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California Independent Petroleum Association Comments on Low Carbon Fuel Standard Public Workshop to Discuss Potential Regulation Revisions (October 14 & 15, 2020)

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Thank you for the opportunity to share comments on behalf of the members of the California Independent Petroleum Association (CIPA). CIPA represents nearly 400 crude oil and natural gas producers, royalty owners, and service and supply companies who all operate in California under the toughest regulations on the planet. Our members are committed to innovation and investment to help the state reach its statutory emission reduction targets in support of goals toward carbon neutrality in the decades to come. CIPA's member companies have the assets and knowledge to play a significant role in helping decarbonize several sectors of California's economy, including transportation which is the focus of these comments.

This letter responds to CARB's request for input on the recent two-day workshop focused on potential changes to the LCFS, including updates to the OGPEE oil carbon intensity (CI) model. These comments are broken up into two these two categories for ease of review—proposed LCFS changes and the OPGEE updates.

Many of the suggested changes were focused on improving the LCFS program and/or the OPGEE model, but there were also comments made by CARB that were seemingly inconsistent with achieving the goals of AB 32. CIPA's comments are also focused on how to truly improve the Innovative Crude program under the LCFS, which to-date has been a driver of investment, innovation and carbon/criteria pollutant emission reductions.

Large-scale investments, such as renewable energy and/or carbon capture and storage, require policy stability and regulatory certainty to not only finance and permit such projects, but to successfully operate. These two concepts, stability and certainty, are foundational to the durability and integrity of environmental markets, such as credit markets—which our members have used to invest in carbon reduction technologies. Any movement away from the current

policy of letting credit generation and trading incentivize market-driven investments is detrimental to reduction projects. Credit trading is the most economically efficient way to produce emission reductions; an 'electrification at all costs' policy model, is not only counterproductive, but reckless.

Even with the state's incredible energy efficiency, VMT reduction strategies, and vehicle technology requirements, California consumes among the most energy on the planet outpacing France, Germany and the United Kingdom[1]. Owing to the sheer size of its demand and California's continued reliance on energy imports, state policies (or changes to those policies) can have wide ranging impacts around the US and the world as a whole. Unfortunately, other energy producing regions of the world do not share California's values for labor, health and safety or the environment. Exporting our energy needs, including the jobs and tax base they support, is a very real form of "leakage" which AB 32 sought to avoid. Rather than exporting our industry, California should embrace an energy portfolio that prioritizes California produced energy, which benefits both state and local economies as well as the environment.

California will need petroleum and natural gas fuels for decades, even if the recent Governor's Executive Order targets are met. According to data provider IHS, even though by 2050 between 60 and 80% of global new car sales will be electric (this comprises battery, plug-in hybrid and fuel cells), ICE-based cars will still account for 1.9 billion vehicles on the road because of their longevity. Until we, as a state, stop using liquid and gaseous fuels, we should prioritize in-state supply that is produced under California's stringent regulations. Anything short of that is the true definition of "leakage" and is not just. Even if California were to achieve a 50% reduction in petroleum demand as outlined in previous policy documents, the state would still be an importer of foreign crude. It is that foreign crude that should be targeted for reduction, not in-state production as the staff presentation seemed to imply was on the table.

Further restricting California production means that our state will get even more oil from countries that do not share our humanitarian or environmental values. Importing more oil mean more ships at our ports. This year alone, when demand dipped due to COVID, dozens of foreign tanker ships idled off the coast of California from San Francisco to Los Angeles, emitting daily emissions at Southern California ports equivalent to 68,000 cars.[2]

California is an energy island and growing our reliance on foreign oil also creates an energy security issue. All of the oil produced in California is used in California. We do not export California produced crude. The vast majority of the State's remaining supply is imported from foreign countries, with the largest amount of imports coming from Saudi Arabia. Saudi oil isn't produced under the Cap-and-Trade program, Oil and Gas Methane rule, local district flaring permits, or the myriad of water quality requirements imposed on California producers. Californian's pay over $25 billion per year to countries that do not honor human rights or environmental protection. Instead of making the Saudi royal family richer, we Californians should be focused on keeping more Californians working and using money here. **The last barrel of oil used in this state, should be produced in this state with all of our environmental regulations and carbon capture and sequestration.**

