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**Session 2 Liquid Low-Carbon Fuels - Commissioner Workshop on  
Near- Zero Emission Vehicles and Low-Carbon Fuels**

*Additional submitted attachment is included below.*



August 19, 2020

California Energy Commission  
1516 Ninth Street  
Sacramento, CA 95814

*Submitted electronically via*

<https://efiling.energy.ca.gov/Ecomment/Ecomment.aspx?docketnumber=20-IEPR-02>

Docket #: 20-IEPR-02  
Project: Transportation

**Re: Session 2: Liquid Low-Carbon Fuels - Commissioner Workshop on Near-Zero Emission Vehicles and Low-Carbon Fuels**

Dear Commissioners:

Biofuelwatch welcomes the opportunity to provide comment on the California Energy Commission (CEC) Integrated Energy Policy Report (IEPR) 2020 update. The mission of Biofuelwatch is to provide information, advocacy and campaigning in relation to the climate, environmental, human rights and public health impacts of large-scale bioenergy. Our organization has experience around the world in numerous formal policy arenas, as well as on the ground with affected communities. These brief comments are provided to the CEC specifically in relation to the Wednesday, July 29, 2020 Commissioner Workshop regarding Liquid Low Carbon Fuels (Workshop)<sup>1</sup>.

***Summary of Concerns***

In the most fundamental sense we believe that in practical, conceptual and narrative terms the Low Carbon Fuel Standard (LCFS) is misleading as a climate solution. The pursuit of an overall market-wide lowered “carbon intensity” in liquid fuels for the consumption in the state of California over such a long-time frame distracts from the imperative of deep transformation of our energy economy away from extractive energy resources. As an evolving policy mechanism we are in particular concerned

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<sup>1</sup> <https://www.energy.ca.gov/event/workshop/2020-07/session-2-liquid-low-carbon-fuels-commissioner-workshop-near-zero-emission>

that the LCFS 1) perversely locks in fossil fuel reliance while 2) deceiving the public that the mechanism works to reduce fossil fuel use and 3) at the same time seriously misinforms decision makers and the general public about the real and finite social and environmental limits of biofuels.

### ***Omissions in Air Resources Board Presentation in Workshop***

One critique that we have of the LCFS that is informed to a significant extent by our experience in working with communities that are directly affected by extractive energy projects, and in biofuels related projects specifically, is the arcane and byzantine nature of the LCFS itself. We contend that the complexity of the framework of the LCFS inhibits and discourages public understanding and participation. Public participation is fundamental to effective climate action.

Compounding the difficulties that the public may have in understanding the LCFS is that representatives of the Air Resources Board (ARB) can struggle to describe all of the working parts of the LCFS to interested audiences. One glaring example of this challenge arose in the ARB presentation during the Workshop.<sup>2</sup> It is a concern that the ARB representative failed to include mention of the Crude Oil Life Cycle Assessment in the Overview of the Low Carbon Fuel Standard (LCFS). By failing to even briefly describe how crude oil is assessed for the LCFS the ARB provided an incomplete picture of the role of petroleum-based liquid fuels manufactured under the mechanism. From our experience in studying the environmental and social impacts of biofuels we also recognize a repeated pattern of the narrative elevation of the promise of liquid biofuels being used to distract from ongoing and anticipated reliance on fossil fuels and the documented impacts of biofuel feedstock production.

It would have been more transparent to publicize the fact that the 2019 Crude Oil Life Cycle Assessment<sup>3</sup> calculates that the carbon intensity of the crude oils refined in California has actually risen over the past three years, and exceeds the 2010 California Baseline Crude Average carbon intensity. This rising crude oil carbon intensity is accompanied by consistently high annual amounts of crude oil sourcing for the California oil refinery sector. Ostensibly the data from 2020 will show historically reduced amounts of crude sourcing for refineries in the state, reflecting recent market volatility. The point is, the near exclusive focus on 'biofuels' in the LCFS, as happened in the ARB presentation in the Workshop, is providing cover for the climate damaging crude oil that remains the primary feedstock for the majority of liquid fuels manufactured in the state of California.

The significant role of petroleum in current and proposed aviation biofuels under the LCFS is similarly obfuscated in many discussions. The integration of biofuels into energy economy discourse is serving as a means of extending the social license and economic viability of the fossil fuel industry.

