September 26, 2023

Liane M. Randolph
Chair

Steve Cliff
Executive Officer

California Air Resources Board
1001 I Street
Sacramento, CA 95814

RE: **Pearson Fuels Comments on Potential Changes to the Low Carbon Fuel Standard including the Value of a Robust E85/Flex Fuel Vehicle Policy to Decarbonize and De-fossilize Light-duty Vehicles While Saving Consumers Money**

Dear Chair Randolph and Executive Officer Cliff,

RTC Fuels, LLC, dba Pearson Fuels ("Pearson Fuels"), appreciates the opportunity to provide comments on potential changes to the Low Carbon Fuel Standard ("LCFS"). Pearson Fuels is the largest distributor of E85 in California, supplying more than 325 public and private fueling locations across the state. More than 100 additional Pearson Fuels sites are planned to open within the next 24 months. Pearson Fuels is also providing the only E85 fuel rack in California, which replaces the gasoline component of E85 with low-carbon intensity renewable naphtha. Paired with cellulosic ethanol, E85 with renewable naphtha is fully renewable and low aromatic with GHG reductions approaching 80% compared to CARB unleaded gasoline.

Summary

Pearson Fuels is an ardent supporter of the LCFS. As recognized in the 2022 Final Scoping Plan ("Scoping Plan"), the LCFS program is the most effective program in the transportation sector. The Scoping Plan similarly recognizes that increasing the rate of LCFS carbon intensity ("CI") reductions and extending the schedule of CI reductions is essential to California's success in fulfilling the requirements of AB 32 and achieving carbon neutrality by 2045.

In order to fully leverage the tremendous market power of the LCFS to decarbonize the transportation sector, we recommend that the Governing Board direct CARB staff to fully explore the following specific issues to inform the development of proposed amendments to the LCFS:

- Low carbon fuels such as E85 are often priced below conventional fossil fuels and these fuels save consumers' money, reduce greenhouse gas ("GHG") emissions, reduce criteria pollutant emissions, and diversify the transportation fuels market.

- California marketers have identified and promoted E85 as a consumer-friendly fuel; built out a massive E85 station network particularly in disadvantaged communities; and leveraged California's existing FFV fleet to reduce petroleum dependence and GHG emissions.
- California should continue to utilize biofuels as a vitally important GHG reduction strategy; further leverage its existing FFV fleet to reduce GHGs in the light-duty sector; and utilize biofuels including E85 to achieve carbon neutrality to supply internal combustion engines that will remain on the road beyond 2045.
- Through the use of the full range of low carbon fuels available to California, it is feasible for California to achieve a CI reduction goal of 35% by 2030, as we've advocated for previously. ICF International shows the potential for a target reduction of 42% for 2030 through modeling it has done for the Low Carbon Fuels Coalition and other stakeholders.

In addition to these LCFS program recommendations, we recommend that CARB explore ways to establish other types of policy support for flex fuel vehicles ("FFVs") to complement the support that is provided to zero emission vehicles ("ZEVs"). Expanding the supply of both FFVs manufactured by automakers and conventional gasoline vehicles converted to FFVs via aftermarket devices provides tremendous opportunities to empower disadvantaged communities to decarbonize while reducing consumer fuel costs and cutting fossil fuel usage. Indeed, the use of E85 in FFVs grew an astounding 66% from 2021 to 2022 while the size of the FFV fleet in California was essentially unchanged.[1]

I. The SRIA is incorrect to assume that low carbon fuels cost more than fossil fuels, and that marketers of low carbon fuels do not pass savings to their customers. In the case of E85 in California, these assumptions are demonstrably incorrect.

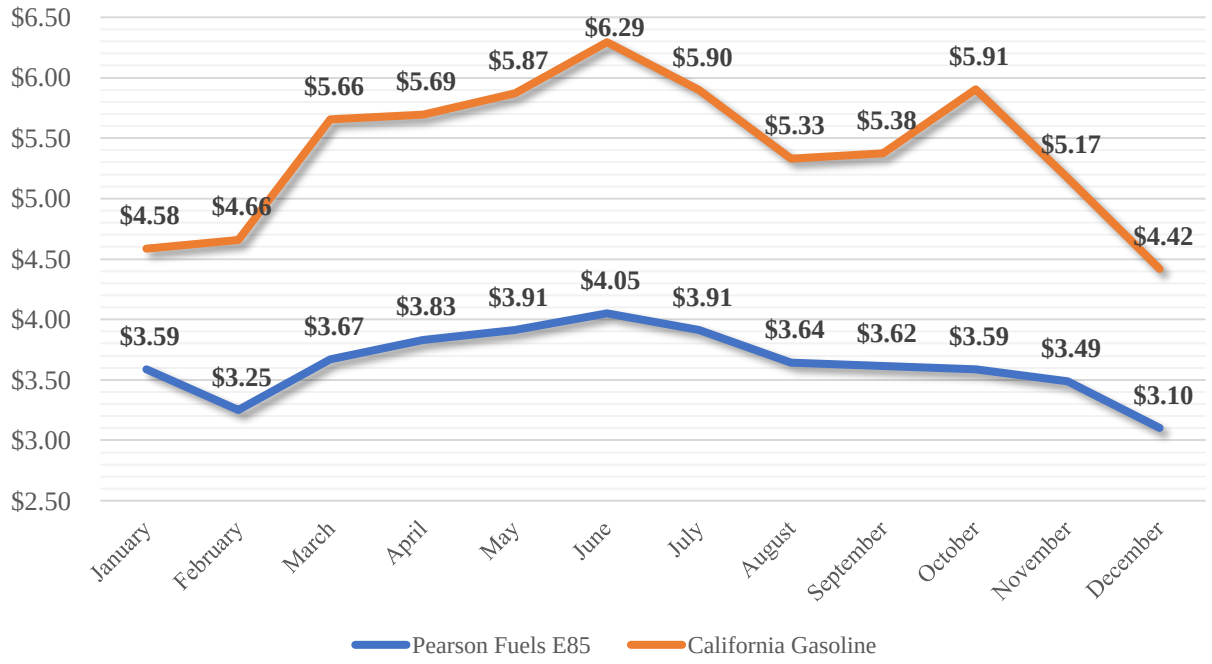
The Standardized Regulatory Impact Assessment ("SRIA") contains assumptions that are biased against low carbon fuels and in favor of fossil fuels. This is remarkable in the State that is investigating the record profits of fossil fuel companies and seeking to dramatically cut fossil fuel usage over the next two decades. There is well-documented evidence that the assumptions as applied to E85 in the California marketplace are completely incorrect, including the simple fact that E85 use grew 66% in 2022 over 2021 because it saved consumers so much money. The mistaken assumption in the SRIA is most starkly illustrated by the growth and pricing in high-blend ethanol, E85. The same general economics (*that ethanol consistently costs less than gasoline in the wholesale market*) apply to low-blend ethanol which is blended at a 10% blend level across the vast majority of California's gasoline fuel pool.