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[1] CA - 7.96 quadrillion BTUs https://www.eia.gov/state/print.php?sid=CA
Country ranking: https://www.eia.gov/international/rankings/world?pa=12&u=0&f=A&v=none&y=01%2F01%2F2017

[2] https://www.nationalgeographic.com/science/2020/06/coronavirus-oil-prices-crashed-tankers-idled-california-spewing-pollution/

CIPA members embrace an inclusive energy portfolio utilizing new and traditional energy sources working together. The LCFS's Innovative Crude provisions have rightly incented innovation, and our members have responded by invested in solar and cogeneration to lower the overall carbon intensity of our operations, invested in CCS and other innovations that can be used to further decarbonize the grid or exported to other states and countries. Exporting technology is a positive ancillary benefit of California's efforts. Exporting wealth, jobs, tax base is not.

CIPA member companies are actively investing in California to help the state meet its aggressive climate targets and pay millions of dollars each year that are reinvested in programs right here in California that advance our state's priorities such as clean air and emissions reductions.

California's in-state production industry is also uniquely poised to invest in technologies such as carbon capture and sequestration (CCS) and pioneering production methods to dramatically reduce carbon intensity. The scientific community has written extensively about the role of CCS to achieve net zero emissions under the Paris Accord. Our member company, California Resources Corporation, has California's first carbon capture project underway and this year will complete its Front-End Engineering Design (FEED) study for the carbon capture facility on its power plant at Elk Hills. Similarly, on day two of the workshop, Sentinel Peak previewed a non-thermal heavy oil production process that will drastically lower in-state crude CI—the exact goal of the LCFS. These are two more examples of our industry's willingness to be leaders in meeting California's climate goals. Such commitments must be honored by retaining the eligibility to participate in the program. Slide 44 of the staff presentation[3], implied this eligibility was at risk. It cannot be understated that such signals from CARB are extremely damaging to the investment and finance communities that are needed to fund the technology California is seeking. These types of signals defeat the goals of the program.

Additionally, on a more wholistic note, about 20% of each barrel of oil goes to non-road uses. That part of the barrel supplies the raw materials to make more than six thousand items Californians use each day. During the pandemic alone, these products include electronic devices for remote work and distance learning, single use masks, lifesaving medical equipment and pharmaceuticals. CIPA has yet to see a credible plan for replacing all of these with alternatives to petroleum-based products.

Low Carbon Fuel Standard Presentation

After participating in the October 14 workshop, we had the following specific concerns and comments about what was presented:

- Slide 11 refers to aligning with the EO on ZEV deployment. As already noted above, CIPA strongly encourages CARB to acknowledge the role liquid fuels will continue to play in the transportation sector for the next several decades. Any policy actions to reduce in-state petroleum production is counter-productive to the overall goals of AB 32.
- Slides 39-43 on Project-based Crediting:
    - CIPA is opposed to recommendations that reduce LCFS credit generation and make it more difficult to finance/approve/implement project-based reductions or change financial impacts for projects that have already been built. The current method of crediting for displaced thermal/electrical energy has been through

[3] https://ww2.arb.ca.gov/sites/default/files/2020-10/101420presentation_carb.pdf

numerous rulemakings. It currently allows for simple "math" and ease of implementation.
    - The concept of having to "baseline" the project for verification purposes is highly problematic. This idea is similar to how the original Innovative Crude provisions were rolled out. Those original ideas were scrapped by CARB in subsequent rulemakings as they were found to be unworkable due to the dynamic operations of oil fields.
    - Alignment of "Project" credits with "Pathway" credits is not necessary for successful implementation of either. They are distinct components of the regulation precisely since they are so different.
    - CIPA looks forward to working with staff on the CCS eligibility criteria. Staff proposed to change the language and meaning of "on-site". CIPA supports expanding project eligibility and opposes any changes which will decrease generation of LCFS credits based on ratioing energy outputs from our integrated operations.
    - CIPA has a high level of concern about the idea presented for requiring land use change emissions calculations associated with Innovative Crude projects. The land used for these projects are typically within disturbed properties within oil field boundaries. We look forward to additional discussion on this concept.
    - The "pro-rating" concept on slide 43 could have significant negative implications for projects. CIPA needs more detail from CARB to fully understand this idea.
- Slide 44 questions whether the innovative crude provisions are even necessary considering the move to electrified transportation. ***CIPA would oppose any attempt to reduce or eliminate the CCS or other Innovative Crude provisions from the LCFS***— especially if the rationale is an Executive Order which acknowledges the use of fossil fuels for decades to come. Reducing the Carbon Intensity is the focus of the LCFS, that mission should not be impacted by an EO focused on new vehicle sales decades in the future. If the LCFS gives up on reducing fuel CI in all manners possible under the LCFS, CARB will be giving up on investment and innovation which will provide near-term CI reductions in anticipation of reductions that will occur far in the future. As noted in IPCC reports, near-term GHG reductions have greater effects than those closer to mid-century.

