

California E15 Webinar

Robert White
Renewable Fuels Association

Alessandra Brichetto
CFCA

Renewable Fuels Association (RFA)

- Since 1981, the Renewable Fuels Association (RFA) has been the authoritative voice of the U.S. ethanol industry. Our members are committed to helping our country become cleaner, safer, and more energy independent. In creating a forum for ethanol producers and industry stakeholders, RFA has achieved an unequaled record of results through action, advocacy and analysis.
- With the most experienced staff in the industry, RFA is able to provide timely, comprehensive industry information to our members, Congress, federal and state government agencies, fuel marketers and retailers, strategic partners, the media and other opinion-leader audiences.
- RFA has been the industry's most forceful advocate for expanding the market for ethanol. Just as important, we've worked to beat back aggressive challenges to ethanol's progress from special interests seeking to maintain fossil fuel status quo.

© 2026 Renewable Fuels Association. All rights reserved.

Agenda

- E15 Update for California
- E15 Basics
- Blending Economics & Benefits
- Equipment Options & Compatibility
- Lessons Learned
- Q&A



© 2026 Renewable Fuels Association. All rights reserved.

E15 Update for California

© 2026 Renewable Fuels Association. All rights reserved.

California E15 Rulemaking Process

- CARB completed the Peer Review of the Tier II Multi-Media Evaluation (MME) and submitted a final Tier III Report to the California Environmental Policy Council (CEPC) for approval in December 2025.
- The CEPC approved it in August 2026.
- CARB's board hearing on the proposed rulemaking took place on September 24th. We are now awaiting final rule.
- Key notes from proposal:
  - E15 is treated as gasoline, NOT an alternative fuel and is 10.5% to 15.0% ethanol
  - Can be produced at the rack from a blend of ethanol and CARBOB, or downstream of the terminal from a blend of ethanol and E10 or a blend of E10 and E15 or E85.
  - Follow EPA labeling requirements, no additional state labeling required. You do NOT have to post octane (but we suggest you do).
  - Does not require a separate hose with E10.

© 2026 Renewable Fuels Association. All rights reserved.

California Legislation & Current State of Play

- AB 30, which deemed E15 a legal fuel in California until CARB completes a rulemaking, passed unanimously in 2025 and was signed by Governor Newsom on October 2, 2025.
- Unfortunately, while E15 was deemed a legal fuel, the OSFM would not allow it to be sold through existing Stage II Vapor Recovery systems due to lack of a UL listing at E25.
- The important note is that the Stage II systems were all tested on E15 as part of their UL listing for E10.
- After months of impasse, legislation was drafted and SB 795 passed unanimously out of both the Assembly and Senate on August 31st and was signed by the Governor on September 19th.
- Legislation will allow OEMs to self certify by providing statements of compatibility to all necessary agencies.
- The OSFM has until the end of the year to complete a rulemaking.

© 2026 Renewable Fuels Association. All rights reserved.

E15 Basics



© 2026 Renewable Fuels Association. All rights reserved.

E15 Basics

- What is E15?
- E15 is a blend of ethanol with a minimum ethanol content of 10.5% ethanol and a maximum of 15% ethanol. The remainder is typically gasoline.
- It is approved by EPA for most vehicles on the roads today. Specifically, 2001 and newer light duty vehicles and all Flex Fuel Vehicles (FFVs).
- ASTM D4814 - Standard Specification for Automotive Spark-Ignition Engine Fuel



E15 FOR CALIFORNIA
E15forCA.com

© 2026 Renewable Fuels Association. All rights reserved.

E15 Basics

- Most tested fuel – U.S. Dept of Energy tested 86 vehicles more than 6 million miles before approving E15.
- Also, not a new fuel - debuted at retail in **July 2012** and consumers have logged more than 250 billion miles.
- Provides the same or similar mileage as E10.
- Produces lower emissions than E10 or E0.
- Provides more octane at a reduced price.
- More than 14 years in the marketplace, and no reports of engine damage or misfueling concern.



© 2026 Renewable Fuels Association. All rights reserved.

E15 Basics - Emissions

During the testing of 20 vehicles by the University of California, Riverside in 2022 found that simply replacing E10 with E15 provides the following emissions benefits:

- Particulate Matter reductions of **18 percent**
- Hydrocarbon gas emissions reductions of **5 to 8 percent**
- Carbon Monoxide reductions of **17 percent**
- Nitrogen Oxide reductions of **3 percent**

© 2026 Renewable Fuels Association. All rights reserved.

E15 Basics – Fuel Economy

E15 Fuel Economy Results

Fuel Economy (miles per gallon), avg. of all test cycles

Vehicle and model year	E10	E15	% Change	
2019 Dodge Ram 1500	18.032	17.569	-2.6%	
2018 Honda Fit	**37.115**	**37.866**	**2.0%**	← GDI
2020 Jeep Compass	**24.462**	**24.866**	**1.7%**	
2016 Nissan Rogue	29.301	29.144	-0.5%	
2019 Toyota Rav4	32.838	32.729	-0.3%	
2018 Honda Civic	34.846	34.709	-0.4%	
2016 Mazda3	36.766	34.856	-5.2%	← 74,000 miles at start
2020 Ford Fusion	25.169	24.645	-2.1%	
2019 Chevrolet Impala	**22.211**	**22.335**	**0.6%**	← GDI
2021 Chevrolet Spark	40.342	40.146	-0.5%	
2020 KIA Optima	31.398	30.981	-1.3%	
2020 Jeep Cherokee	19.200	19.020	-0.9%	
2020 Nissan Armada	15.959	15.916	-0.3%	
2020 Toyota Prius	63.758	62.296	-2.3%	
2020 GMC Acadia	21.627	20.719	-4.2%	
2020 Buick Enclave	20.116	19.833	-1.4%	
2021 Chevrolet Colorado	19.582	19.563	-0.1%	
2017 Ford F150	**19.405**	**19.399**	**0.0%**	← GDI, Turbo
2021 Hyundai Accent	44.319	42.833	-3.4%	
2018 Chevrolet Suburban	16.578	16.263	-1.9%	
Average	**28.651**	**28.284**	**-1.3%**	

