

November 18, 2025

Fuels Program
California Air Resources Board
1001 I Street
Sacramento, CA 95814

Submitted via:

Re: ACE Comments on CARB Scoping Workshop on E15 Use in California

To the CARB Fuels Program staff,

On behalf of the members of the American Coalition for Ethanol (ACE), I appreciate the opportunity to provide input on California Air Resources Board's (CARB) plans for the rollout of E15 and request for comments following your October 14, 2025, Scoping Workshop on E15 Use in California.

ACE is a grassroots advocacy organization, powered by rural Americans from all walks of life who have built an innovative industry that delivers homegrown biofuel and food for a growing world. Our nearly 300 members include U.S. ethanol biorefineries, investors in biofuel facilities, farmers, and companies that supply goods and services to the U.S. ethanol industry. We appreciate the significance of California approving the sales and use of E15, making the fuel now legal for sale in all 50 US. states.

It is our understanding Assembly Bill 30 (AB30) authorized the sale of E15 fuel in California immediately after it was signed into law by the governor on October 2, 2025, while any remaining studies on its environmental impact are completed. Since California's current regulations don't cover E15 specifications or regulatory enforcement, we urge CARB to move quickly with a clear statement that the sale of E15 is allowed in California, and provide guidance promptly, so California fuel marketers can begin offering the low-cost and clean fuel to consumers immediately.

E15 compatibility with vehicles and infrastructure has been thoroughly studied and answered. Yet, those answers have been subsequently and continually doubted or ignored by ethanol opponents, often citing little more than long disproven mythology, anecdotal "evidence," or small stilted studies using vehicles chosen for past issues with ethanol and "aggressive" ethanol fuels containing water and acids rarely if ever found in fuels sold in the U.S.

Meanwhile, in addition to all the technical and scientific analysis done by the Environmental Protection Agency (EPA) and U.S. Department of Energy (DOE) to approve E15, we now also have 14 years of safe, real-world use in unmodified tanks, lines, and dispensers at thousands of retail stations, and millions of vehicles have used E15 without incident. E15 is no longer a new, untested product. We would ask CARB to give greater consideration to 14 years of real-world E15 use, providing even more proof ethanol is compatible with existing tanks and equipment, and the 14 years of safe vehicle operation without reports of engine damage, show most concerns about vehicle compatibility were also either total fabrications or at very least, dramatically overblown.

Request for Input on Regulatory Options

We strongly encourage updating the fuel specification in the CaRFG regulation to offer E15 as a gasoline grade rather than establishing a specification considering E15 an alternative fuel. E15 is defined as gasoline by EPA, meets the ASTM D4814 Standard Specification for Automotive Spark-Ignition Engine Fuels, and is approved for use in more than 95% of gasoline powered vehicles on the road today.

Treating E15 as an alternative fuel would increase the cost for retailers to offer the fuel at the pump and confuse drivers, making them hesitant to use the cleaner fuel in their non-alternative fuel cars. Increasing the cost of retailer compliance by requiring expensive infrastructure upgrades to be compatible with fuels having 75% more ethanol than E10 rather than the five percent actually being added to make E15, and further discouraging use by consumers by misidentifying E15 as a fuel they believe they need a flex fuel vehicle to use, will likely reduce the availability and use of lower cost gasoline for Californians with no benefit to safety or the environment. The unnecessary confusion would limit E15 availability and use, resulting in fewer consumers taking advantage of the savings offered by the new grade of fuel and limiting E15's benefit for California air quality, effectively thwarting the intentions of the California legislature, which passed AB30 unanimously with an urgency designation indicating its intent to make E15 available immediately.

Infrastructure Needs - Retail

CARB asked for comments on upgrades needed and infrastructure costs involved in implementing E15. The short answer, especially in California with its strict fueling infrastructure standards, is there should be little or no cost for the majority of California's fuel terminals and retailers.

