THE E15 ADVANTAGE

The Secrets to Success

growth energy®
America's Ethanol Supporters

CONTENTS

Introduction

For years, large retail chains, like Sheetz, Kwik Trip, Casey's, and Thornton's, have been selling E15 to their customers because of its competitive pricing, engine performance value, and benefits to the environment. With enough E15 sold for consumers to drive more than 20 billion miles in the last seven years, E15 has developed a solid reputation for helping retailers sell more fuel.

E15 Generates 30 to 56 Percent of Total Fuel Sales

More than a dozen large independent retail chains have been selling E15 for more than five years. During this time, E15 has developed strong sales records for retailers, with E15 sales generating 30 to 56 percent of total fuels sales in many locations. Given E15's favorable spread over unleaded, those sales offer a significant boost in profits for those offering E15. Consumers have also made it known they prefer to purchase E15. That's because E15 gives consumers a competitively priced fuel that offers performance and environmental benefits.

Forecourt: Set Up For Success

Consumers are creatures of habit, especially when purchasing fuel. They want a fuel that works in their engine, is cost-effective, and possibly cleaner-burning, making E15 primed for success (Mohamadi, A. 2018). Several factors can influence the sales success of E15. To maximize your competitive advantage with E15:

- Offer E15 at the majority, if not all, the dispensers.
- Market E15 like other gasoline products, under a name like Unleaded 88 or Regular 88 (Quadrant, 2012).
- Offer E15 via a shared hose with other grades of gasoline, like 89 and premium.
- Post the price of E15 on the street sign. Retailers who post the price of E15 sell approximately 49 percent more E15 volume than retailers who don't post the price (McNamara, P. 2019).