Source: Testing of 20 vehicles by the University of California, Riverside in 2022

© 2026 Renewable Fuels Association. All rights reserved.

E15 in the Marketplace

- Early adopters could only offer E15 by diluting E85 at retail stations OR by splash blending
- Some terminals eventually began offering product.
- Now more than 5,200 stations in 35 states.
- Sales vary greatly per location.
- When sold as a midgrade, sales are lower and typically average 20-30% of overall sales.
- When offered as the base unleaded fuel at 87 octane replacing E10, retailers saw no drop in sales.
- Typically, overall sales are up meaning new customers, not just converts from E10.
- Offered as 6 different octane levels today.
- 2025 sales topped 1.5 billion gallons!
- It will become #1 fuel in Iowa in 2026.









© 2026 Renewable Fuels Association. All rights reserved.

Who is offering E15? Just some of the Brands Offering E15.

Source: RFA



EPA's E15 Decision

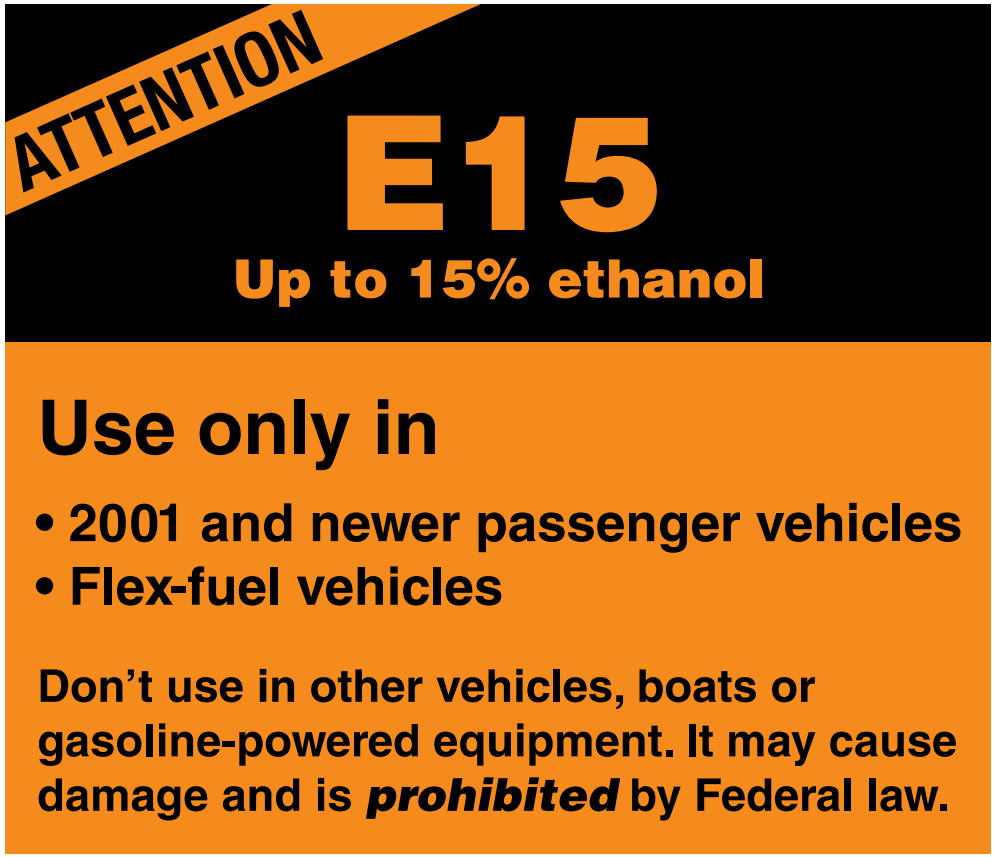
- On March 6, 2009 a waiver was submitted to U.S. EPA to increase the allowable ethanol content in **gasoline** up to 15% volume.
- EPA responded in October 2010 and January 2011 with partial approval, denial and with conditions:
  - Approved for Vehicles MY2001 and newer, and all FFVs.
  - Denied for Vehicles MY2000 and older; off road engines.
  - Mandated "conditions" for offering E15 called the "Misfueling Mitigation" rule.
  - See: http://www.epa.gov/otaq/regs/fuels/additive/e15/
- The waiver does not require E15 to be sold.

© 2026 Renewable Fuels Association. All rights reserved.

What is required?

Labeling:

1. **Must** post EPA's label – must be placed in the upper two-thirds of the dispenser.
2. **Suggest** that you post octane, minimum guarantee.





E15 FOR CALIFORNIA
E15forCA.com

© 2026 Renewable Fuels Association. All rights reserved.

What is required?

