| DOCKETED | |
|---|---|
| **Docket Number:** | 20-IEPR-02 |
| **Project Title:** | Transportation |
| **TN #:** | 234356 |
| **Document Title:** | CA Advanced Biofuels Alliance Comments - CABA CEC Low-Carbon Liquid Fuels Comments |
| **Description:** | N/A |
| **Filer:** | System |
| **Organization:** | CA Advanced Biofuels Alliance |
| **Submitter Role:** | Public |
| **Submission Date:** | 8/19/2020 9:53:49 AM |
| **Docketed Date:** | 8/19/2020 |

*Comment Received From: CA Advanced Biofuels Alliance*
*Submitted On: 8/19/2020*
*Docket Number: 20-IEPR-02*

## CABA CEC Low-Carbon Liquid Fuels Comments

*Additional submitted attachment is included below.*

August 19, 2020

Commissioner Patty Monahan
California Energy Commission
Sacramento, CA 95814

**RE: Liquid Low-Carbon Fuels – Commissioner Workshop on Near Zero Emission Vehicles and Low-Carbon Fuels**

Dear Commissioner Monahan:

Thank you for the opportunity to comment on the Near Zero Emission Vehicles and Low-Carbon Fuels Commissioner Workshop. We appreciate the Commission taking the time to learn about our industry's role in achieving the State's environmental goals. Our comment on this workshop is simply to encourage the Commission to find ways to facilitate the use of biodiesel and renewable diesel (collectively "biomass-based diesel") in those heavy duty vehicle (HDV) applications where electrification is not yet feasible. There is no need to continue using petroleum diesel in such applications when drop-in, sustainable biomass-based diesel is available now -- in blend ratios comprising up to 100% renewable content -- for achieving significant environmental and public health benefits.

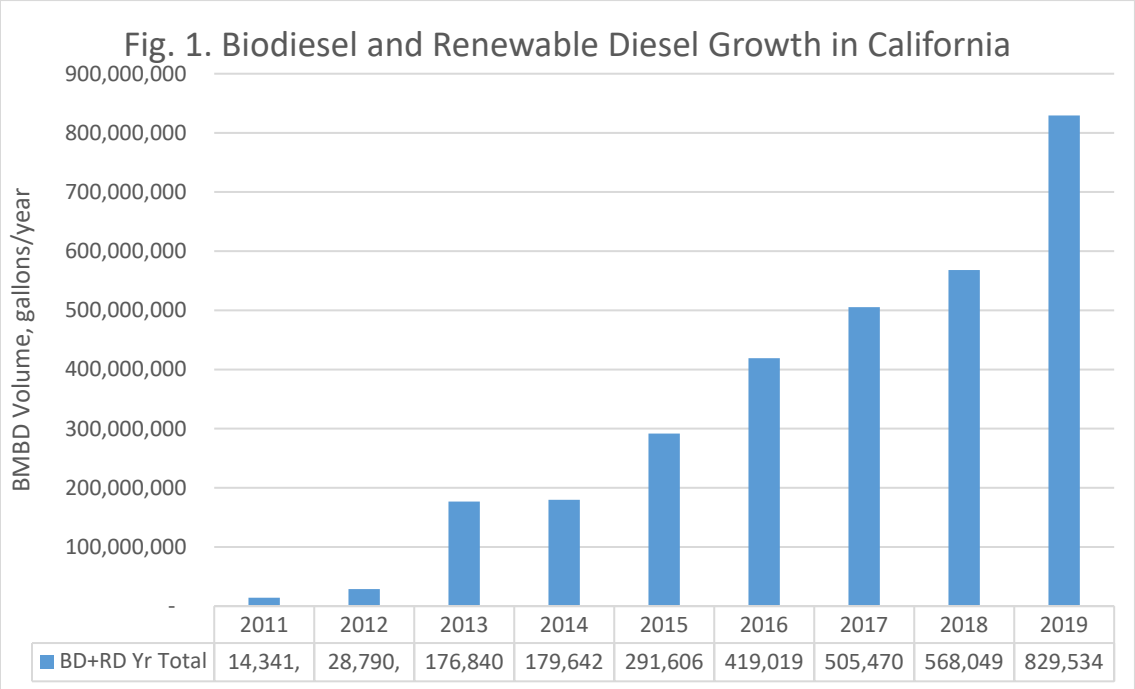
The California Advanced Biofuels Alliance (CABA) is a not-for-profit trade association promoting the increased use and production of advanced biofuels in California. CABA has represented biomass-based diesel (BMBD) feedstock suppliers, producers, distributors, retailers, and fleets on state and federal legislative and regulatory issues since 2006. As longtime supporters of the Low Carbon Fuel Standard (LCFS), we strongly support clean air and climate protective policies. Accordingly, we believe policies that promote the use of low-carbon fuels should be developed holistically so that environmentally-protective, biomass-based diesel fuel is encouraged in applications where electrification is not yet feasible.