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<sup>2</sup> <https://efiling.energy.ca.gov/getdocument.aspx?tn=234040>

<sup>3</sup> [https://ww2.arb.ca.gov/sites/default/files/classic//fuels/lcfs/crude-oil/2019\\_crude\\_average\\_ci\\_value\\_final.pdf](https://ww2.arb.ca.gov/sites/default/files/classic//fuels/lcfs/crude-oil/2019_crude_average_ci_value_final.pdf)

### ***LCFS Contributes to Market and Sector Instability – Who Pays the Price?***

The weeks since the Workshop have been a time of unprecedented uncertainty and sector volatility. There have been a series of news worthy events and announcements, including but not limited to these examples:

- The closure of the Marathon refinery in Martinez, CA and the possible conversion to renewable biodiesel at that refinery.<sup>4</sup>
- The announcement by Phillips 66 to convert their Rodeo refinery to biofuels.<sup>5</sup> They state that this would be one of the largest “renewable diesel” plants in the world.
- The announcement by Neste of commitments by three airlines at San Francisco International Airport (SFO) to use Neste’s “sustainable aviation fuel” (SAF) blend, and the current expansion of the Neste SAF refinery in Singapore, which is publicized to be twice as big as the Phillips 66 plant in Rodeo.<sup>6</sup>

We advise Commissioners to take stock and assess whether or not the instability of the refinery sector is exacerbated by the market influences of the LCFS. The sudden pivot of numerous refinery interests to “green” their image with the production of “renewable diesel” and “sustainable aviation fuels” is clearly driven by an appetite for the exceptional government subsidies. This pivot towards “green” fuels is laden with many traps, especially without a fully sober assessment of the resource limits governing the scarcity of feedstock for biofuel production. These very real limitations regarding feedstock supply chains have been front and center in news coverage of these moves in the California and global refinery sector.<sup>7</sup>

Though this recent news is driving home the urgent economic chaos of the moment, analysts of the sector have long understood the truth about the realities of finite feedstock for truly ‘renewable’ biofuels. The documented direct and indirect impacts of increasing competition for finite feedstock should serve as a “reality check” for investors. There is a history of biofuel startup companies, securing ample subsidies and then failing to produce fuels at commercial scale. Where biofuel production has been successful – using vegetable oils, corn and sugarcane, for example, the environmental and social consequences of vast new demand for these commodities

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<sup>4</sup> <https://www.mercurynews.com/2020/08/01/marathon-petroleum-to-shut-martinez-refinery/>

<sup>5</sup> <https://newsroom.phillips66.com/news-releases/news-releases-details/2020/Phillips-66-Plans-to-Transform-San-Francisco-Refinery-into-Worlds-Largest-Renewable-Fuels-Plant/default.aspx>

<sup>6</sup> <https://renewablesnow.com/news/neste-to-supply-sustainable-jet-fuel-to-us-airline-trio-at-sfo-airport-709950/>

<sup>7</sup> From the LA Times “The surge of new entrants into the California biofuel market is creating its own problems, Van der Wal said. Existing renewable diesel suppliers to California, including Neste and Valero Energy Corp., have locked up much of the feedstock, leaving less tallow and cooking oil for the newcomers. Additionally, so many projects are being proposed that there may not be enough diesel demand in California to absorb the additional fuel.” <https://www.latimes.com/business/story/2020-08-12/phillips-66-oil-refinery-biofuel-plant>

has had severe and rippling effects on markets, food production, biodiversity and human rights. Locally, the economic convulsions of an already volatile fuels industry create uncertainty and risk for frontline communities and labor force directly impacted by rapid changes in California's refinery sector. As with fossil fuel dependence, communities affected by refineries are still thrust into an exposed position where the collapse of companies and the evaporation of capital will leave legacy pollution unaddressed and severe economic impacts from the sudden closure and departure of massive industrial operations that result in the dramatic loss of jobs and the sudden erasure of a local tax base.

When it comes to rectifying legacy environmental, social and labor injustices associated with the fossil fuel industry there are many questions raised by this sudden conversion of petroleum refining assets to "green" biofuels. The market incentives of the LCFS are contributing to a chaotic situation that is devoid of the holistic planning that should be the cornerstone of climate action directed to a safe and just transformation of our energy economy.

### ***Are the Sustainability Criteria for the LCFS Behind the Times?***

There are few doubts that sustainability standards regarding biofuels have proven inadequate and unreliable. Those same questions are arising now with the LCFS. Our organization is greatly concerned that by the time the ARB comes to terms with weakness and loopholes in the standards regarding feedstock pathways, irreparable damage will have already occurred.

As a high level concern, and one that was raised during the Workshop, our organization is compelled to inquire just how is the ARB addressing concerns about palm oil entering feedstock supply chains? Are potential loopholes and market trends being addressed in a contemporary manner? We appreciate that the ARB has taken steps to prohibit virgin palm oil as a feedstock pathway for the LCFS fuels manufactured in the California refinery sector. Since that time, though, a much greater understanding of the industry has revealed that the qualification of Palm Fatty Acid Distillate (PFAD) as "wastes and residues" is essentially a loophole for utilization of palm oil in biofuel manufacture, displacing other uses of the material, contributing significantly to overall demand for palm oil and thus driving the expansion of palm oil production – well known to be a major contributing factor in deforestation, pollution, and human rights abuses.