Misfueling Mitigation Plan (MMP):

- Must adopt an MMP.
- RFA has an approved MMP with EPA.
- You can simply adopt RFA's by letter. This is true for a retailer, blender and terminal.
- We have the sample letters for all levels of the supply chain that we can provide. You format with your letterhead, your company's information and submit.
- Then follow the guidance – affix labels, proper hose/dispenser configurations and do not promote misfueling.

© 2026 Renewable Fuels Association. All rights reserved.

What is required?

Participate in a Fuel Survey:

- Conducted by RFGSA, sign-up at www.RFGSA.org.
- Stations blending onsite will pay $100 annually.
- Terminals will pay based on gallons blended annually.
- Stations taking delivery of preblended E15 do **NOT** pay but should register.
- Ethanol producers, refiners and others pay the bulk of the program costs and have access to the data collected, as do the stations.
- The survey checks for labels, ethanol content and RVP during summer months. Compliance continues to improve and is important.

© 2026 Renewable Fuels Association. All rights reserved.

What is required?

- At this point, there are no additional requirements from FTC or NCWM.
- CARB's proposed rule has been published and expect it to be finalized – no additional labeling required, just federal label and onsite blending will be allowed.
- Blending at retail is allowed elsewhere and continues to provide economic advantages around the rack.
- It is also critical if E15 availability is blocked by the terminal but we do not expect any major opposition.



© 2026 Renewable Fuels Association. All rights reserved.

Blending Economics & Benefits

© 2026 Renewable Fuels Association. All rights reserved.

Blending Economics & Benefits

- E15 is currently selling at a national average discount of 10% compared to E10 (23% to E0).
- This translates to a discount above 41 cents per gallon nationwide (58 cents in California).
- How does this discount exist?
  - Market Differential – Ethanol & CARBOB
  - RFS/RINs – Currently trading at $2.11
  - LCFS – Currently trading above $80
  - Cap at the Rack – Ethanol is exempt
- Imagine having at least 20 cents (or more) advantage to your competition!



© 2026 Renewable Fuels Association. All rights reserved.

Blending Economics & Benefits

Study: E15 Could Save California Drivers $2.7 Billion Annually

- A July 2024 study by economists at UC Berkeley and the U.S. Naval Academy found **California drivers could expect to save 20 cents per gallon** if the state allowed gas stations to sell E15 fuel – a blend of 15 percent ethanol and 85 percent gasoline approved in all 49 other states.
- **The potential savings for California consumers could reach $2.7 billion annually**, according to the study, authored by David Zilberman, PhD, a distinguished professor in the Agricultural and Resources Economics Department at UC Berkeley, and Scott Kaplan, PhD, assistant professor in the Economics Department at the United States Naval Academy.

© 2026 Renewable Fuels Association. All rights reserved.

Recent DOE Report (July 2026)

- A recent report published by the Department of Energy found that E15 has been selling recently for $0.40 per gallon less than standard E10 gasoline on average.
- The DOE report, which is based on actual pricing data collected from the marketplace, also showed E15 costs 7 percent less at the pump on an energy basis, meaning drivers choosing E15 pay less per mile traveled than drivers choosing E10.
- The DOE report shows that the average E15 price in April was $3.44 per gallon compared to an average E10 price of $3.84 per gallon.
- This is the first year that DOE's quarterly report included E15 prices.

© 2026 Renewable Fuels Association. All rights reserved.

Equipment Options & Compatibility

© 2026 Renewable Fuels Association. All rights reserved.

Equipment Compatibility

- In 2015, EPA published guidance regarding compatibility of underground storage tank (UST) systems with biofuel blends.
- The guidance discusses how owners and operators who wish to store gasoline containing more than 10 percent ethanol in their UST systems may demonstrate compliance with the compatibility requirement in 40 CFR 280.32.
- What does EPA require?
  - EPA has determined that owners and operators must demonstrate that the following UST components are compatible with the fuel to be stored:
    - Tank
    - Piping
    - Containment sumps
    - Pumping equipment
    - Release detection equipment
    - Spill prevention equipment
    - Overfill prevention equipment

© 2026 Renewable Fuels Association. All rights reserved.

Equipment Compatibility

U.S. EPA accepts EITHER to prove E15 compatibility	• Underwriters Laboratories (UL) Listing • Manufacturer's Warranty/Statement
Fuel Dispensers	• Wayne dispensers are all compatible to E15. Ovation moved to E25 in 2010. E25 became standard in 2016 and their newer dispensers (since 2022) are approved up to E40. • Gilbarco dispensers since 2008 are all compatible for E15. In 2011, they moved to E25 and released retrofit kits in 2012. They have plans to move to E40.
Tanks	• Nearly all UST made in the last 30 years are approved up to 100% ethanol. • All steel tanks in service, regardless of age are approved for storing E15. • All double-walled fiberglass tanks installed since the year 1990 are compatible with E15. • Single wall fiberglass tanks since 2005 are compatible with E15.
Piping	• All steel and double wall fiberglass piping since 1990 are compatible with E15.. • Manufacturers of pipe thread sealants (pipe dope) have stated that their products have been compatible with ethanol blends up to E20 for many years.

© 2026 Renewable Fuels Association. All rights reserved.