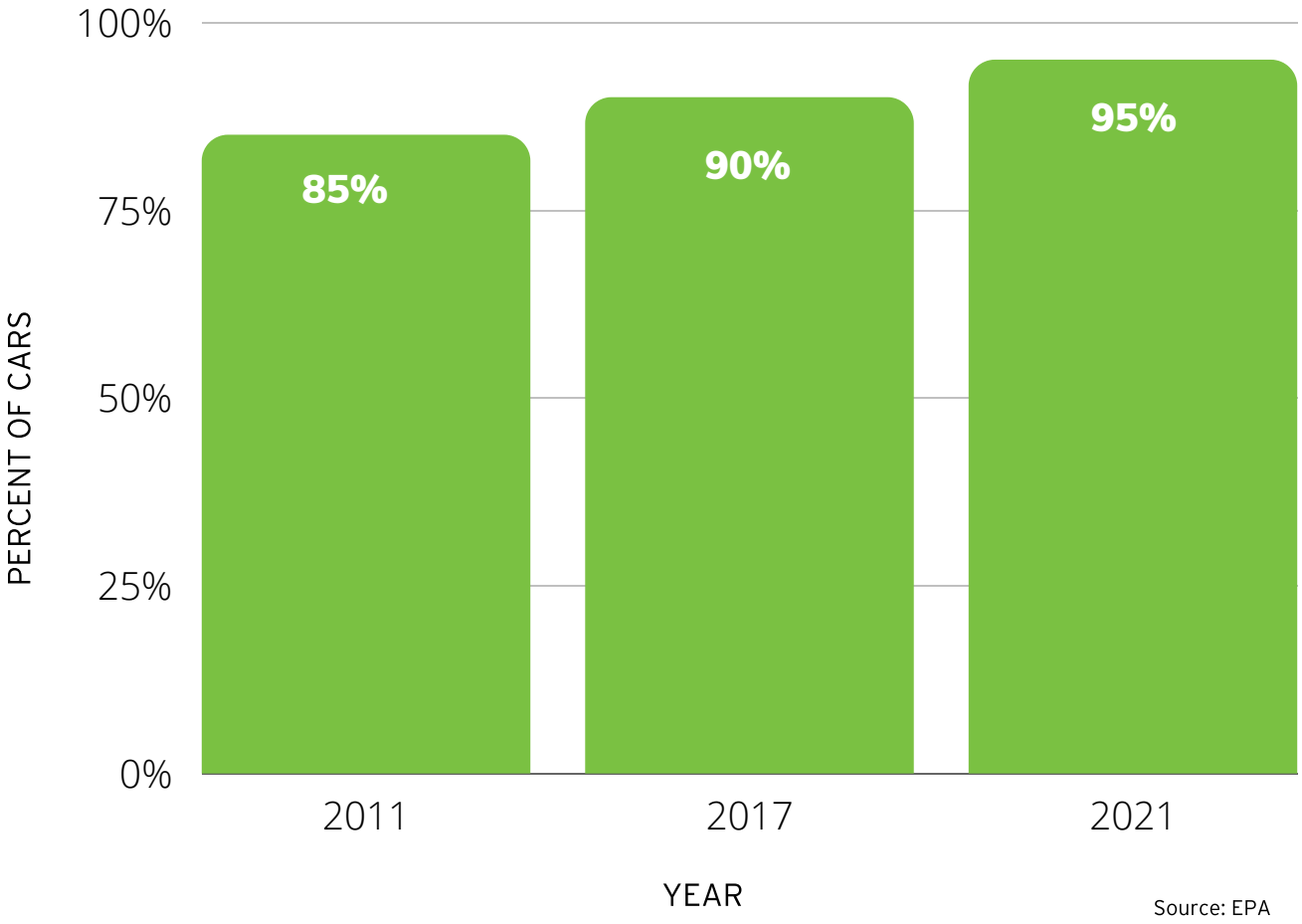
E15 Pricing Strategy

Consumers are very price sensitive and identify price as their number one criterion for purchasing gasoline (NACS, 2015). Moreover, electing where to buy gas based on price is relatively easy since retailers post their prices on street corners. There are also prominent websites and phone apps, like GasBuddy, that enable consumers to quickly price shop for lower gasoline prices in each geographic market.

Whether pricing to grow volume or maximize margins, E15 affords retailers the flexibility to help achieve their objectives. Historically, the price of ethanol has remained below the price of gasoline. As a result, E15 typically costs less than E10/87, depending upon market conditions. Also, E15 typically offers the consumer an octane of 88, which has a perceived value greater than 87.

In a consumer demand study conducted by Mastercard, consumer reactions to selling E15 at parity or at a discount of up to $0.10/gallon compared to 87/E10 was studied at more than 350 retail locations over 12 months (McNamara, P. 2019). Sales of E15 grew as the discount to 87/E10 increased. It is important to point out, over-all gasoline gallons sold increased too. In other words, E15 did not cannibalize 87/E10, 89, or premium grade sales (McNamara, P. 2019).