Neste, the company noted above for their recent agreement with airlines at SFO to provide 'sustainable aviation fuel' is of particular concern. We direct you to our 2018 briefing "***Neste: The Finnish Company Looking to Put Palm Oil In Airplane Fuel Tanks.***"<sup>8</sup>

Neste has remained mired in controversy regarding the utilization of palm oil feedstock in their fuel manufacturing. For instance, a year ago it was discovered that

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<sup>8</sup> <https://www.biofuelwatch.org.uk/wp-content/uploads/Neste-aviation-biofuels-briefing.pdf>

Neste sources palm oil from a small number of Indonesian palm oil mills that are included among those most responsible for driving orangutan habitat loss.<sup>9</sup>

Beyond expressing concern with the potential direct entry of palm oil and/or PFAD into the California refinery sector for use under the LCFS, either through permitted means or through loopholes and fraudulent trafficking of feedstock commodities, or in liquid fuels produced in other jurisdictions, we want to emphasize how dangerous the overall narrative of “sustainable aviation fuels” is for the worlds remaining forests and the communities that steward them. In sum – unsustainable levels of demand (such as would be required to have any impact on aviation emissions) cannot be met “sustainably.”

The Workshop did not provide assurances that these threats and risks are being fully comprehended by state officials. Failure to completely comprehend the environmental and social risks from accelerated biofuel expansion insures that the safeguards against those dangers will not only be inadequate but that they could exacerbate the situation.

### ***False Promises of Cellulosic Biofuels***

There was mention in the workshop about the development of woody biomass-based liquid fuels as part of a future diversified “sustainable aviation fuel” market. It is important to recognize that experts within the field have been clear in stating that the technology for cellulosic biofuels remains decades away from commercial availability. Even if scalable technology existed for refining such heterogeneous source material into a widely usable ‘drop in’ liquid biofuel, the rampant utilization of woody biomass for manufacturing fuel carries with it severe land use, biodiversity protection and water quality challenges. Our report “***Dead End Road: The False Promises of Cellulosic Biofuels***”<sup>10</sup> looks at the technical challenges and the history of attempts to produce cellulosic biofuels at commercial scale.

The ARB and the CEC, as well as CalFire and the California Natural Resources Agency, have repeatedly promoted unsubstantiated benefits and potential in manufacturing liquid fuels from the utilization of woody biomass. This is a dangerous distraction. Such a false narrative fails to take into account the very real threats to biodiversity and water quality that arise from excessive extraction of forest material as feedstock, as well as downplaying the very real technical limits and dangers from such processes. Lessons can be learned from the growing controversy regarding the impacts of using biomass as a substitute for coal, and the substantial amounts of peer reviewed literature documenting the impacts of biomass energy on forests and climate.

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<sup>9</sup> <https://newsnowfinland.fi/finland-international/investigation-neste-biofuel-link-to-orangutan-habitat-destruction>

<sup>10</sup> <http://www.biofuelwatch.org.uk/wp-content/uploads/Cellulosic-biofuels-report-2.pdf>

### ***Dangerous Assumptions About CORSIA Mechanism***

The UN's International Civil Aviation Organization (ICAO) proposes to achieve "carbon neutral emissions growth" for the aviation industry using "alternative" fuels and forest offsets, under a scheme called CORSIA (Carbon Offsetting and Reduction Scheme for International Aviation). This mechanism was alluded to during the presentation but was not described in detail. Many dangerous assumptions about CORSIA were elevated in the Workshop. Our organization published a report in September 2019 titled "***CORSIA: A False Solution to the Very Real Threat of Emissions from Aviation.***"<sup>11</sup> In this report we describe the risks of an accelerated demand for palm oil as feedstock for "sustainable aviation fuels." Unfortunately, the Workshop did not go into the necessary discussion regarding how CORSIA sustainability criteria in development for aviation biofuels are woefully inadequate.

### ***Conclusion: The LCFS is Insufficient as a Climate Action Tool***

We have had more than a decade of watching how the markets-based mechanisms are being designed, implemented and monitored in California. We are of the position that markets-solutions are protecting the polluters and their economic and political interests more than they are facilitating the society wide transformation of our energy systems that are so urgently needed.

In essence, the climate question is one of finite limits, yet the LCFS promotes a narrative that it is possible to switch out fossil fuels for supposedly low carbon fuels such as biofuels and just keep consuming fuel at the same if not greater quantities.

We urgently encourage Commissioners to consider the evidence-based and sober conclusion that increasing industrial demands on the land sector to provide feedstock for liquid biofuels is not a viable climate solution. Deforestation, biodiversity loss, polluted waterways, displaced communities, and volatile commodity markets are all characteristics of the global biofuels sector. None of these are attributes of a truly just and science-based approach to addressing climate change.

Thank you for your attention to this letter. We are available for clarification and would be glad to offer our expertise for further discussion.

Sincerely,



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<sup>11</sup> <https://www.biofuelwatch.org.uk/wp-content/uploads/CORSIA-Briefing.pdf>