Equipment Costs – PEI Survey

- Five different dispenser scenarios (cost/dispenser):
  - Currently compatible: $1,167.
  - Not compatible, upgrade to UL87A-25: $4,192 (NOTE: Wayne Fueling Systems has changed this for their equipment)
  - Not compatible, replace all with new: $20,437.
  - Stand-alone E15: $31,775.
  - New site, E85-compatible blender pumps: $10,901.
  - Add ~$110,000, if tank needs added/replaced (10,000 gal).
- Cost can be minimal to offer E15, first retailer only had to affix new labels.
- There are options to minimize costs, conversions, trade-ins, incentives.
- Report did not include pricing on tank linings, which would lower cost significantly over replacing a tank, if allowed.
- **THIS SURVEY WAS DONE PRE-COVID!**

© 2026 Renewable Fuels Association. All rights reserved.

Steps to Offer E15 – The Breakdown

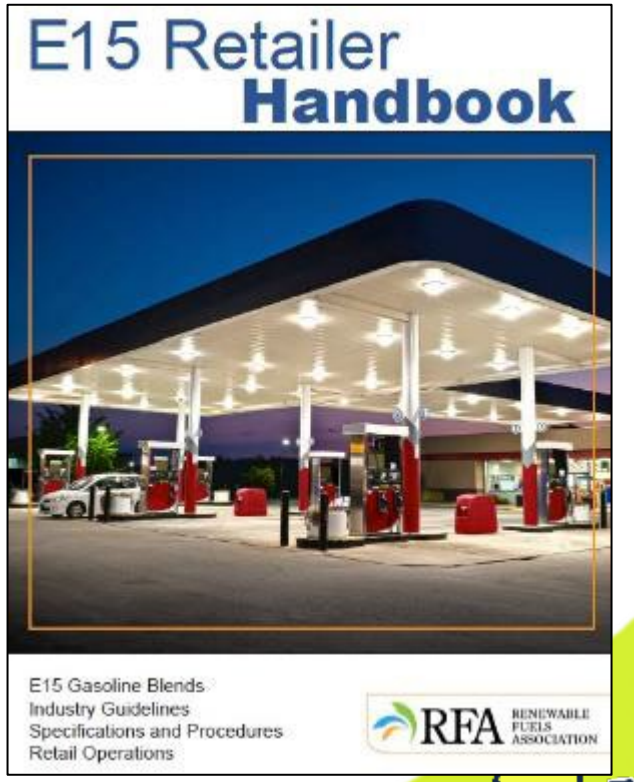
Fuel Retailer Steps to E15:

1. Review equipment and fuel supply for E15 suitability.
2. Contact marketing/branding and insurance company.
3. Need a Misfueling Mitigation Plan (MMP):
   - Review and adopt RFA's Model MMP.
   - Only required if blending E15.
4. Need a fuel survey:
   - Register for the RFGSA E15 Fuel Survey at www.RFGSA.org.
   - If blending, pay fee associated w/ survey.
5. Notify state regulatory officials:
   - Water Board (30-day notice), Fire Marshal, local AHJ, etc.
6. If all the above are a "go"- place label(s) and start offering E15! At a minimum, must use orange/black EPA label and we suggest you label octane.

© 2026 Renewable Fuels Association. All rights reserved.

RFA's E15 Retailer Handbook

- Outlines regulatory requirements for E15:
  - Federal and state.
- Must be promoted for compliance with MMP.
- E15 Retail Advisory is part of Handbook as a new mandatory addendum.
- Available in hard copy or at: www.EthanolRFA.org/E15RetailerHandbook



E15 FOR CALIFORNIA
E15forCA.com

© 2026 Renewable Fuels Association. All rights reserved.

EPA Regulating Dispenser Configuration

- EPA “concerned” over common hose configuration, precedent setting concern.
- E15 Retail Advisory developed to communicate the concerns.
- Only three dispenser configurations approved, all others require EPA action:
  1. Dedicated hose for E15.
  2. E15 & E10 from a common hose: 4-gallon minimum purchase, label required.
  3. E15 & E10 from a common hose: At least one fueling position w/o E15, remove 4-gallon minimum, alternate label used.
- All other configurations, additional action required. No other options have been approved to date.

