

ADVANCING HIGHER BLENDS

The Renewable Fuels Association continues its work to expand the availability of E15 and flex fuels like E85 at the pump, while simultaneously advocating for more flex fuel vehicles on the road. The successes seen in 2022 provide an impetus for more action in 2023.

RFA's efforts helped secure emergency waivers from the Biden administration for year-round E15 in 2022, as gas prices rocketed to record levels. The result was record sales volumes of lower-cost E15 and rapid growth in the number of customers seeking out the fuel.

When it comes to E15, RFA won the support of the American Petroleum Institute and key fuel retailer groups for the bipartisan Consumer and Fuel Retailer Choice Act to ensure E15 is available as a lower-cost year-round option for drivers. The permanent, nationwide year-round availability of E15 is a top priority for our organization.

RFA also continued its work on the U.S. Department of Agriculture's Higher Blends Infrastructure Incentive Program (HBIIP), which provides matching grants for higher blend infrastructure projects around the country. 2022's Inflation Reduction Act provides \$500 million for higher blend infrastructure matching grants and RFA actively helps retailers apply successfully for grants.

And while flex fuels like E85 continue to gain in popularity—its use in the bellwether state of California continues to rise—automakers continue to backtrack on their produc-

tion of FFVs. For model year 2023, the only FFVs available to consumers are select Ford F-150 and Transit models, with a few other Ford and GM models available for fleet purchases only. This is a marked difference from the more than 80 different

models from eight manufacturers that were available to consumers as recently as the 2015 model year. RFA continues to strongly advocate for the production of more FFVs and fairness in how alternative fuel vehicles are incentivized under fuel economy and greenhouse gas regulations.



While the number of flex fuel models has been decreasing in the United States, other countries are encouraging more options as they strive to reach their own net-zero-carbon goals. Toyota has introduced a flex fuel Corolla model for the India market, as shown at January's Auto Expo 2023 show in New Delhi. This major event featured a large pavilion dedicated to ethanol.

CAN YOU



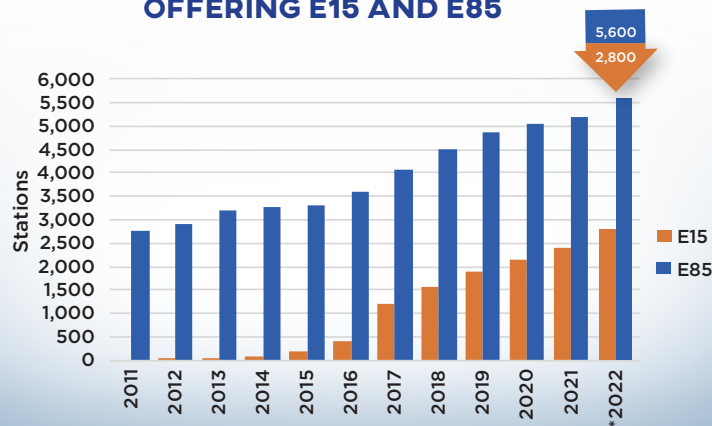
THE FOLLOWING 2023 MODELS ARE AVAILABLE AS FLEX FUEL VEHICLES (FFVs):

- Ford F-150 (3.3L & 5.0L engines)
- Ford Transit (3.5L engine)

Fleet only:

- Ford Police Interceptor - Utility (3.3L engine)
- Chevrolet Silverado (5.3L engine)
- Chevrolet Silverado HD (6.6L engine)
- GMC Sierra (5.3L engine)
- GMC Sierra HD (6.6L engine)

EXPANSION OF U.S. RETAIL STATIONS OFFERING E15 AND E85



Source: RFA

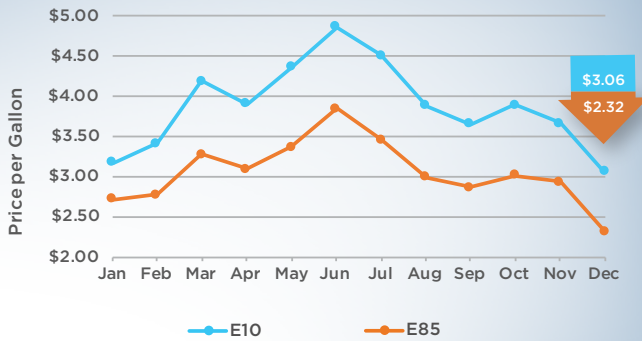
*Estimated

100% HBIIP Grant Success Rate

Since 2020, RFA-supported grants led to infrastructure projects by **35 companies**, totaling **\$74 million** and covering **260 retail operations** spanning **21 states**. In 2022, RFA helped retailers apply for **\$200 million** in infrastructure funding that could lead to **1,000 more dispensers** at more than **220 new E15 locations** across **19 states**.

E15

2022 NATIONAL AVERAGE RETAIL PRICES FOR E10 & E85



Source: RFA based on data from E85prices.com

“To reduce gas prices ... I announced an emergency waiver to allow E15 gasoline to be sold across America during the summer. It’s an extraordinary effort, but it had to be done for this summer. E15 uses more ethanol from crops grown here in Illinois and elsewhere around the country. And it can reduce the cost of a gallon of gasoline at the pump by 10 cents per gallon. Every little bit matters. I know it’s a big deal.”

- President Joe Biden at a May 2022 event in Illinois



E15 APPROVAL STATUS FOR U.S. LIGHT-DUTY VEHICLES

■ E15 approved by automaker in ALL models
 ■ E15 approved by automaker in SOME models
 ■ E15 approved by EPA only; NOT approved by automaker

AUTOMAKERS / MODELS	MODEL YEAR													MARKET SHARE *
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023		
BMW Group **														
BMW													2.5%	
Mini													0.3%	
Daimler Group (Mercedes-Benz)													2.6%	
Ford Motor Co. (Ford & Lincoln)													14.5%	
GM (Buick, Cadillac, Chevrolet & GMC)													16.2%	
Honda Motor Co. (Honda & Acura)													7.8%	
Hyundai Motor Co. (Hyundai, Genesis & Kia)													10.6%	
Mazda													2.1%	
Mitsubishi Motors Corp.†													0.7%	
Nissan Motor Co.‡														
Infiniti													0.3%	
Nissan													5.3%	
Stellantis (Alfa Romeo, Chrysler, Dodge, Fiat, Jeep, Maserati & RAM)													12.5%	
Subaru §													4.1%	
Tata Motors (Jaguar & Land Rover)													0.7%	
Toyota Motor Corp.														
Lexus													2.1%	
Toyota ¥													12.8%	
Volkswagen Group #														
Audi													1.2%	
Porsche													0.5%	
Volkswagen													2.4%	
Volvo Car Group													0.8%	

* Internal combustion engine models only.

** Approves the use of up to 25% ethanol blends.

† Approves the use of E15 in Outlander.

‡ Approves the use of E15 except in Titan, Kicks & QX80.

§ Approves the use of E15 except in 2.5L engines.

¥ Approves the use of up to 25% ethanol blends in Supra.

Approves the use of E15 except in Golf.

Sources: Auto manufacturers' owner's manuals, GoodCarBadCar.net