The "Fuel Expenditures" section of the SRIA begins by stating, "The proposed amendments will increase the volume of low-CI fuels in the California market, which tend to be higher cost than fossil fuels."[2] In the section entitled, "Estimated Cost Pass-Through," the SRIA states that,

[1] See Exhibit 1 attached illustrating the decline in FFV manufacturing by model and original equipment manufacturef, Renewable Fuels Association, Flex Fuel Vehicle Availability by Year, Renewable Fuels Association.
[2] CARB, Low Carbon Fuel Standard 2023 Amendments Standardized Regulatory Impact Assessment (hereafter "SRIA), at p. 51, available at https://ww2.arb.ca.gov/resources/documents/low-carbon-fuel-standard-sria#:~:text=Standardized%20Regulatory%20Impact%20Assessment&text=The%20SRIA%20is%20an%20initial,to%20updating%20the%20LCFS%20Regulation.

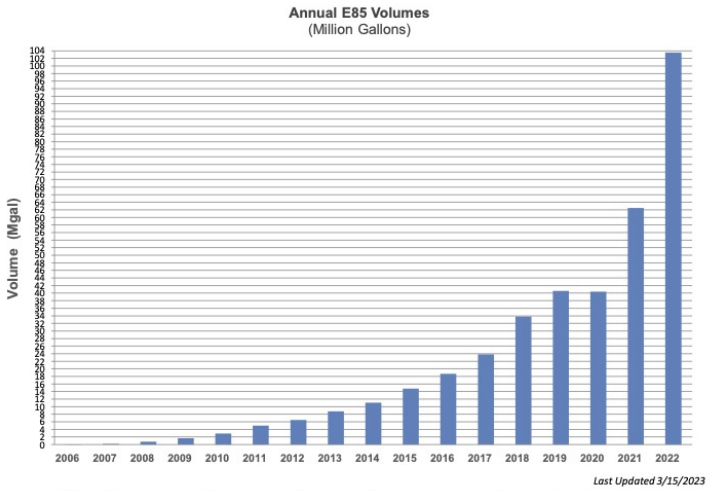
"When LCFS credit revenue is generated by a fuel producer, staff assumes that the producer may not share any of the revenue with fuel consumers, but rather use this revenue to cover the higher cost of producing these lower carbon fuels or retain this value to improve their firm's profitability."[3]

During 2022, the Pearson Fuels station network delivered E85 at massive discounts to conventional gasoline, even after adjusting for fuel mileage per gallon, with price discounts ranging from nearly a dollar to more than $2.30 per gallon on an average monthly basis as compared with same station gasoline prices. [4]



In the aftermath of the Russian invasion of the Ukraine and the resulting price spike in world **and U.S. national** crude oil prices, E85 offered a refreshingly cost-effective and non-petroleum dependent fuel alternative to FFV drivers- but only to FFV drivers. The price discount spurred a remarkable year-on-year E85 demand growth rate of 66% in California. Through its E85 program found at Title 13, California Code of Regulations, section §2292.4, CARB tracks every gallon of E85 sold in the state. The following table and chart reflect the dramatic growth in E85 that California has achieved.[5]

[3] Id. at p. 56.
[4] Pricing graph based on Pearson Fuels' internal price tracking of all grades of unleaded gasoline vs. E85, supporting information available upon request.
[5] See California Air Resources Board, "Alternative Fuels: E85 Ethanol," website page at https://ww2.arb.ca.gov/our-work/programs/alternative-fuels/alternative-fuels-e85-ethanol, "Annual E85 Volumes based on Reported Test Program Exemption Data," at https://ww2.arb.ca.gov/our-work/programs/alternative-fuels/alternative-fuels-e85-ethanol See also **Exhibit 4** attached.



Year	Total Vol *(gal)*
2006	8,000
2007	155,847
2008	770,983
2009	1,643,497
2010	2,930,034
2011	5,024,329
2012	6,482,868
2013	8,799,981
2014	11,066,428
2015	14,773,124
2016	18,679,904
2017	23,854,146
2018	33,774,239
2019	40,602,796
2020	40,372,564
2021	62,475,418
2022	103,521,770

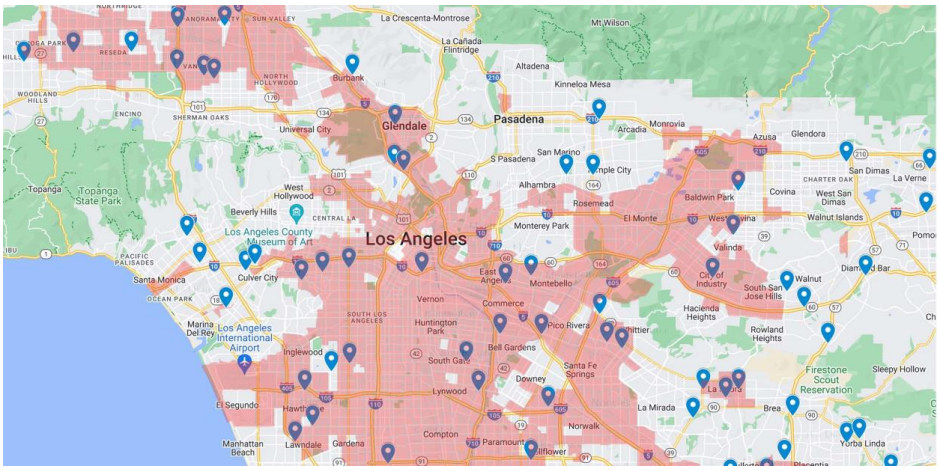
CARB has confirmed the rigor of its oversight program and the rate of E85 growth in a letter to Pearson Fuels that is attached as **Exhibit 4** to this comment.[6] The sustained growth in demand for E85 from FFVs in California is remarkable, surging from less than 6.5 million gallons in 2012 to over 103 million gallons in 2022.