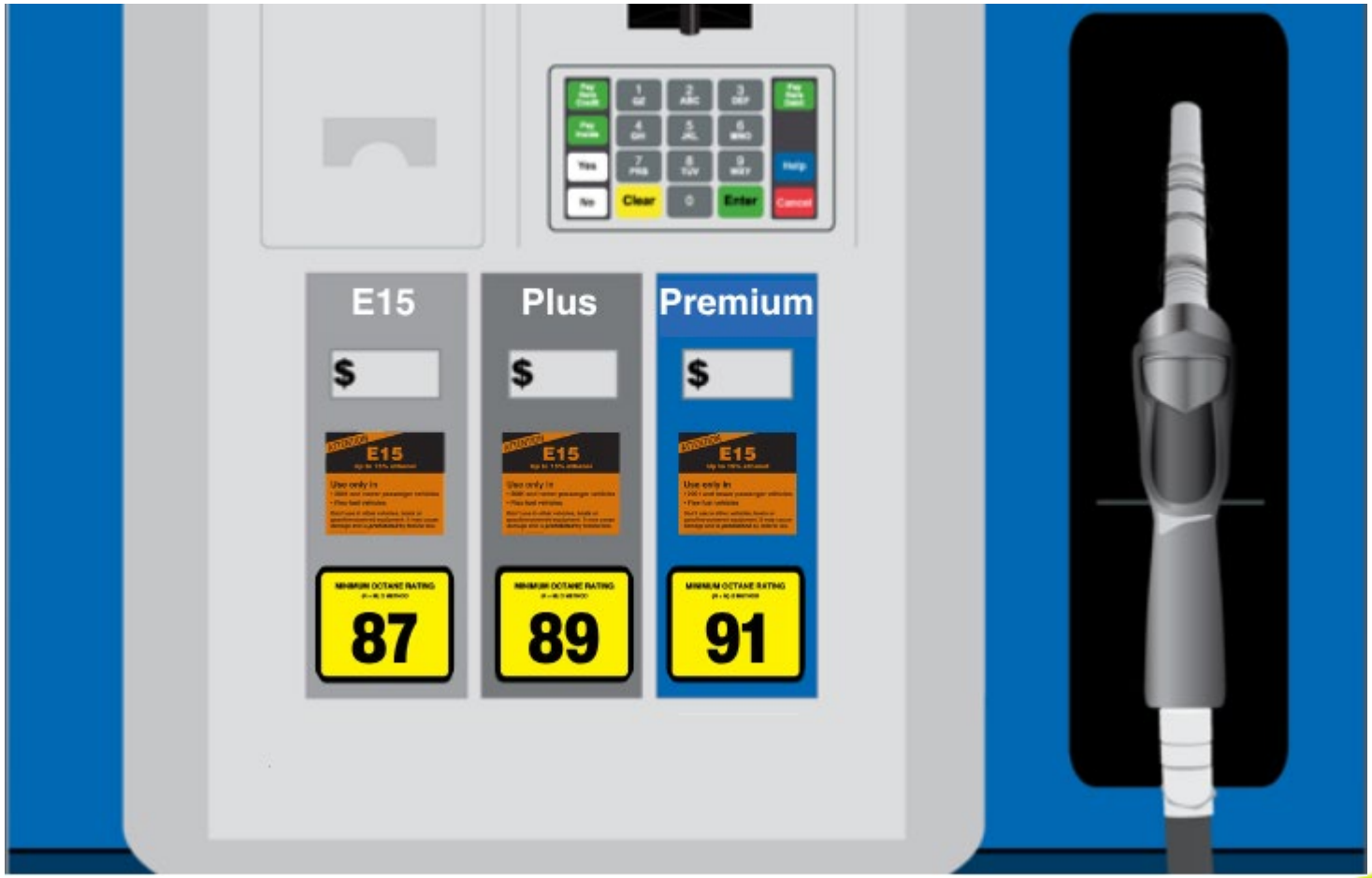
© 2026 Renewable Fuels Association. All rights reserved.

EPA Regulating Dispenser Configuration

- Offering E15 from the same hose as E15+ blends is **NOT APPROVED** due to residual volumes post-E15+ customer. Despite small volume, nonapproved engines voiced concerns and restrictions were applied.
- It is important that equipment be configured to offer another option:
  - Dedicated hose for E15.
  - Common hose with E10/E0 (two options approved).
  - Prove to EPA that hose residual is handled. Again, has not happened to date.
- Could limit options at some dispensers to make legal. For example, some dispensers at a station have E15, some don't.
- We are working with equipment manufacturers to avoid wrong equipment or configurations being ordered but important to pay attention.

© 2026 Renewable Fuels Association. All rights reserved.

EPA NOT Regulating Dispenser Configuration: ALL E15



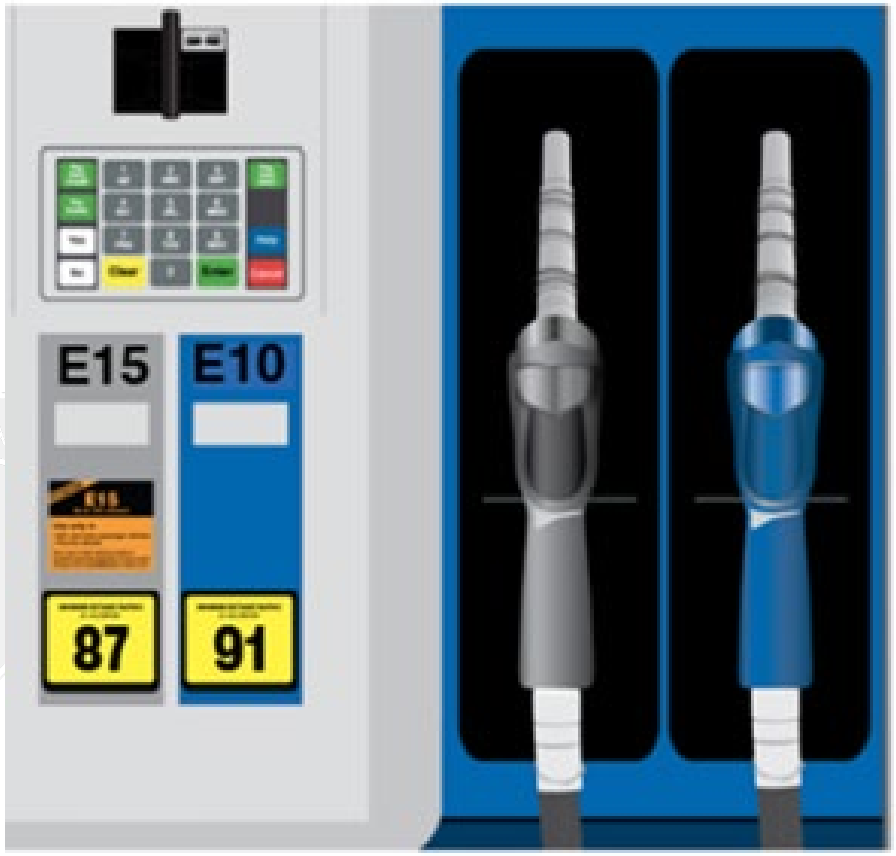
© 2026 Renewable Fuels Association. All rights reserved.