Steel tanks and lines are compatible with all blends of gas and ethanol, as are fiberglass tanks listed under Underwriters' Laboratory (UL) 1316 which includes ratings for up to 100% ethanol or methanol, and UL has been listing underground fiberglass piping for 100% ethanol and methanol since 1988. A station would have to have a single walled fiberglass tank from 1990 or earlier – 35 years old – to not be compatible with higher blends of ethanol. Piping connected to underground storage tanks is part of the Underground Storage Tank System (UST) and must meet the same compatibility requirements as the tank. There may be submersible pumps and other parts associated with UST systems that are not compatible with blends above 10%, but not many – and not deal-breakers, cost wise.

Retail stations could use the same tanks, lines, and dispensers they have right now unless they have equipment over 30 years old, and most of that is compatible, too. On a marketer-focused website ACE manages – flexfuelforward.com, we have a tool called Flex Check, where retailers (or regulators or anyone else) can go and find out if their current fueling equipment is compatible with E15. EPA links to the Flex Check tool on their [website](#) where marketers go for info on offering E15.

Major dispenser manufacturers have been warranting their products for up to 15% alcohol for decades, because UL listing UL87A for dispensers of gas and alcohol blends required testing with 15% alcohol. UL87A does not specifically mention E15 (nor does it mention E10); however, UL 87 does reference a number of underlying standards using phrases such as “ethanol does not exceed 15 percent,” and “approved for gasoline/ethanol blends up to 15 percent ethanol” and “gasoline with up to 15 percent ethanol.” All the manufacturers reiterated their equipment was compatible by 2008 at the latest, when efforts to initiate approval of E15 or E20 started circulating.

Hoses, nozzles, and “hanging hardware” are sometimes E10 specific, but are a small part of the cost of a station's fuel storage and dispensing equipment. ACE's Flex Check tool found on flexfuelforward.com links to manufacturers' statements and websites in case there are questions about compatibility.

In the workshop and in its interim guidance CARB mentioned vapor recovery equipment as being compatible only to E10 and its recommendation to treat E15 as an alternative fuel seems to hinge on that piece of the fueling infrastructure – the only part not already compatible or affordably upgradable – as the reason they would recommend treating E15 as an alternate fuel.

Infrastructure Needs - Terminals

Terminals, racks, aboveground storage tanks, fuel lines, blending equipment, pumps, bottom loading equipment – all of the fuel storage and handling infrastructure and piping at those facilities is steel compatible with 100% alcohol (including methanol which is far more corrosive than ethanol). Since ethanol is already stored and blended in California's terminals, there should be very little cost at fuel terminals or blending racks. E15 is merely a new product for California which will be created using existing products already stored in terminals. Terminals have large tanks of E98 ethanol and CARBOB and those two products are blended in varying quantities to make E10, E85, and now E15 as the products are loaded into transport trucks to deliver to retail sites. A product code is entered by the truck driver into the terminal's point of loading computer system, which loads the proper amounts from the facility's E98 ethanol tank(s) and CARBOB tank(s) into compartments of a fuel transport trailer. Since E98 is already handled daily from receiving via rail (or ship) to storage tanks and then to trucks to make E10, the infrastructure shouldn't require any upgrades.

Certain terminal owners, refiners, or others interested in delaying implementation or creating false hardship in an attempt to squeeze cash or tax credits out of state or federal governments (or even the ethanol industry) may complain about a "50% increase in ethanol" and the tankage, rail, and marine terminal infrastructure it involves. But even if approval of E15 were to immediately change the entire state from E10 to E15 overnight (highly unlikely), we would remind alarmists that 50% of a small number is still a small number, and more importantly, overall gasoline volume in California has dropped from an average of 15.5 billion gallons a year in the four years before COVID to 13.6 BGY in the past four years. That's a 12% drop – about 1.9 billion gallons. Moving from 10% to 15% ethanol would require an additional 700 million gallons a year – less than half the storage space not being used for gas anymore. Also, 700 million gallons of ethanol means 700 million gallons less gasoline.