Given the fact that ethanol is the only low-carbon fuel displacing the use of gasoline in spark-injection engines, the assumptions in the SRIA warrant review. The negative impact of the incorrect assumptions is to dramatically overestimate the cost to consumers while overlooking the savings to consumers. This approach tends to bias the SRIA against low-carbon fuels and in favor of fossil fuels.

II. California marketers have identified and promoted E85 as a consumer-friendly fuel; built out a massive E85 station network particularly in disadvantaged communities; and leveraged California's existing FFV fleet to reduce petroleum dependence and GHG emissions.

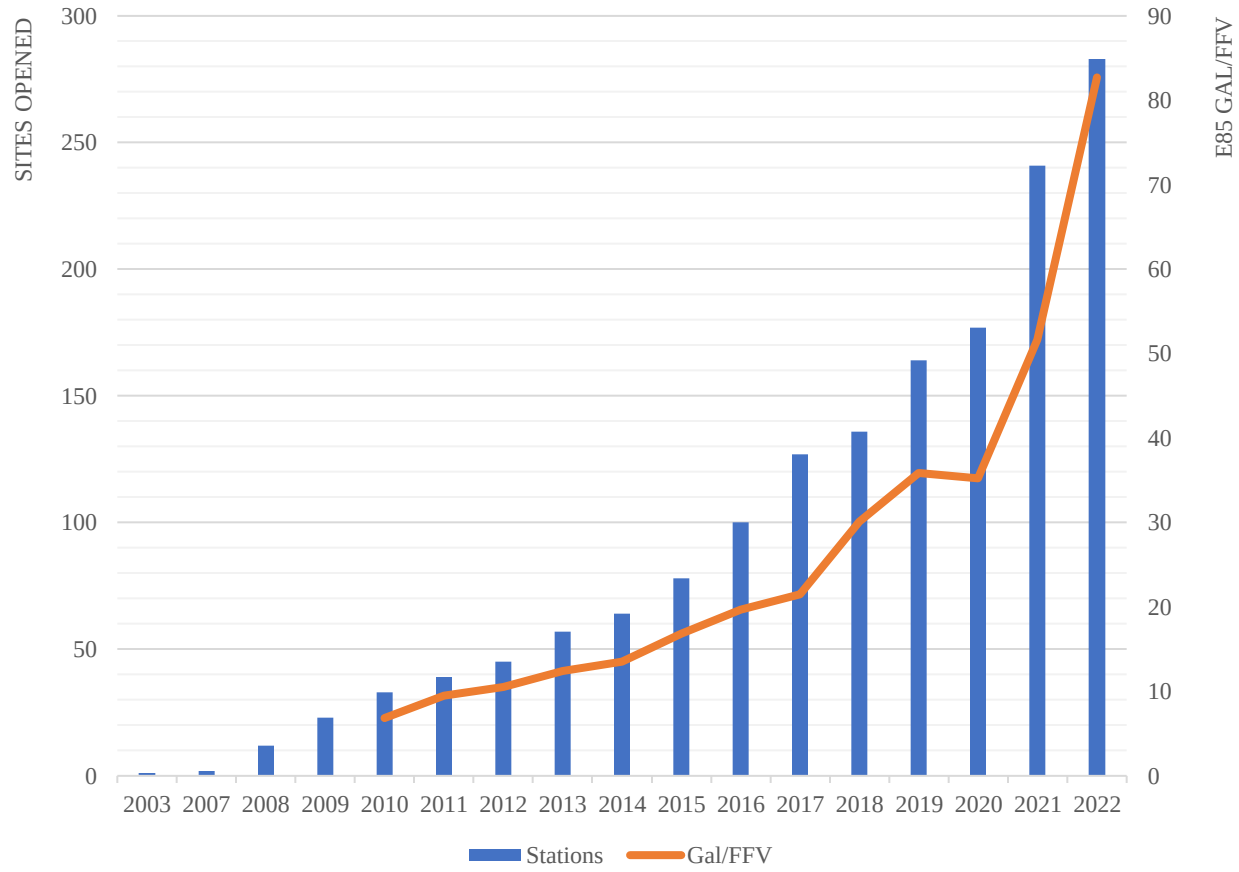
As previously noted, Pearson Fuels is the largest distributor of E85 in California and supplies more than 325 retail E85 stations under long-term contracts. Pearson Fuels continues to open 5-6 new E85 stations per month. These stations are spread throughout the state with a high concentration in disadvantaged communities where the fuel cost savings from E85 are most valuable to low and moderate-income consumers. The following map was developed based on the Pearson Fuels network of stations in Los Angeles overlayed on the California Legislature's SB 535 "Disadvantaged Communities Map" that highlights CalEPA designated communities in red, as further discussed in the attached Exhibit 2.

[6] Letter from Alexander "Lex" Mitchell, Manager, Emerging Technologies Section, California Air Resources Board regarding E85 use, to Graham Noyes, Noyes Law Corporation. This CARB letter is attached as an exhibit to the comment of Pearson Fuels to this proceeding.



At the same time that Pearson Fuels has been dramatically growing its station network, E85 fuel used per FFV has rapidly grown.

E85 Sites Opened in California & E85 Gallons Per FFV



III. California should continue to utilize biofuels as a vitally important GHG reduction strategy; further leverage its existing FFV fleet to reduce GHGs in the light-duty sector; and utilize biofuels including E85 to achieve carbon neutrality to supply internal combustion engines that will remain on the road beyond 2045.