EPA NOT Regulating Dispenser Configuration: ALL E15



© 2026 Renewable Fuels Association. All rights reserved.

EPA Regulating Dispenser Configuration: Dedicated E15 Hose – E10 Replacement





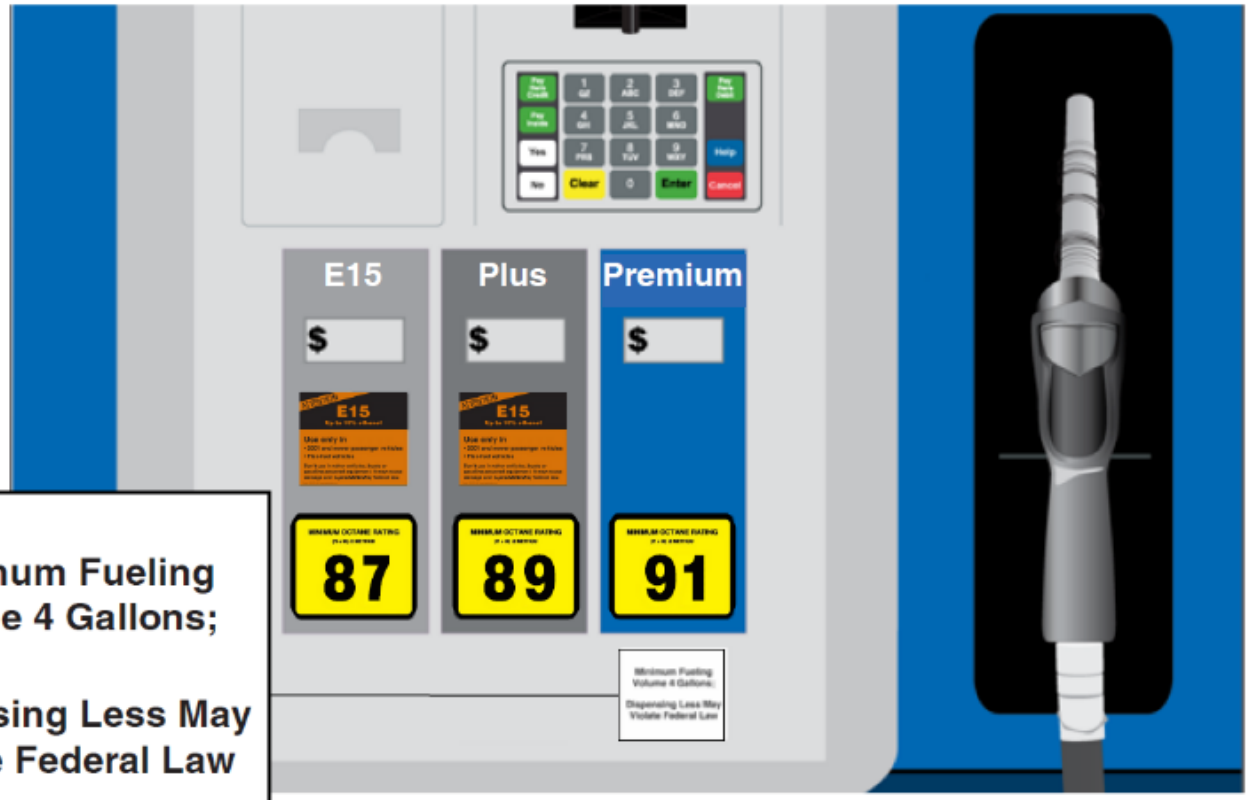
© 2026 Renewable Fuels Association. All rights reserved.

EPA Regulating Dispenser Configuration: Dedicated E15 Hose – Midgrade Offering



© 2026 Renewable Fuels Association. All rights reserved.