Cars Approved for E15



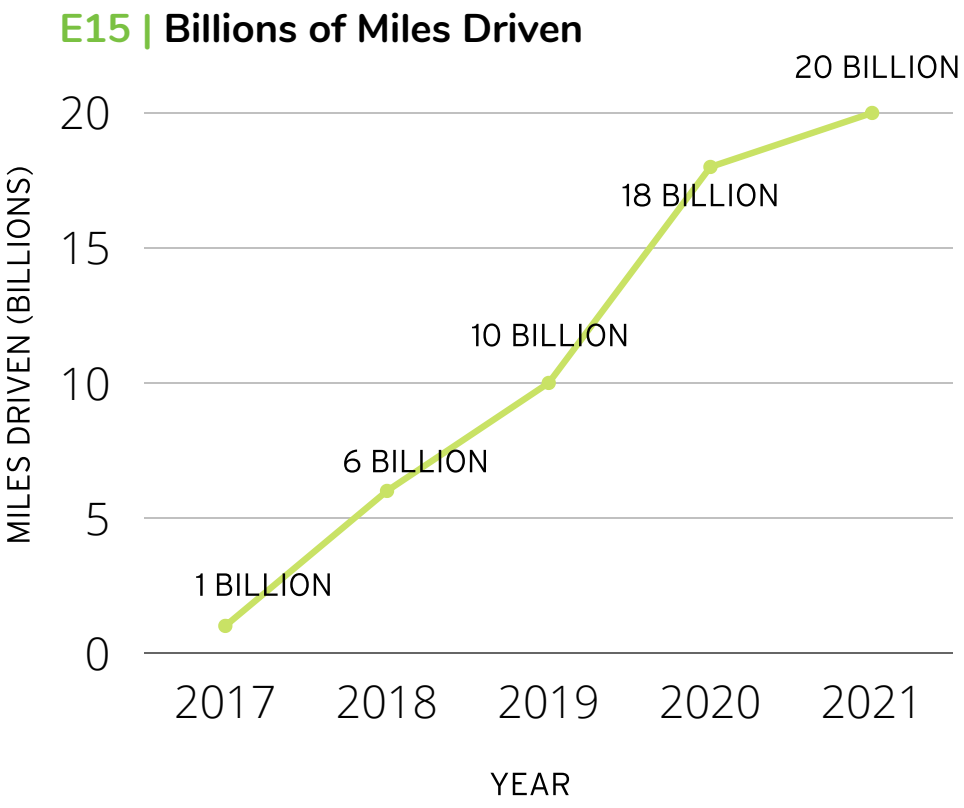
Source: EPA

E15 has a large, accessible market

While some fuel options remain niche products, E15 has mainstream appeal and is a good choice for most American motorists—that's why consumers across the U.S. have logged more than 20 billion miles on the fuel. E15 is approved for use in all 2001 and newer vehicles, which is 95 percent of the cars on the road today (Darlington, 2020).

E15 also appeals to consumers looking for a lower-priced fuel, better performance, and a cleaner-burning option when filling up (Mohamadi, A., 2018).

The most tested fuel ever, with more than 20 billion consumer miles driven



In 2011, the U.S. Environmental Protection Agency (EPA) approved E15, a new gasoline-grade containing up to 15 percent ethanol. The EPA, in cooperation with the U.S. Department of Energy (DOE), completed the most extensive testing of this new lower-carbon, transportation fuel in the United States history.

The DOE tested 86 vehicles, statistically representing all 2001 and newer vehicles being driven by consumers today (DOE, 2012). These test vehicles were driven more than six million miles with no statistically significant increase in emissions or loss of fuel economy. Also, there were no additional maintenance issues attributed to the use of E15 in vehicles 2001 and newer (Oakridge National Laboratory, 2012).

Since 2011, consumers have purchased enough E15 to drive approximately 20 billion worry-free miles. After trying the fuel, consumers come back to E15 and rely on its performance and better value.

E15 and customer loyalty drives more gallons sold and store purchases

Consumer research and purchasing behavior validate that consumers are keen to purchase E15 (Mohamadi, 2018). More than 4,000 consumer surveys, on-location interviews, and trials at more than 350 retail locations over six months have painted a clear picture of which consumers purchase E15 and why.

There are four distinct groups of consumers who are purchasing E15: conservative men, environmentally conscious males, diverse male millennials, and suburban women.