Oil Production Greenhouse Gas Emissions Estimator (OPGEE)

We appreciated the October 14 presentation from Stanford and look forward to this triennial update as an opportunity to improve the OPGEE model. Outdated and inaccurate inputs within the model and the lack of model validation have allowed anti-oil extremists to grab headlines by saying California has the dirtiest oil in the world. This incorrect view of the domestic industry undermines California's climate leadership by ignoring the comprehensive environmental protection measures our industry operates under and that CARB regulates, including: the state's landmark methane rule, AB/SB 32, community air monitoring, and Cap-and-Trade. It further ignores the impact of the lack of qualified and verified data used to model crudes produced outside California. Finally, OPGEE as a model, is only as good as the data inputs and is no match for measured emissions.

Our members report actual emissions each year; reports which are independently verified. However, comparing the carbon intensity scores through actual emissions reported to CARB against those produced OPGEE modeling have shown some fields off by several hundred

percent. Stanford offered to conduct a California validation effort, CIPA would like to work with them on such an effort. We trust there is value in such an effort.

CIPA believes some model inputs are either outdated, inaccurate or do not reflect the current regulatory arena that only California operators are subject to follow. One example is that to date, the OPGEE model has not taken into account the greening of the electricity received from California's grid as renewable percentages are constantly increasing. Other examples are the use of outdated assumptions on the numbers and types of pneumatic devices in the field, reductions provided by field-wide leak detection and repair requirements and vapor recovery on tanks. These inputs overstate the CI of California production and lead to policies that increase our reliance on foreign oil sources.

OPGEE also uses studies outside California about fugitive emissions are not relevant to California's operations. Those other reservoirs are completely different than those in California.

At face value, it is absurd to think that oil from Saudi Arabia or Venezuela is "greener" than locally produced oil from California. California producers are subject to the toughest regulations on the planet and local crude does not travel thousands of miles across the ocean on massive energy-consuming tanker ships to arrive at our ports. At the workshop, presenters confirmed that there is a lack of reliable data from other foreign jurisdictions. There are very important questions to be answered before an apples-to-apples comparison of in-state and foreign crude CI scores can be made.

With accurate data, we can truly demonstrate how California's policies are resulting in cleaner energy production. CIPA has a working group of members looking at this data and we look forward to partnering with CARB and Stanford to make this modeling as accurate as possible.

Given that the actual model outputs were not ready for presentation, CIPA reserves our view of the model's reorganization until more details are conveyed. CIPA does look forward to working through the following issues with CARB and Stanford:

- Use of assumptions and default scores for foreign operations
- Validation of at least one California oil field CI score
- Greening of the California electricity grid
- Impact of the CARB Oil/Gas Methane rule on OPGEE
    - Use of out-of-state fugitive methane studies
- Shipping emissions
- Revised gas treatment modeling
- Other technical issues

CIPA understands that there are a lot of moving policy pieces happening in California at the moment, including Carbon Neutrality policy development, the next Scoping Plan effort, dual CalEPA Transportation studies, potential Cap-and-Trade amendments, ZEV vehicle mandates, and more. But a reasonable review of all of that still shows a need for gasoline and diesel for decades to come. Reducing the carbon footprint of that fuel pool is the goal of the LCFS, and CIPA members are working to that goal.

Thank you for continuing the dialogue with us. We look forward to working with CARB staff and Stanford to improve LCFS and implement updates to OPGEE under this regulatory process.

Sincerely,

Rock Zierman
Chief Executive Officer
California Independent Petroleum Association