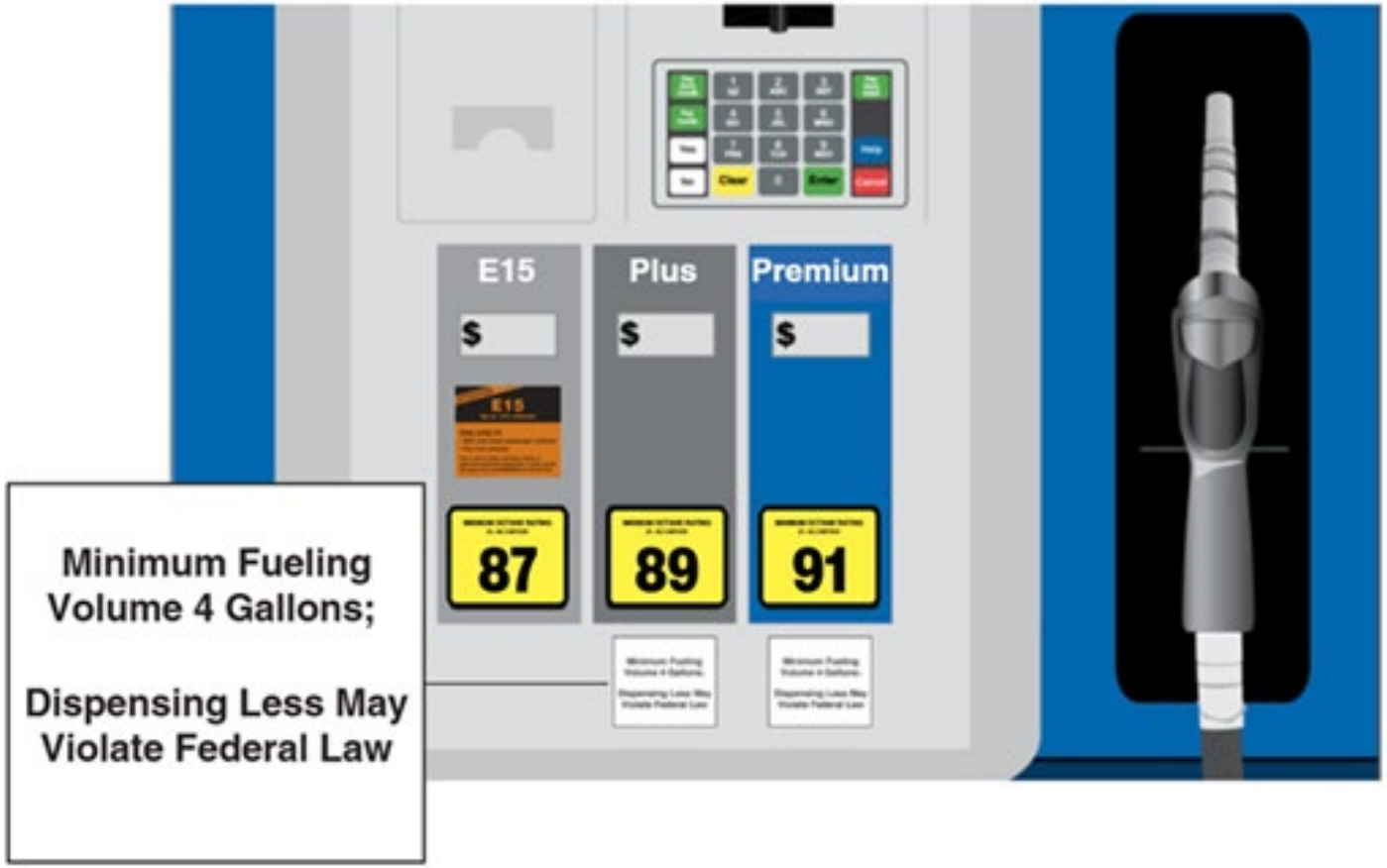
EPA Regulating Dispenser Configuration: Common Hose: 4-gallon Minimum (midgrade made at dispenser





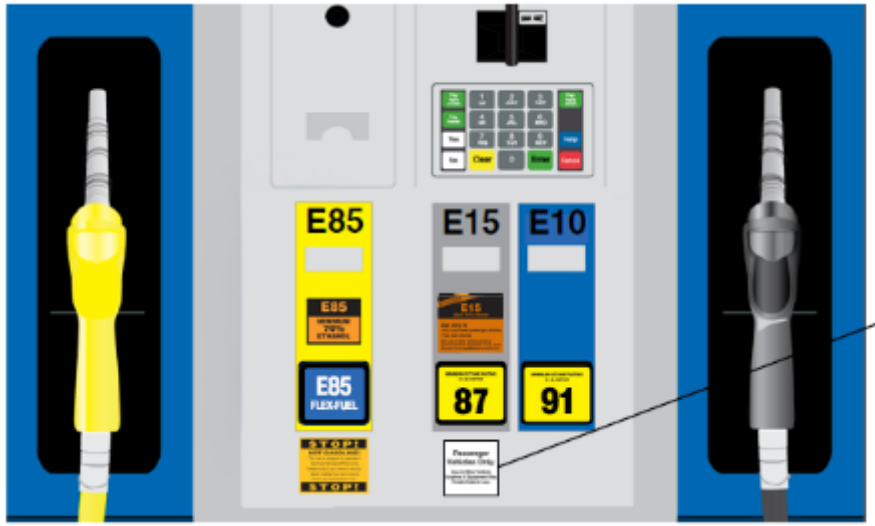
© 2026 Renewable Fuels Association. All rights reserved.

EPA Regulating Dispenser Configuration: Common Hose: 4-gallon Minimum (midgrade from separate tank)



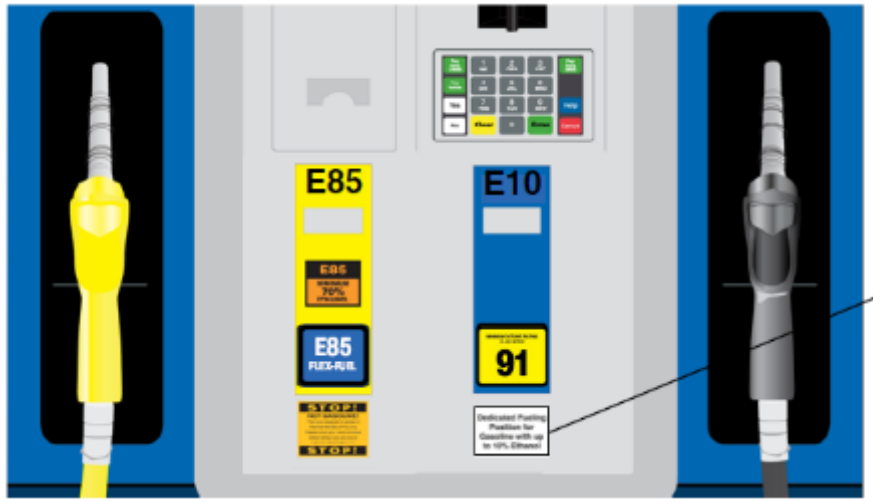
© 2026 Renewable Fuels Association. All rights reserved.