The State of California has taken a leadership role in climate policy dating back to 2006 and has developed a network of policies and strategies to enable decarbonization. Consistent with this, Governor Jerry Brown signed Executive Order No. B-55-18 in 2018. The Executive Order established a new statewide goal to achieve carbon neutrality as soon as possible, and no later than 2045, and to achieve and maintain net negative emissions thereafter. Further to that goal, the California Legislature approved the Budget Act of 2019 (AB 74) that funded two studies, administered by the California Environmental Protection Agency, to: 1) identify strategies to reduce emissions from transportation energy use, and 2) identify strategies to manage the decline in fossil fuel production and associated emissions in parallel with reductions in demand. The study to reduce emissions from transportation use was conducted by the University of California Institute of Transportation Studies ("ITS") at four campuses, UC Davis, UC Berkeley, UC Irvine, and UCLA.

The resulting ITS report is entitled, "Driving California's Transportation Emissions to Zero."[7] While California leads the nation in electrifying transportation, the report recognized the reality that a significant number of internal combustion engines will remain on the road beyond 2035. As a result, the Driving California's Transportation Emissions to Zero report concluded that to achieve carbon neutrality it was necessary for California to make a complete transition by 2045 from petroleum-based gasoline to bio-based gasoline including ethanol blends as is illustrated in the following graph. FFVs are the only existing vehicles that can utilize E85, the only type of bio-based gasoline that has been commercialized.

[7] Institute of Transportation Studies, "Driving California's Transportation Emissions to Zero," (April 2021), available at https://escholarship.org/uc/item/3np3p2t0

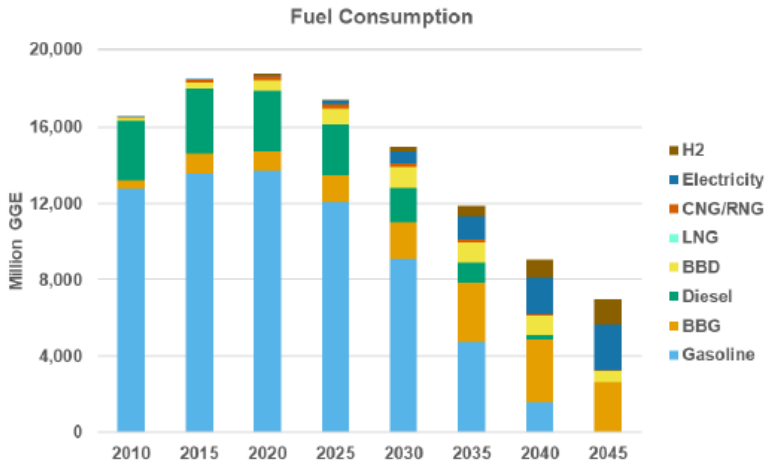


Figure EX-2. CO_2 emissions and fuel consumption projections in the LC1 scenario. The near-zero CO_2 emissions target is reached by 2045, with nearly all fossil fuels replaced by electricity, hydrogen, and biofuels at that date. (MMT, million metric tonnes; SAF, sustainable aviation fuel; H2, hydrogen; CNG/RNG, compressed natural gas/renewable natural gas; LNG, liquefied natural gas; BBD, bio-based diesel, including biodiesel and renewable diesel; BBG, bio-based gasoline, including ethanol blends and drop-in gasoline replacement fuels)

Driving California's Transportation Emissions to Zero

IV. Beyond the LCFS Program, CARB should develop other types of policy support for FFVs to complement the support that is provided to zero emission vehicles ("ZEVs"). Expanding the supply of both FFVs manufactured by automakers and conventional gasoline vehicles converted to FFVs via aftermarket devices provides tremendous opportunities to empower all Californians to decarbonize while reducing consumer fuel costs and cutting fossil fuel usage.

While recognizing the enormous success of the LCFS program, we strongly encourage CARB to also develop complementary policies to further accelerate the decarbonization and de-fossilization of transportation sector fuels. Meeting Scoping Plan targets requires California to reduce fossil fuel consumption by 94% by 2045. Given the continued dominance and long-life spans of internal combustion engines ("ICE"), the only way California can feasibly meet this target is to speed the transition to low-carbon liquid fuels in legacy ICE vehicles in the state. Other than a website that tracks the remarkable growth of E85 fuel demand,[8] (growth that is driven by the savings E85 provides to consumers), CARB has thus far overlooked the opportunities to develop programs that further leverage California's existing fleet of FFVs that can utilize E85.

E85 use in California FFVs has been growing at an average annual rate of 33% with a usage rate in FFVs of 16% in 2022. ICF completed an analysis of the growth of E85 in the California marketplace and forecasted a similar growth rate for 2023-2027 (the "ICF E85 Report"). However, ICF capped market growth based on a maximum anticipated average usage rate of E85

[8] CARB Website, "Alternative Fuels: Annual E85 Volumes, at https://ww2.arb.ca.gov/resources/documents/alternative-fuels-annual-e85-volumes

per FFV of 50% and also projected a decline in registered FFVs beginning in 2025 because of fleet turnover and the rapid decline in FFV manufacturing.[9] The ICF report, "Forecasting E85 Consumption in California" provides the background and details of the ICF E85 forecast and is attached as **Exhibit 3.**

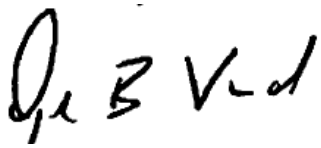
V. Through the use of the full range of low carbon fuels available to California, it is feasible for California to achieve a CI reduction goal of 35% by 2030, as we've advocated for previously. ICF International shows the potential for a target reduction of 42% for 2030 through modeling it has done for the Low Carbon Fuels Coalition and other stakeholders.

Pearson Fuels is pleased that the SRIA proposes to set more ambitious CI reduction targets for the system—as directed a year ago during the Scoping Plan drafting[10]—rather than delaying the program. However, we encourage CARB to go further by supporting the recent ICF study[11] which concluded that the target could be a 42% CI reduction by 2030. This creates an opportunity to double down on this successful framework and accelerate progress simply by adopting more ambitious targets.

Conclusion

We appreciate the opportunity to provide this comment and are always available for further discussions relating to the benefits that E85 and FFVs can provide to California. We appreciate the diligent work of CARB staff and the Governing Board.

Sincerely,



Doug Vind
Pearson Fuels

Cc: Joshua Cunningham, California Air Resources Board

[9] See also Footnote 1 and Exhibit 1.
[10] https://www.gov.ca.gov/wp-content/uploads/2022/07/07.22.2022-Governors-Letter-to-CARB.pdf
[11] "Analyzing Future Low Carbon Fuel Targets in California; Initial Results for Accelerated Decarbonization, Central Case," June 2023, ICF Resources L.L.C.

