations Should Not Result in Immediate Penalization**

Staff proposes modifications to Subsection 95488.10(a)(7) that expand the scope and impose immediate penalties on a renewable fuel producer when the verified operational CI is found to be greater than the certified CI of a fuel pathway. Staff's initial proposal first introduced this concept to Tier 1/Tier 2 pathway holders, and now Staff proposes to expand this to producers who have been operating under a temporary pathway. Kern acknowledges that any incremental credits should be invalidated if an operational CI exceeds the certified CI. However, the additional imposition of deficits without regard or due process for determining the reason is premature and assumes noncompliance warranting penalty without merit or substantiation. Furthermore, the assignment of deficits equal to four times the number of incremental credits is arbitrary, excessive and again omits consideration for the reason behind any such increase. Valid operational fluctuations that occur within the fuel production process, such as catalyst degradation over time, variations in feedstock quality, unforeseen unit upsets, or similar occurrences, should not warrant additional deficits as they do not represent noncompliance.

Pathway holders are already encouraged to incorporate a margin of safety into the certified CIs by accepting a higher CI than demonstrated through CARB-accepted life cycle calculations. This proposed application of deficits will drive pathway holders to further increase this arbitrary margin to their CI to avoid these penalties, rendering them unable to recognize the full amount of climate benefit of a fuel – essentially leaving credits "on the table." Kern encourages CARB to reject this addition and support the existing process of incremental credit invalidation, a root cause analysis to explain the difference, and enforcement only if warranted.

6. **Temporary Pathway Credit True-up Provides Fair Treatment for New Fuel Production**

Staff proposes to expand the credit true-up provisions in subsection 95488.10(b) to include periods using temporary pathway CIs after annual verification. Kern appreciates Staff's

consideration of stakeholder comments highlighting the benefits of the credit true-up of temporary fuel pathways by providing a mechanism to recover credits based on verified operational data. Temporary pathway CIs take a conservative approach by assigning a sufficiently high CI that operational CIs are expected to prove lower or even have a large variation. Kern applauds these efforts to streamline the application review process, alleviate business impacts associated with a delay in pathway certification and allow for recognition of the full amount of climate benefit of a fuel.

7. **Sustainability Requirements are Overly Broad and Will Result in the Unintentional Exclusion of Forest and Agricultural Residues**

Staff proposes to add details to the original proposal on biomass sustainability requirements, incorporating a phase-in approach to reduce deforestation and other land conversion risks. Kern respectfully requests CARB consider further amendments to avoid unnecessary and unintentional exclusion of forest waste that is collected from wildfire mitigation, forest restoration and public safety projects. The sustainability criteria for both forest and agricultural waste were developed to address concerns about purpose-grown crops would also eliminate many beneficial projects that use forest waste biomass and agricultural residues. Section 95488.9(g) was originally written to ensure the sustainability of crop-based fuels but has now been expanded to cover all waste biomass. The proposed requirements are not appropriate for agricultural or forest residues where the feedstock is a waste product, and the fuel producer has no control over the crop growing practices. For example, a fuel producer that uses almond shells or orchard prunings to produce fuel or electricity has no control over the pesticides or erosion control methods used by the farmer who is growing the crop or orchard. Applying the same standards to agricultural or forest residues as to purpose-grown crops will effectively close the door to fuels that could be produced from agricultural and forest residues. Kern encourages CARB to reconsider this proposal with a keener eye on these unintended consequences.

In conclusion, Kern appreciates CARB's consideration of Kern's comments. As always, Kern is committed to working with Staff throughout this regulatory process. Please do not hesitate to reach out to me at (661) 845-0761 with any questions.

Sincerely,

Melinda Palmer
VP – Regulatory & Public Affairs
Kern Energy