EPA Regulating Dispenser Configuration: Common Hose w/ Dedicated Fueling Position



Passenger Vehicles Only.

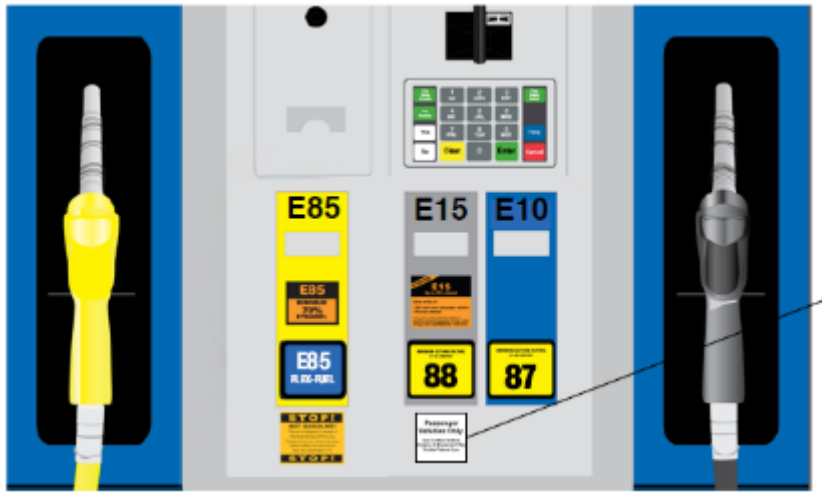
Use in Other Vehicle Engines & Equipment May Violate Federal Law.



Dedicated Fueling Position for Gasoline with up to 10% Ethanol

© 2026 Renewable Fuels Association. All rights reserved.

EPA Regulating Dispenser Configuration: Common Hose w/ Dedicated Fueling Position



Passenger Vehicles Only.

Use in Other Vehicle Engines & Equipment May Violate Federal Law.



Dedicated Fueling Position for Gasoline with up to 10% Ethanol

© 2026 Renewable Fuels Association. All rights reserved.

Lessons Learned

© 2026 Renewable Fuels Association. All rights reserved.

Lessons Learned

- Differentiating the product didn't work.
  - Using different marketing names
  - Promoting the additional octane
- Marketing blitzes didn't work.
  - Advertising campaigns
- Less is more.
  - Replace E10 and move on
  - Or, if tanks allow, offer as a midgrade











© 2026 Renewable Fuels Association. All rights reserved.

What has slowed E15 elsewhere?

- The biggest hurdle has been the lack of year-round approval due to RVP – **NOT** an issue in California.
- Various marketing approaches caused confusion and concern.
- Various hose configuration choices kept the fuel out of the spotlight.
  - Moved E15 away from the traditional unleaded options

© 2026 Renewable Fuels Association. All rights reserved.

Recommendations for Success

- Offer E15 as Regular Unleaded.
- Post octane as 87, even if actual is 88 or higher.
- Offer it at all fueling positions (or most).
- Don’t differentiate beyond requirements of federal or state governments.
- Ensure supplier maximizes the ethanol content of the blend.
- Remember – E15 can be any octane level! Can be regular, midgrade or premium. It is currently sold as 6 different octanes today (86 to 94).

© 2026 Renewable Fuels Association. All rights reserved.

Why should you consider E15?

- Lower the price at the pump for your customers.
- Increase your number of customers & enhance inside sales.
- Boost your profits at the island and inside your store.
- Enhance marketing opportunities, differentiate yourself.
- Become the price leader!

© 2026 Renewable Fuels Association. All rights reserved.

What about E85?

- E85 has been growing in availability and sales in California. There is now more gallons sold in this state than any other in the nation!
- Averaging more than a 40% price discount to RUL, it attracts customers wondering if they can use the product.
- Sold only to Flex Fuel Vehicles (FFVs), which are ~10% of the consumer fleet today.
- Given today's sales in the state, we believe that only ~10% of the current FFV population is being serviced – lots of room for growth!
- If you want to solicit new customers and stand out - this is another great way.
- Hear the business case directly from RFA members Pearson Fuels in San Diego or Propel Fuels in Sacramento.



© 2026 Renewable Fuels Association. All rights reserved.

What you should do now – if interested

- Verify that your Stage II Vapor Recovery Equipment OEM has or will submit a Statement of Compatibility.
- Verify if (and when) your fuel supplier will have E15 available.
- Your Equipment:
  - Verify that all equipment that fuel touches meets the requirements for E15 outlined here and by the various agencies.
  - Once verified, submit your 30-day notice to the Water Board.

© 2026 Renewable Fuels Association. All rights reserved.

QUESTIONS?

Robert White

Renewable Fuels Association

www.E15forCA.com or www.EthanolRFA.org

rwhite@ethanolrfa.org

402-661-4764

Twitter/X: @fuelinggood

© 2026 Renewable Fuels Association. All rights reserved.