Exhibit 1 to Pearson Fuels's Potential Changes to the LCFS comments
Flex Fuel Vehicle Availability by Year, Renewable Fuels Association

CAN YOU FLEX FUEL?

RFA RENEWABLE FUELS ASSOCIATION

Flex Fuel Vehicle (E85) for ALL models of specified engine size
Flex Fuel Vehicle (E85) for FLEET models only of specified engine size

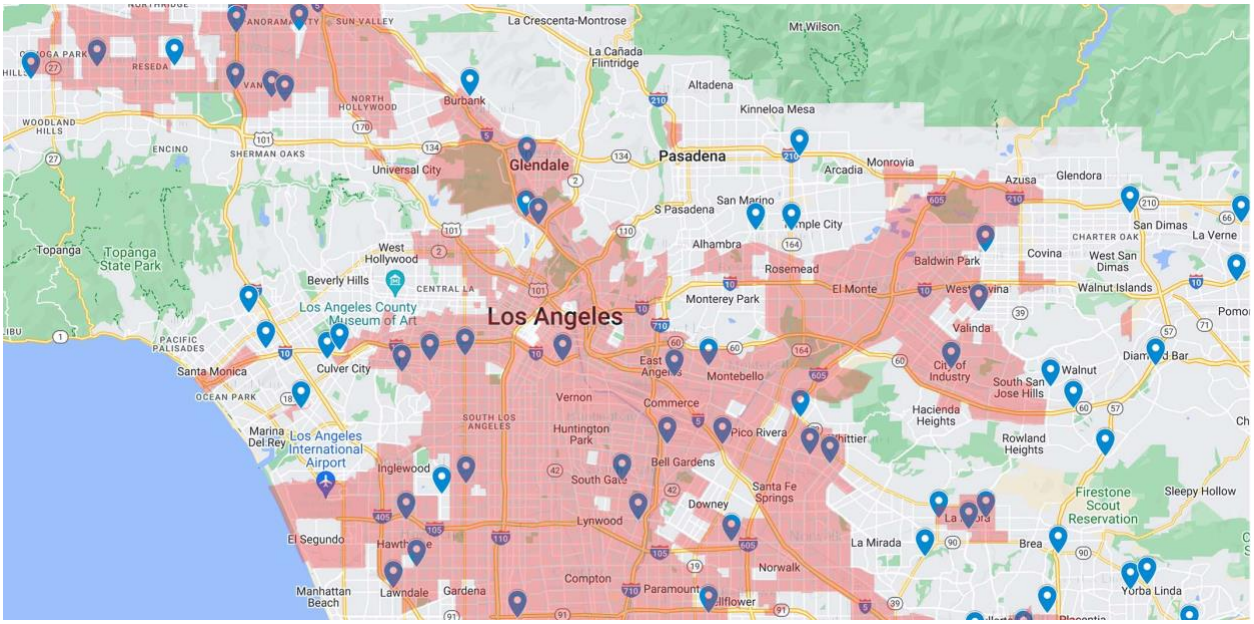
AUTOMAKERS / MODELS	MODEL YEAR														
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
AUDI															
Audi A4 quattro automatic					2.0L	2.0L	2.0L	2.0L							
Audi A5 quattro automatic					2.0L	2.0L	2.0L	2.0L	2.0L						
Audi A5 Cabriolet quattro automatic					2.0L	2.0L	2.0L	2.0L	2.0L						
Audi Allroad quattro automatic					2.0L		2.0L	2.0L							
Audi Q5 quattro automatic					2.0L	2.0L	2.0L	2.0L	2.0L						
BENTLEY															
Bentley Continental Flying Spur/Speed			6.0L	6.0L	6.0L	6.0L	6.0L	6.0L	6.0L						
Bentley Continental GT/Speed			6.0L	6.0L	6.0L	6.0L	6.0L	6.0L	6.0L						
Bentley Continental GTC/Speed			6.0L	6.0L	6.0L	6.0L									
Bentley Continental Supersports/ Convertible/Convertible ISR			6.0L	6.0L	6.0L										
CHRYSLER/DODGE/JEEP															
Chrysler 200							2.4L	2.4L	2.4L						
				3.6L	3.6L	3.6L	3.6L	3.6L	3.6L						
Chrysler 300			3.6L	3.6L	3.6L	3.6L	3.6L	3.6L	3.6L	3.6L	3.6L				
Chrysler Aspen	4.7L														
Chrysler Sebring Convertible	2.7L	2.7L	3.6L												
Chrysler Sebring Sedan	2.7L	2.7L	3.6L												
Chrysler Town & Country	3.3L	3.3L	3.6L	3.6L	3.6L	3.6L	3.6L	3.6L							
Dodge Avenger	2.7L	2.7L	3.6L	3.6L	3.6L	3.6L									
Dodge Caravan		3.3L													
Dodge Challenger			3.6L												
Dodge Charger			3.6L	3.6L	3.6L	3.6L	3.6L	3.6L	3.6L	3.6L	3.6L				
Dodge Dakota	4.7L	4.7L	4.7L												
Dodge Dart					2.0L	2.0L	2.0L	2.0L							
Dodge Durango	4.7L		3.6L	3.6L	3.6L	3.6L	3.6L								
Dodge Grand Caravan	3.3L	3.3L	3.6L	3.6L	3.6L	3.6L	3.6L	3.6L	3.6L	3.6L	3.6L				
Dodge Journey			3.6L	3.6L	3.6L	3.6L	3.6L	3.6L	3.6L	3.6L	3.6L				
Dodge Ram					3.6L	3.6L									
Dodge Ram 1500	4.7L	4.7L	4.7L	4.7L			3.6L	3.6L	3.6L	3.6L	3.6L				
Jeep Cherokee							2.4L	2.4L	2.4L	2.4L					
Jeep Commander	4.7L														
Jeep Grand Cherokee	4.7L		3.6L	3.6L	3.6L	3.6L	3.6L								
Jeep Renegade							2.4L	2.4L	2.4L	2.4L					
FORD/LINCOLN/MERCURY															
Ford Crown Victoria	4.6L	4.6L	4.6L	4.6L											
Ford Escape		3.0L	3.0L	3.0L					2.5L	2.5L	2.5L				
Ford E-Series Commercial Van/Wagon/	4.6L	4.6L	4.6L	4.6L	4.6L	4.6L									
Cutaway	5.4L	5.4L	5.4L	5.4L	5.4L	5.4L					6.2L				
Ford Expedition	5.4L	5.4L	5.4L	5.4L	5.4L	5.4L									
Ford Explorer					3.5L	3.5L	3.5L	3.5L	3.5L	3.5L	3.5L	3.3L			
Ford F-150			3.7L	3.7L	3.7L	3.7L	3.5L	3.5L	3.5L	3.5L	3.5L	3.3L	3.3L	3.3L	3.3L
	5.4L	5.4L	5.0L	5.0L	5.0L	5.0L	5.0L	5.0L	5.0L	5.0L	5.0L	5.0L	5.0L	5.0L	5.0L
Ford Super Duty F-250/F-350			6.2L	6.2L	6.2L	6.2L	6.2L	6.2L	6.2L	6.2L	6.2L	6.2L	6.2L	6.2L	
Ford Super Duty F-450 Chassis Cab							6.2L	6.2L	6.2L	6.2L	6.2L				
Ford Super Duty F-550 Chassis Cab							6.2L	6.2L	6.2L	6.2L					
Ford Focus				2.0L	2.0L	2.0L	2.0L	2.0L	2.0L						
Ford Fusion		3.0L	3.0L	3.0L											
Ford Police Interceptor - Utility							3.5L	3.5L	3.5L	3.5L	3.5L	3.3L	3.3L	3.3L	3.3L
							3.7L	3.7L	3.7L	3.7L	3.7L				
Ford Taurus					3.5L	3.5L	3.5L	3.5L	3.5L	3.5L	3.5L				
Ford Transit							3.7L	3.7L	3.7L	3.7L	3.7L	3.5L	3.5L	3.5L	3.5L
Ford Transit Connect								2.5L	2.5L	2.5L	2.0L	2.0L	2.0L	2.0L	
Lincoln Navigator/Navigator L	5.4L	5.4L	5.4L	5.4L	5.4L	5.4L									
Lincoln Town Car	4.6L	4.6L	4.6L												
Mercury Grand Marquis	4.6L	4.6L	4.6L												
Mercury Mariner		3.0L	3.0L												
Mercury Milan		3.0L	3.0L												
GENERAL MOTORS															
Buick Lacrosse				3.6L	3.6L	3.6L	3.6L	3.6L							
Buick Lucerne	3.9L	3.9L	3.9L												
Buick Regal			2.0L	2.0L	2.0L										
				2.4L											
Buick Verano				2.4L	2.4L										