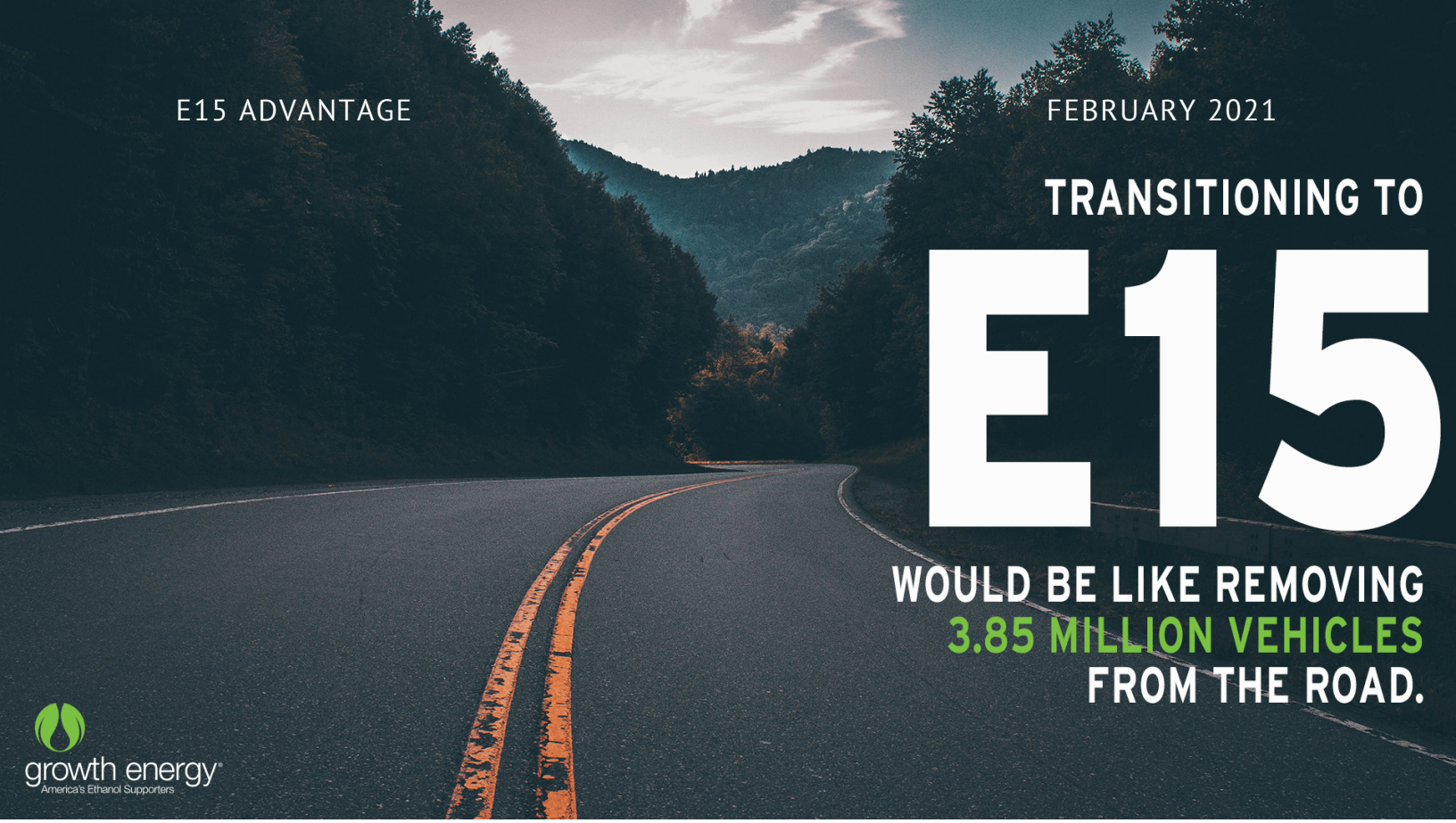
	Audience	Age	Income	Key E15 Message
Current Adopters	Conservative Male	55+	Middle upper income	Good for your engine, Works in your car engine
Immediate Targets	Environmentally Conscious Males	35-54	Upper income	Clean, Environmentally friendly
	Diverse Male Millennials	18-35	Lower middle income	Lower price, Works in your car engine, Environmentally friendly
Long-Term Targets	Suburban Women	35-64	Middle upper income	Clean, Lower Price, Environmentally responsible

Men in their 50s, who are car enthusiasts with higher incomes, find the performance of E15 appealing. At the same time, more environmentally conscious men in their 30s with higher incomes find the cleaner-burning advantage of E15 worthwhile. E15 also appeals to millennials, one of the largest economic groups in the United States. Consumer research, backed up by retailer loyalty data, confirms that male millennials with lower incomes find the affordability of E15 and enhanced environmental profile versus other fuels to be of interest. Finally, suburban moms with upper incomes find the cleaner-burning benefit an essential consideration when purchasing gasoline.

These purchasing habits were confirmed during a series of retailer loyalty marketing promotions conducted with Thornton's and Kum & Go. Delivering select promotional messages regarding E15 to the appropriate audience resulted in loyalty customers purchasing an additional five gallons per month of E15, as compared to the average loyalty customer. Also, E15 consumers purchased items in the store significantly more than the average loyalty program customer (Poster, C. 2018).

Additionally, a four-month promotional program for E15 on GasBuddy further confirmed consumer purchase behavior. More than 160,000 consumers selected E15 as their primary fuel on the app during this program, and more than 72,000 store visits were tracked. A survey completed by more than 14,000 GasBuddy users demonstrated that 61 percent of the users were aware of E15 (marketed to consumers as Unleaded 88) and that 22 percent of users were likely to select going to a retailer that offers E15 (GasBuddy, 2019).