California currently has seven operating biodiesel production facilities and one renewable diesel facility.[1] Many more biodiesel and renewable diesel production facilities reside in the rest of the United States. Currently, there are over 1 billion gallons of nameplate biodiesel plant capacity with LCFS pathways, more than enough to supply the whole state with biodiesel at B20.[2] In 2018 alone, over one billion gallons of additional renewable diesel production capacity was announced throughout the country.[3]

To emphasize the points made by CABA Members, New Leaf Biofuel and World Energy, we believe an investment in alternative fuel storage, blending & distribution infrastructure is key to achieving the State's climate goals.

[1] Clean Diesel Powers: California, https://www.dieselforum.org/california
[2] National Biodiesel Board, https://www.biodiesel.org/production/production-statistics and LCFS Pathway Certified Carbon Intensities, https://ww3.arb.ca.gov/fuels/lcfs/fuelpathways/pathwaytable.htm
[3] A Roadmap for Eliminating Petroleum Diesel in California by 2030, California Advanced Biofuels Alliance, 2019.

As shown in the figures below, biomass-based diesel[4] plays a critical role in the success of the LCFS. Biomass-based diesel volumes have increased from 14 million gallons in 2011 to 830 million gallons in 2019[5] (Fig. 1) and are expected to reach 1 billion gallons by the end of 2020. These low-carbon fuels become more readily available each year. These high-performing diesel replacements have transitioned from modest credit generators to mainstays of the program, accounting for 45% of LCFS credits in 2018 and 2019 (Fig. 2)[6]. As such, biomass-based diesel fuels have provided the lion's share of the LCFS credits to date (cumulatively 41% of all credits generated since 2011) and have therefore been a key contributor to the LCFS' success. Biomass-based diesel fuels have displaced so much petroleum diesel in eight years that biodiesel and renewable diesel now comprise nearly 22% of each gallon of diesel fuel used in California (Fig. 3)[7].




[4] Biodiesel and renewable diesel are made from the same organic feedstocks but through different processes. Biodiesel is produced through a catalyzed reaction with alcohol in a process called transesterification, while renewable diesel is produced through more energy-intensive hydrotreating of the feedstock in what is essentially the same process used to make conventional petroleum diesel.

[5] Fig. 1 derived from LCFS Quarterly Data Summary (updated April 30, 2020), accessed May 15, 2020.

[6] Fig. 2 derived from LCFS Quarterly Data Summary (updated April 30, 2020), accessed May 15, 2020.

[7] Fig. 3 derived from LCFS Quarterly Data Summary (updated April 30, 2020), accessed May 15, 2020.