Exhibit 1 to Pearson Fuels's Potential Changes to the LCFS comments
Flex Fuel Vehicle Availability by Year, Renewable Fuels Association

AUTOMAKERS / MODELS	MODEL YEAR														
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
GENERAL MOTORS															
Cadillac ATS					3.6L										
Cadillac Escalade/ESV/EXT	6.2L	6.2L	6.2L	6.2L	6.2L	6.2L									
Cadillac SRX				3.6L	3.6L										
Chevrolet Avalanche	5.3L	5.3L	5.3L	5.3L	5.3L										
		6.2L													
Chevrolet Caprice Police				3.6L	3.6L	3.6L	3.6L	3.6L	3.6L						
				6.0L	6.0L	6.0L	6.0L	6.0L	6.0L						
Chevrolet Captiva					2.4L	2.4L	2.4L								
Chevrolet Equinox				2.4L	2.4L	2.4L	2.4L	2.4L	2.4L						
			3.0L	3.0L	3.0L	3.6L									
Chevrolet Express		4.8L	4.8L	4.8L	4.8L										
	5.3L	5.3L	5.3L	5.3L	5.3L	5.3L	5.3L								
		6.0L	6.0L	6.0L	6.0L	6.0L	6.0L	6.0L	6.0L	6.0L	6.0L	6.0L			
Chevrolet HHR	2.2L	2.2L	2.2L												
	2.4L	2.4L	2.4L												
Chevrolet Impala	3.5L	3.5L	3.5L												
				3.6L	3.6L	3.6L	3.6L	3.6L	3.6L	3.6L	3.6L	3.6L			
	3.9L		3.9L												
Chevrolet Malibu		2.4L	2.4L	2.4L											
	3.5L	3.5L													
Chevrolet Silverado		4.8L	4.8L	4.8L	4.8L	4.3L	4.3L	4.3L	4.3L	4.3L					
	5.3L	5.3L	5.3L	5.3L	5.3L	5.3L	5.3L	5.3L	5.3L	5.3L	5.3L	5.3L	5.3L	5.3L	5.3L
	6.2L	6.2L	6.2L	6.2L	6.2L										
Chevrolet Silverado HD					6.0L	6.0L	6.0L	6.0L	6.0L	6.0L	6.0L		6.6L	6.6L	6.6L
Chevrolet Suburban	5.3L	5.3L	5.3L	5.3L	5.3L	5.3L	5.3L	5.3L	5.3L	5.3L	5.3L	5.3L			
		6.2L													
Chevrolet Tahoe	5.3L	5.3L	5.3L	5.3L	5.3L	5.3L	5.3L	5.3L	5.3L	5.3L	5.3L	5.3L			
	6.2L														
GMC Savana		4.8L	4.8L	4.8L	4.8L										
	5.3L	5.3L	5.3L	5.3L	5.3L	5.3L									
		6.0L	6.0L	6.0L	6.0L	6.0L	6.0L	6.0L	6.0L	6.0L	6.0L	6.0L			
GMC Sierra		4.8L	4.8L	4.8L	4.8L	4.3L	4.3L	4.3L	4.3L	4.3L					
	5.3L	5.3L	5.3L	5.3L	5.3L	5.3L	5.3L	5.3L	5.3L	5.3L	5.3L	5.3L	5.3L	5.3L	5.3L
	6.2L	6.2L	6.2L	6.2L	6.2L										
GMC Sierra HD					6.0L	6.0L	6.0L	6.0L	6.0L	6.0L	6.0L		6.6L	6.6L	6.6L
GMC Terrain				2.4L	2.4L	2.4L	2.4L	2.4L	2.4L						
			3.0L	3.0L	3.0L	3.6L									
GMC Yukon	5.3L	5.3L	5.3L	5.3L	5.3L	5.3L	5.3L	5.3L	5.3L	5.3L	5.3L	5.3L			
	6.2L	6.2L	6.2L	6.2L	6.2L	6.2L									
GMC Yukon XL	5.3L	5.3L	5.3L	5.3L	5.3L	5.3L	5.3L	5.3L	5.3L	5.3L	5.3L	5.3L			
	6.2L	6.2L	6.2L	6.2L	6.2L	6.2L									
Hummer H2 & SUT	6.2L	6.2L													
Pontiac G6	3.5L														
JAGUAR															
Jaguar XF/XJ/XJL							5.0L								
Jaguar XJ/XJL							3.0L								
MERCEDES-BENZ															
Mercedes-Benz C 300	3.0L	3.0L	3.0L	3.0L	3.5L	3.5L									
Mercedes-Benz C 350				3.5L	3.5L	3.5L									
Mercedes-Benz CLA 250							2.0L	2.0L	2.0L	2.0L	2.0L				
Mercedes-Benz E 350							3.5L	3.5L							
Mercedes-Benz E 350 Cabriolet				3.5L	3.5L	3.5L									
Mercedes-Benz E 350 Coupe				3.5L	3.5L	3.5L									
Mercedes-Benz E 350 Sedan					3.5L	3.5L									
Mercedes-Benz GLA 250							2.0L	2.0L	2.0L	2.0L	2.0L				
Mercedes-Benz GLE 350								3.5L	3.5L	3.5L					
Mercedes-Benz ML 350				3.5L	3.5L	3.5L	3.5L								
NISSAN															
Nissan Armada (*All MYs 8th VIN is "B")	5.6L	5.6L	5.6L	5.6L	5.6L	5.6L	5.6L								
Nissan Frontier									4.0L	4.0L	4.0L				
Nissan Titan (*All MYs 8th VIN is "B")	5.6L	5.6L	5.6L	5.6L	5.6L	5.6L	5.6L								
SAAB															
SAAB 9-3 (*All MYs 8th VIN is "F")				2.0L											
SAAB 9-5 (*All MYs 8th VIN is "F")			2.0L	2.0L											
TOYOTA															
Toyota Sequoia	5.7L	5.7L	5.7L	5.7L	5.7L	5.7L	5.7L	5.7L	5.7L	5.7L					
Toyota Tundra	5.7L	5.7L	5.7L	5.7L	5.7L	5.7L	5.7L	5.7L	5.7L	5.7L	5.7L				
VOLKSWAGEN															
Volkswagen Routan (*All MYs 8th VIN is "G")				3.6L	3.6L	3.6L									