As to handling rail cars, the state's current ethanol volume is about 3.7 million gallons a day. That volume represents 125 railcars a day, statewide, down from 140 cars a day before COVID. If California were to transition to 15% ethanol everywhere, overnight, it would represent about 185 railcars a day. Sixty more rail cars – divided by 54 terminals and racks in the state – seems manageable.

Retail Implementation of E15

The fuel will be going into the same cars that are using E10 now, so no configuration change is necessary if E15 is sold as gasoline. The only change would be if a retailer had limited tank space and offered Regular E10 and Premium E10 and wanted to replace one with E15. If California is like most other states, Premium is a single-digit percentage of their sales, but retailers tend to be afraid of losing that piece of business. Some may decide to replace regular E10 with E15 and would steer customers with older vehicles and small engines to Premium E10. Either way, there could be a small cost to change products in tanks (pump out existing product, change labels, other housekeeping items) but no large expenditures for completely new infrastructure for an additional new product.

E15 Adoption Rates

Based on the real-world experience of E15 use in every other state in the U.S., we anticipate the frequency of California retailers adopting E15 will be greater than other retailers across the country over the past 14 years. The fact there is E15 in use – without incident – in other parts of the country should be a positive. California already has low-RVP base fuel, so the hurdle of convincing retailers they won't have to switch back and forth in different RVP seasons doesn't exist. The biggest factor in adoption of E15 in California will be the same as anywhere else – the gap between ethanol and gasoline prices. Unlike E85, which gets a big boost from a much lower tax rate than gasoline in California, the extra 5% ethanol in E15 would make the finished product 5 to 15 cents cheaper than E10. That may not sound like a large discount to some, but 5 cents on a lot of gallons can add up – unless you believe the

mythology that adding E15 fuel will cost you hundreds of thousands of dollars – which many retailers still believe.

Of course, in addition to the rack price differential there are the carbon credit and RIN values that fit into the equation that can further improve blending economics for E15. Also, in general, oil companies have offered pre-blended E10 at a larger discount than the RIN values would suggest, to maintain control of the RINs and discourage their customers from splash-blending their own E10 (buying the ethanol with RINs and 84 octane V-grade separately). E15 would have 4% extra RINs with it, and some refiners might see an advantage in controlling more “extra” RINs.

Based on these factors, I would expect adoption to be much faster in California than what it has been in the rest of the U.S. Nationwide ethanol use increased from just 4 billion gallons a year in 2005 to 13 billion gallons a year in 2010 based on positive blending economics, a federal blender’s tax credit, and adoption of the Renewable Fuel Standard (RFS) by Congress. California could take similar action, such as a tax credit for E15 or changing LCFS requirements to drive E15 adoption. However, just making E15 legal creates opportunities – especially if crude oil takes off or trade policy causes gas prices to spike.

At terminals the adoption rate – meaning the terminal being able to offer E15 at the rack – is merely a programming issue, setting up a product code signaling the pumps to add more from the ethanol tank and less blendstock from the RBOB tank. In areas where a fair number of retailers have already converted, a pre-blended E15 is usually available at the rack. That doesn’t mean there are tanks holding E10 or E15, those fuels are blended as they are loaded into the fuel transport trailer, with the computer system indicating how many gallons to pull from the ethanol tank and the RBOB tank, as mentioned above. However, anywhere ethanol and gas are available can be a blending terminal, because E15 can be “splash-blended” – just as E10 was when it first came on the market. Instead of loading 1,000 gallons of E10, you pull 945 gallons of E10 and 55 gallons of E98, which gets you just under 15%, meeting the definition of E15.

Potential Cost Impacts - Consumers

It is often the case that all retail fuel prices drop when E15 enters a market. Most retailers adding E15 will attempt to sell it at a price below the E10 prices in their market. The other retailers respond by either ignoring it, assuming no one will buy E15, or lowering their E10 price to match the competitor’s new E15. It doesn’t require widespread E15 adoption to have widespread impact on retail pricing in an area. Currently, with retail margins being 25 cents or more – and probably quite a bit more in California – the idea of taking a nickel off your margin to avoid having to go through the hassle (and what some may believe is a big expense) of adding a new fuel appeals to many fuel retailers.