Fig. 2. Biomass-based Diesel's Growth in LCFS Credits

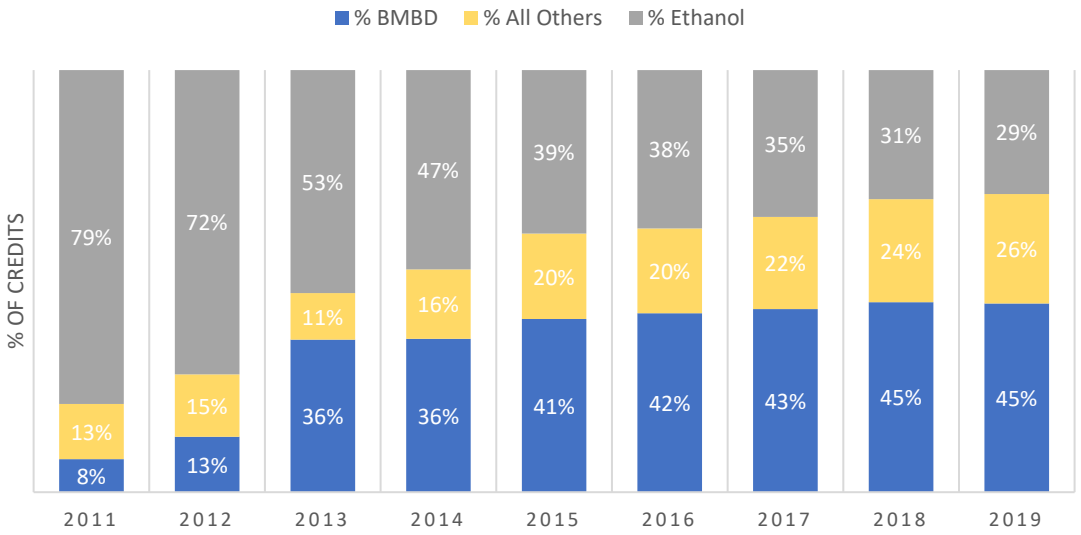
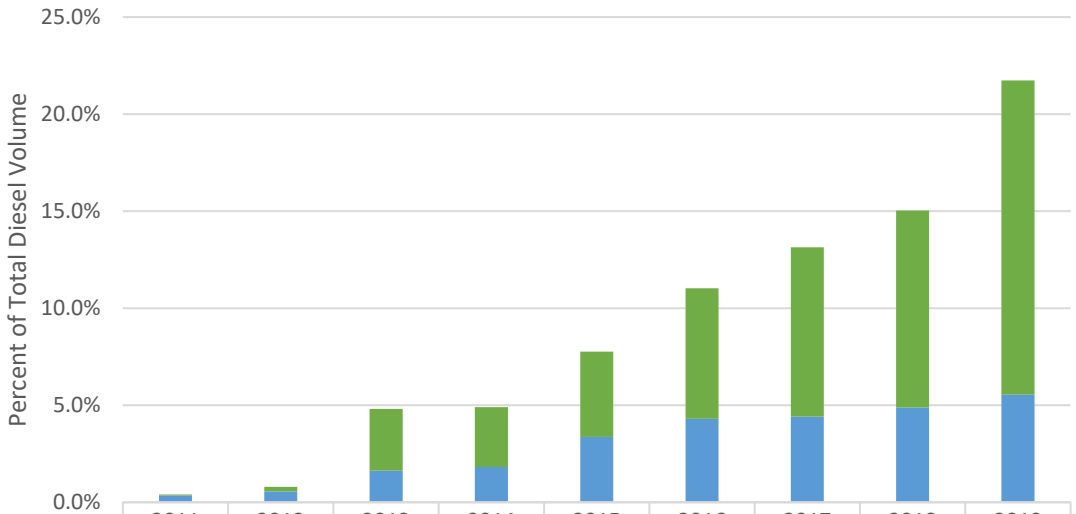



Fig. 3. Biomass-based Diesel Percent of CA Diesel Pool




| | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|---|---|---|---|
| RD % | 0.1% | 0.2% | 3.2% | 3.1% | 4.4% | 6.7% | 8.7% | 10.2% | 16.2% |
| BD % | 0.3% | 0.6% | 1.6% | 1.8% | 3.4% | 4.3% | 4.4% | 4.9% | 5.5% |

Biomass-based diesel provides significant environmental and public health benefits. Relative to petroleum diesel, biomass-based diesel fuels reduce greenhouse gas emissions (GHG) upwards of 71%, diesel particulate matter[8] (diesel PM) by 25% or more depending on blend levels, and carbon monoxide,

[8] CARB identified diesel PM as a toxic air contaminant in 1998, "with no safe threshold of exposure, which means that any diesel PM exposure may increase lifetime cancer risk for affected communities." Proposed Regulation on the Commercialization of Alternative Diesel Fuels, Staff Report: Initial Statement of Reasons, p. 50, https://ww3.arb.ca.gov/regact/2015/adf2015/adf15isor.pdf, accessed Feb. 10, 2020.

polycyclic aromatic hydrocarbons (PAH), and other noxious compounds by a substantial degree. Also, each gallon of biomass-based diesel consumed helps keep multiple gallons of petroleum crude oil in the ground[9], which advances the Governor's objectives for reducing California's dependence on fossil fuel by 50% by 2030 and achieving carbon neutrality by 2045.