Verify FFV capability with automaker before using E85.

Exhibit 2 to Pearson Fuels's Potential Changes to the LCFS comments Pearson Fuels Station Map, Los Angeles Area
Overlay with California SB 535 Disadvantaged Communities Map



Underlying SB 535 Map is download from
https://experience.arcgis.com/experience/1c21c53da8de48f1b946f3402fbae55c/page/SB-535-Disadvantaged-Communities/

This SB 535 Disadvantaged Communities (2022 Update) map shows the disadvantaged communities designated by CalEPA for the purpose of SB 535. These areas represent the 25% highest scoring census tracts in CalEnviroScreen 4.0, census tracts previously identified in the top 25% in CalEnviroScreen 3.0, census tracts with high amounts of pollution and low populations, and federally recognized tribal areasas identified by the Census in the 2021 American Indian Areas Related National Geodatabase. A Tribe may establish that a particular area of land is under its control, for purposes of this designation, by requesting a consultation with the CalEPA Deputy Secretary for Environmental Justice, Tribal Affairs and Border Relations at TribalAffairs@calepa.ca.gov

To view AB 1550 maps of disadvantaged and low income communities, go to the California Air Resources Board's page on Disadvantaged and Low-income Communities Investments. Additional information on SB 535 is available at the CalEPA website.

CalEnviroScreen is a screening tool used to help identify communities disproportionately burdened by multiple sources of pollution and with population characteristics that make them more sensitive to pollution.

Forecasting E85 Consumption in California

June 2023

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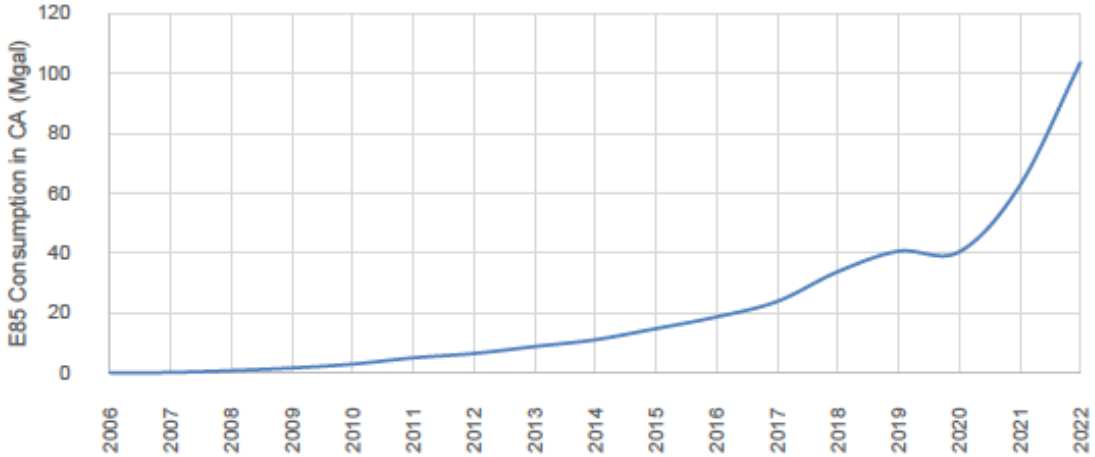
1 Introduction

As part of a broader project, ICF evaluated the potential for more ambitious targets to increase the stringency of the carbon intensity (CI) requirements of the Low Carbon Fuel Standard (LCFS) program. This included the consideration of many strategies that can be used to reduce greenhouse gas (GHG) emissions from the transportation sector, with a focus on low carbon fuels and advanced vehicle technologies. One of the low carbon fuel strategies considered in our analysis was higher level blends of ethanol or E85. Ethanol is blended at higher levels with gasoline to make what is referred to as E85, which is a term that refers to high-level ethanol-gasoline blends containing 51% to 83% ethanol, depending on geography and season.