Furthermore, when asked, consumer preference favored ethanol blends over non-ethanol blended fuels (Petrolia, Bhattacharjee, Hudson, & Herdon, 2009). Most respondents stated they believed ethanol positively influenced the environment, economy, and national security.



E15 FITS A LOWER CARBON FUTURE

Because it's a more affordable, climate-friendly fuel option at the pump, E15 has mainstream appeal and is a good choice for most American motorists looking to make a small change to reduce their carbon footprint without sacrificing engine performance (Mohamadi, A., 2018).

Based on recent studies, it is estimated that a nationwide transition from 87/E10 to E15 would reduce greenhouse gas (GHG) emissions by approximately 17.62 million tons per year (Darlington, T. 2020).

Using data collected from the EPA, U.S. Department of Agriculture (USDA), and Argonne National Lab's Greenhouse Gases, Regulated Emissions, and Energy Use in Technologies (GREET) model, the GHG reduction from E15 would be equivalent to removing approximately 3.85 million vehicles from the road.

Where to start and find out more

Most retailers start with E15 by adding it into their plans for new builds and remodeling projects. Recently, some retailers have begun replacing their 87/E10 with 88/E15 to offer it as their primary street-grade product.

Since all steel tanks and fiberglass tanks installed over the past 30 years are compatible with E15, retailers report that adding E15 to their sites is considerably easier than expected.

In the competitive fuel sales business, retailers need every advantage they can get. Whether retailers are attempting to maximize fuel sales volume, increase margins, or drive more consumer traffic into the store, E15 offers the flexibility to be a critical part of your strategy.

Terminals are catching on as well. Due to increasing demand, more terminals are now offering pre-blended E15. Adding pre-blended E15 to retail sites is even easier since most equipment is compatible with the fuel.

Growth Energy, the world's largest organization representing producers and supporters of ethanol, has helped install more than 90 percent of the E15 retail sites currently offering E15. The organization can assist with marketing, regulatory, and equipment compatibility questions regarding E15.

Please contact these Growth Energy representatives for more information:

Mike O'Brien | Vice President of Market Development | MOBrien@growthenergy.org

Will Beck | Northeastern Regional Market Development Director | WBeck@growthenergy.org

David Durling | Gulf Regional Market Development Director | Ddurling@growthenergy.org

References

Darlington, T. (2020). Analysis of ethanol compatible fleet for the calendar year 2021. Analysis of Ethanol-Compatible Fleet for Calendar Year 2021-Final (growthenergy.org)

Darlington, T. (2020). GHG Benefits of 15% Ethanol Use in the United States. National E15 Analysis Final (airimprovement.com)

GasBuddy (2019). Post-campaign branded research study on consumer attitudes towards E15. Why Consumers Choose E15, August, 2019. Convenience Store Products.

Growth Energy (2020). Sales of E15 high enough for drivers to drive more than 18 billion miles.

McNamara, P. (2019). Mastercard consumer demand study for E15.

Mohamidi, A. (2018). Consumer attitudes and purchasing incentives for E15. Convenience Store News, August 2019.

National Association of Convenience Stores. (2015). 2015 retail fuels report. December 31.

Oakridge National Laboratory. (2012). Final report on intermediate blends catalyst durability program. Final report on intermediate ethanol blends research published | ORNL

Petrolia, D. R. (2009). Do Americans want ethanol? A comparative contingent-valuation study of willingness to pay for e10 and e85. Energy Economics August 19. Print.

Poster, C. (2018). Loyalty programs and E15 purchase behavior. Convenience Store News, July, 2018.

Quadrant (2018). How important is it to consumers that the ethanol content is included in the gasoline name? CSP, August 2019.

Wegener, D. T., & Kelly, R. (2008). Social psychological dimensions of bioenergy development and public acceptance. Bioenergy Research 1: 107-17. Print.

United States Department of Energy (2012). Getting it right: accurate testing and assessments critical to deploying the next generation of auto fuels. Getting It Right: Accurate Testing and Assessments Critical to Deploying the Next Generation of Auto Fuels | Department of Energy