A question was raised on the lower mileage rate for E15 affecting consumers. E15 has 1.6% less BTU than E10, however, the impact on mileage will likely be smaller, as higher oxygen content helps the base fuel burn more completely. In some engines, the higher octane sometimes allows the engine to run more efficiently than it does on Unleaded 87. Dyno tests of E10 have shown 1.5 to 3% less mileage versus E0 even though it’s 3.3% lower BTU. E15 could reduce mileage by less than 0.75 to 1.5% versus E10 in a static test. By comparison, tire pressure affects MPG by 4 to 5%, jackrabbit starts and stops impact mileage 15 to 40% and sitting on the highway in rush hour traffic reduces mileage by 15 to 20%.

There was also a question about potential infrastructure costs being passed on to consumers. First, since there is no E15 mandate or requirement to offer the fuel blend, the cost to a station for making E15 a legal option is ZERO. If E15 were required, most stations would have costs of less than \$2,000, based on a study the Petroleum Equipment Institute did several years ago, adjusted for inflation and higher California costs. According to the most recent CEC Annual Retail Fuel Outlet Report, the average California gas station sells 103,000 gallons of gas per month, so converting would add .0016 cents per

gallon over one year. However, since E15 would currently cost about 5 cents less than E10, the infrastructure cost would merely make E15 only 4.84 cents less than E10. If the retailer charged the same price for 88 octane E15 that they charge for E10 until the infrastructure cost was covered, the \$2,000 charge would be paid off in less than two weeks.

In the real world, a low volume station with old equipment will simply decide not to sell E15, so not only will no infrastructure costs be passed on, that retailer will have to lower their pump prices on E10 to compete with competitors selling E15, saving consumers money.

Vapor Recovery System

Hopefully the survey CARB is conducting on whether E10 certified vapor recovery systems can be certified for E15 use will find that since the Reid Vapor Pressure of E15 is slightly lower than E10, the system currently in use for gasoline in California will be able to accommodate vapor recovery of another blend of the same fuels. Beyond that, using flex fuel hoses and nozzles should be able to be used for E15 at an increased cost, but likely much sooner than all the approvals needed to certify vapor recovery components in the state.

Vehicle Incompatibility and Misfuelling

When EPA approved E15 in 2011, following extensive testing by the Department of Energy on engines and pollution control systems of vehicles model years 2001 and newer, they could only approve E15 for vehicles in model years they tested and thus could not approve E15 for use in older vehicles. EPA and DOE did not test vehicles from model year 2000 and older and find them incompatible with E15. While it may seem like a minor distinction, referring to "Vehicle Incompatibility" gives the inaccurate impression the fuel was tested and found to cause damage when used in those vehicles, and that is not the case.

Federally required misfuelling mitigation plans, along with product transfer documents, labeling, compliance surveys, and other requirements in place to prevent misfuelling should be used in California, as they seem to have been effective where they are currently in use. Misfuelling has not been an issue for E15 retailers to date. The difference between E10 and E15 is barely perceptible even in older engines, and a single tank of E15 is unlikely to cause any noticeable issues. Plus, CARB will likely receive few responses to the request for experiences of misfuelling incidents from other states or countries.

Finally, as mentioned earlier, E15 has been in use in thousands of stations by millions of motorists over the last 14 years, without any of the catastrophic results predicted by anti-ethanol naysayers. The same type of scare tactics was employed when California mandated E10 20 years ago, and the state has gone on to sell more ethanol than any other state, improving air quality and proving the doomsday critics wrong. Approving E15 simply makes the fuel available – it doesn't require anyone to use it. However, as has always been the case, once a new ethanol blend hits a market, people use it, discover the stories they've heard are myths, and they keep using it, saving money and reducing emissions.

Thank you for your time and consideration of these comments.

Sincerely,

A handwritten signature in blue ink, appearing to read "Ron Lamberty", with a long horizontal flourish extending to the right.

Ron Lamberty, CMO
American Coalition for Ethanol