2 E85 Consumption to Date in California

California consumed a record amount of E85 in 2022 according to data from the California Air Resources Board (CARB),[1] as shown in the figure below.

Figure 1. E85 Consumption in California, 2006-2022



California surpassed 100 million gallons of E85 consumed in 2022, due in large part to the attractive price differential between E85 and reformulated gasoline (i.e., E10).

E85 needs to be consumed in flex fuel vehicles or FFVs. California's population of FFVs has held steady since 2018, with slight increases, despite the reduced availability of new FFVs

[1] Available online at https://ww2.arb.ca.gov/resources/documents/alternative-fuels-annual-e85-volumes.

from automobile manufacturers (OEMs). By the end of 2021, California's FFV population topped about 1.2 million vehicles.

3 Projecting E85 Consumption in California

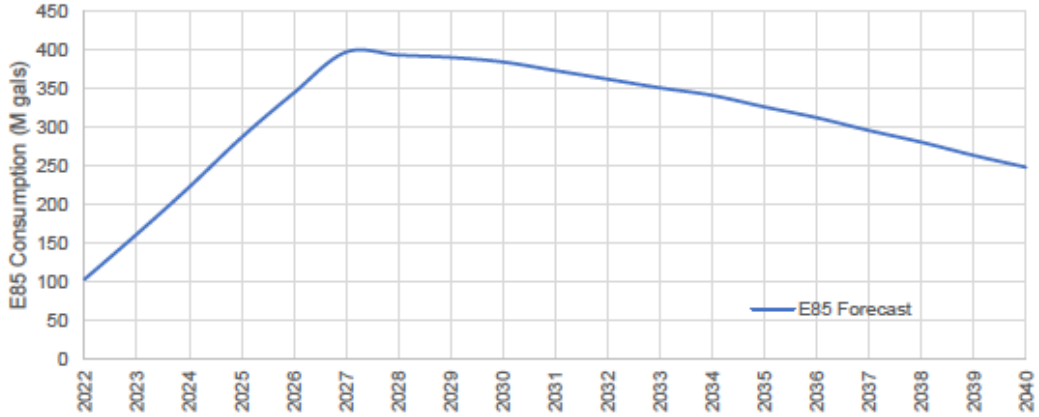
ICF projected E85 consumption in California as a function of several factors, including the FFV population and a weighted average share of E85 consumption per FFV. E85 volumes exceeded 100 million gallons in 2022, up from around 60 million gallons in 2021. Similarly, FFVs actually increased between 2021 and 2022 in California from about 1.14 million FFVs to 1.21 million FFVs based on data presented by the California Energy Commission (CEC).[2] Based on ICF analysis of average annual fuel consumption of light-duty vehicles in California, E85 consumption per vehicle has increased from about 6-8% of average fuel consumption to 16% of average fuel consumption.[3]

ICF increased the size of California's FFV fleet by 2.9% annually until 2025 (consistent with the rate of growth observed since OEMs started reducing FFV offerings in their lineups). Starting in 2025, ICF assumed that the FFV fleet would start to shrink because of fleet turnover. ICF used the same fleet turnover rates included in California's Emissions FACtor model for 2021 (EMFAC2021). To forecast the amount of E85 consumed annually, ICF increased the rate of FFV fueling per vehicle to around 50% by 2028 and held it constant thereafter. This yields the forecasted E85 consumption outlook shown in the figure below.

[2] Light-Duty Vehicle Population in California, available online here.

[3] ICF uses this as a proxy, recognizing that each FFV driver will fuel the vehicle differently with gasoline or E85. The value is calculated as the annual gallons consumed per FFV on the road in the state divided by the average annual fuel consumption for light-duty vehicles in the state. A value of 0% implies that FFVs are fueling exclusively with gasoline, where as a value of 100% implies that all FFVs are consuming E85 all the time.

Figure 2. Forecasted E85 Consumption in California, 2023–2040



Our forecast shows the potential for significant increases in E85 volumes in California over the next 3–5 years before FFV fleet turnover starts to put downward pressure on E85 consumption.

About ICF

ICF (NASDAQ:ICFI) is a global consulting and digital services company with over 7,000 full- and part-time employees, but we are not your typical consultants. At ICF, business analysts and policy specialists work together with digital strategists, data scientists and creatives. We combine unmatched industry expertise with cutting-edge engagement capabilities to help organizations solve their most complex challenges. Since 1969, public and private sector clients have worked with ICF to navigate change and shape the future. Learn more at icf.com.

CALIFORNIA
AIR RESOURCES BOARD

June 29, 2023

Mr. Graham Noyes
Noyes Law Corporation
401 Spring Street, Suite 205
Nevada City, CA 95959
graham@noyeslawcorp.com

Dear Mr. Noyes:

Thank you for your inquiry regarding the amount of E85 sold in California for transportation fuel purposes. As you are aware, the State of California tracks E85 fuel volumes reported under the E85 program found in Title 13, California Code of Regulations, section 2292.4. Fuel suppliers are required to report E85 volumes in California via reports that are filed with the California Air Resources Board. E85 blended by these authorized fuel suppliers is legal for sale in California for use in flexible fuel vehicles and represents virtually all the E85 sold in the State.

Year	Total Volume *(gal)*
2006	8,000
2007	155,847
2008	770,983
2009	1,643,497
2010	2,930,034
2011	5,024,329
2012	6,482,868
2013	8,799,981
2014	11,066,428
2015	14,773,124
2016	18,679,904
2017	23,854,146
2018	33,774,239
2019	40,602,796
2020	40,372,564
2021	62,475,418
2022	103,521,770

The number of E85 stations has increased from 130 in 2018 to 513 today.

My staff has reviewed these numbers and they are accurate to the best of our knowledge.

Sincerely,

Alexander "Lex" Mitchell, Manager
Emerging Fuels Section
Industrial Strategies Division