June 6, 2023

Cheryl Laskowski
Branch Chief, Low Carbon Fuel Standard Team
California Air Resources Board

Submitted via LCFS Comments Upload Link

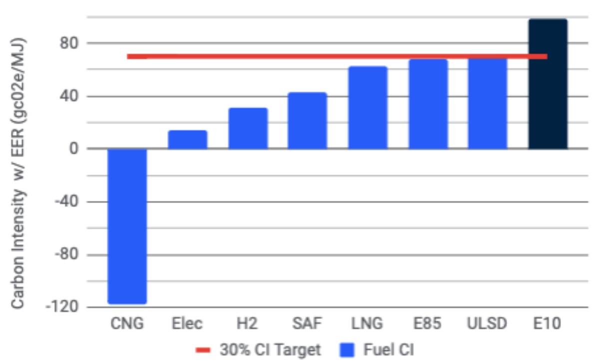
RE: May 23, 2023 LCFS Workshop Potential Changes to the Low Carbon Fuel Standard

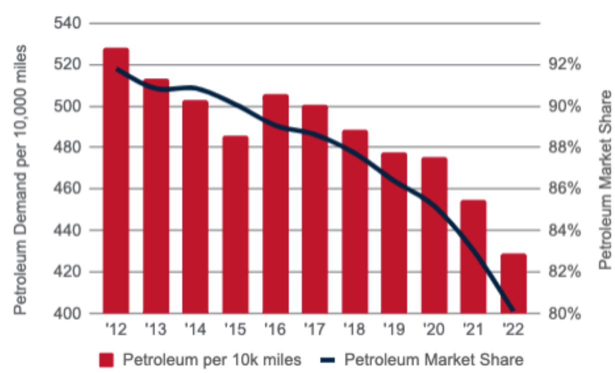
Dear Dr. Laskowski and the respective Transportation Fuels Branch Staff,

Carbon Acumen appreciates the opportunity to comment on the potential changes to the Low Carbon Fuel Standard (LCFS) during the workshop held on May 23, 2023. I would like to thank CARB leadership and staff for listening to a wide range of voices throughout the entire informal and formal rulemaking process improving the program to be more resilient and drive further investments into low carbon fuel infrastructure.

Carbon Intensity Reduction Progress & Momentum

The LCFS has been highly success in its original mission to decrease the carbon intensity of California's transportation fuel pool and to reduce petroleum dependency as all fuels sold in the state of California to end customers are at or below a 30% reduction target except for gasoline[1]. Due to market share expansion of lower CI fuels - petroleum market share by volume has dropped significantly to 80% in 2022 while petroleum used per 10,000 vehicle miles traveled (VMT) has also dropped to 429 gallons, a drop of 18% in the past decade[2] - the LCFS program has been able to achieve the 2024 compliance target of 12.5% a full two years in advance[3].



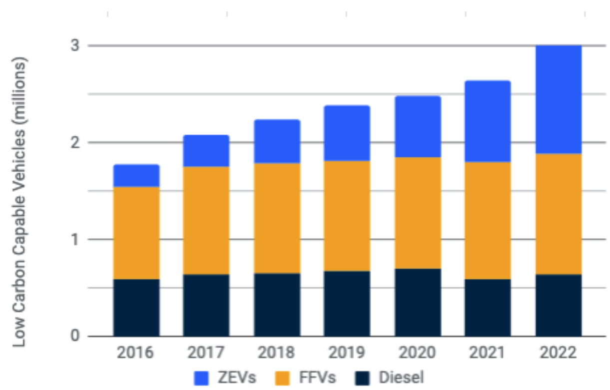


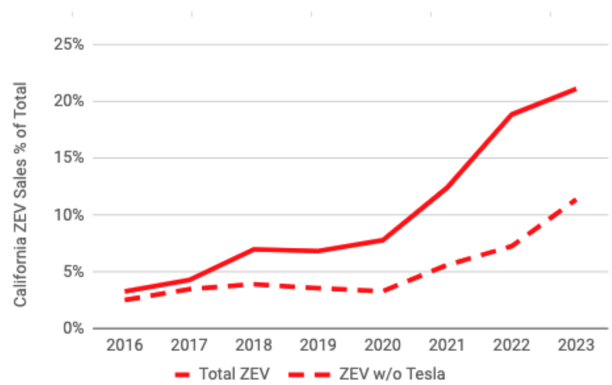
[1] CARB LCFS Reporting Tool Quarterly Summaries
[2] US DOT FWHA, Traffic Volume Trends
[3] CARB LCFS Data Dashboard

This momentum has the opportunity to build on itself as the current run rates of domestically produced Renewable Diesel and Ag Digester renewable natural gas (RNG) has the potential to meet 60% and 50% of the states diesel demand and NG as a transportation fuel[4], respectively.