Because of their immediate benefits and current availability, biodiesel and renewable diesel should be used in all applications where petroleum diesel is used today. This includes on- and off-road transportation, marine applications and generators used during California's Public Safety Power Shut-offs.

Since widespread electrification of the medium- and heavy-duty fleet in California is not expected to happen until after 2040[10], biomass-based diesel fuels can provide immediate public health benefits and help meet important policy objectives during the intervening years while electrification ramps up in the State. These sustainable diesel replacements can provide benefits to all Californians, but particularly for those vulnerable populations in disadvantaged communities near heavy freight activities and facilities.

The key to replacing fossil fuels is to continue growing the market for sustainable, renewable fuels like biomass-based diesel and investment in storage and distribution infrastructure, independent of petroleum.

Our current lack of infrastructure causes a bottleneck in the distribution of renewable fuels. Providing funding for ubiquitous state-wide distribution infrastructure for biomass-based diesel and to shift the balance of market control, must be a key part of the CEC's policy strategy.

Specifically, CABA estimates a need for 25-40 projects ranging from bulk fuel terminal retrofitting to dedicated renewable fuels distribution racks offering blends of biodiesel and renewable diesel as a 100% renewable solution. These projects have been estimated to cost between $500,000 - $4 million each.

As stated in CABA's whitepaper, "A Roadmap for Eliminating Petroleum Diesel in California by 2030," we believe the demand for BMBD and other alternative fuels will continue to grow, eliminating the need for petroleum diesel. To reach this goal, we need the state's support in deployment of renewable fuel infrastructure.

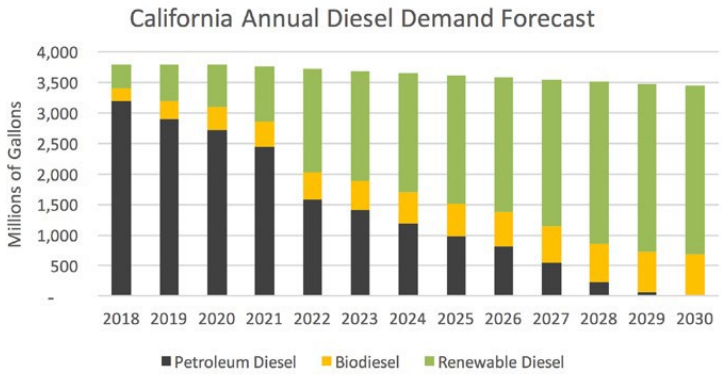
Billions of gallons of petroleum diesel have already been displaced with an array of biofuels and electricity. Since 2010, the renewable portion of California's diesel has increased from less than 1% to approximately 22%. With an anticipated 80% supply of renewable diesel and 20% biodiesel, clean sustainable diesel can completely replace petroleum by 2030. California can meet this goal through a

---

[9] As a general rule, each barrel (42 gallons) of petroleum crude oil yields about 19-20 gallons of gasoline, about 11-12 gallons of diesel, and about 4 gallons of other products. See https://www.eia.gov/tools/faqs/faq.php?id=327&t=9, last accessed Feb. 20, 2020.

[10] CARB staff's own projections for electrification in the heavy-duty vehicle (HDV) sector suggests fleet penetration of electrified HDVs would not grow beyond single digits until sometime after 2040. See Appendix F, Figs. 1-5, "Staff Report: Initial Statement of Reasons," released October 22, 2019, https://ww3.arb.ca.gov/regact/2019/act2019/appf.pdf, pp. 7-9, accessed Feb. 20, 2020.

combination of efficiency improvements, regulatory certainty, infrastructure investment and continued growth in the use of renewable fuels and electrification. This is shown in the graph below.




**Notes**

(1) Diesel fuel demand assumed stable through 2020 then decreasing 1% per year based on efficiency gains, electrification and RNG.
(2) Renewable Diesel volume includes both neat (100%) and co-processed renewable diesel from both lipid and non-lipid feedstocks.[11]

We do not believe there is any one magical solution to help California achieve its ambitious goals. We think that biomass-based diesel will continue to prove to be an important key to California's climate goals. We thank staff for their continued work on this important matter and look forward to collaborating more with you. Please feel free to contact us if any questions should arise.

Sincerely,

Rebecca Baskins
Executive Director
California Advanced Biofuels Alliance

[11] A Roadmap for Eliminating Petroleum Diesel in California by 2030, California Advanced Biofuels Alliance, 2019.