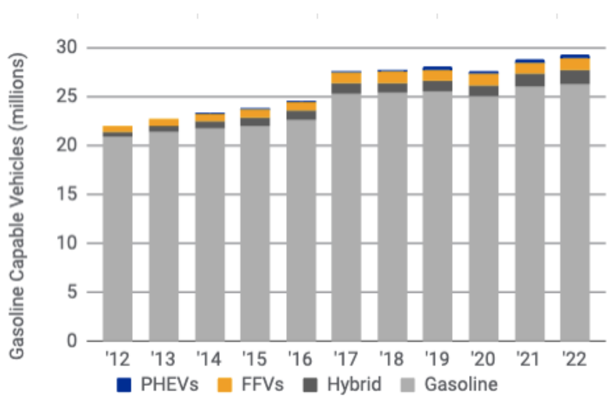
Low Carbon Capable Vehicles (Light-Duty) & Gasoline Consumption

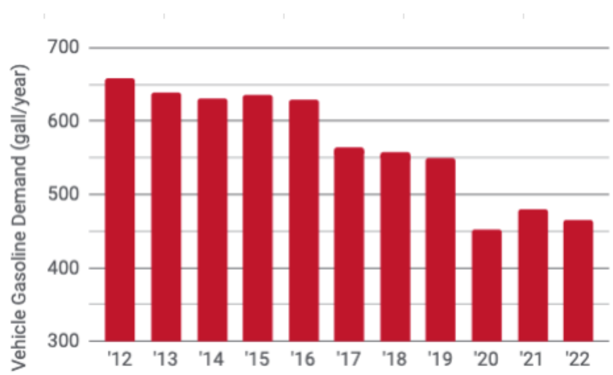
Of the 30 million light-duty vehicles (LDV) registered in California, roughly 10% or 3 million vehicles are low carbon capable (ZEVs, FFVs, Diesel, NG, Propane)[5] as shown in the graph on the right. ZEVs (BEV, PHEV, FCEV) now account for over 20% of new vehicle sales in the state and consumers are starting to purchase more ZEVs created solely by Tesla[6].





Gasoline capable vehicles (gasoline, gasoline hybrid, FFV, PHEV) still make up roughly 95% of the LDV population or over 29 million vehicles on the road. However gasoline demand per gasoline capable vehicle has dropped to around 460 gallons per year per vehicle since 2020[7] from a combination of more FFV drivers using E85[8], more PHEV drivers driving a higher percentage on the battery, and hybrid or full-on work-from-home model employers have implemented.





[4] EPA Renewable Fuel Standard RIN Generation
[5] CEC ZEV & infrastructure Statistics, LDV Population
[6] CEC ZEV & Infrastructure Statistics, New ZEV Sales
[7] CDTFA Fuel Taxes Statistics & Reports
[8] CARB: Annual E85 Volumes

With the increase in consumer demand for low carbon fuels and low carbon capable vehicles, along with lower demand for petroleum based fuels, it is now time for CARB to increase stringency of the program to 2030 combined with a near-term step down and an Auto-Acceleration Mechanism (AAM).

Step Down Magnitude & Timing

CARB should implement a step-down in CI stringency as soon as possible in the 18-20% range starting January 1, 2024. If CARB cannot implement a step down by the beginning of 2024, it is recommended to have two different CI targets for 2024: one for H1-2024 and one for H2-2024. If CARB does not have the ability to implement a step down whatsoever in 2024, Carbon Acumen recommends a step down to at least 20% or beyond in 2025.

Auto-Acceleration Mechanism Metrics, Thresholds, Timing

Carbon Acumen supports the two-test verification metrics presented by AJW[9] with the following thresholds and characteristics:

- **Credit-to-Deficit ratio: 1.1 (higher than 1.0 as presented by AJW)**
- **Bank-to-Deficit ratio: 0.5 (lower than 0.7 as presented by AJW)**
- **Use calendar year, annual data**
- **Pull forward only of the entire curve by 1 year per trigger**
- **Able to trigger multiple years in a row**
- **No freeze or trigger-and-release**
- **Executive Officer announces by May 15 if triggered for ample lead time**

The bank-to-deficit ratio of 0.5 is the equivalent of two full quarters worth of deficits in the bank. By using the characteristics defined above, low carbon fuel producers, marketers and retailers will be able to clearly communicate to financial institutions by saying, “If the program exceeds compliance by 10% and there are at least two quarters worth of deficits in the bank, the AAM triggers and the CI reduction targets are accelerated by one year.”

Carbon Acumen adamantly opposes an AAM based on price as it serves as a de facto carbon tax, increasing the possibility for market manipulation, thus slowing down the transition to a more sustainable energy economy.

If you have any questions or comments about the information provided above or in the Appendix, please feel free to reach out to me at will@carbon-acumen.com.

Sincerely,
Will Faulkner
Carbon Acumen, Founder

[9] AJW Presentation: Acceleration Mechanism, Primary Design Elements