



RFS REFORM

BACKGROUND

In November 2017, the EPA finalized its 2018 biofuel volumes for the RFS which maintained the current 15-billion-gallon ethanol mandate. This is troubling because the existing RFS ethanol blending mandates have already pushed E10, a blend of 10 percent ethanol and 90 percent gasoline, into virtually every gasoline market in the country, and fuel consumption predictions for 2018 and beyond vary between increasing or decreasing numbers. Any significant increase in the ethanol blending standard will force refiners to move to E15 blends unless gasoline demand rises to offset new blending mandates.

UST COMPATIBILITY CONCERNS WITH E15

The demonstration that a UST system is compatible with greater than E10 plus blends is difficult, if not impossible, for most retailers and is a major impediment to dispensing and storage of E15. A UST system is made up of approximately 60 components, all of which need to be either UL listed, or manufacturer certified as compatible with the product to be stored and delivered. Federal, state, and local laws and regulations, national and international fire codes, as well as all commercial insurance policies, require the use of UL certified storage and dispensing equipment or a specific demonstration that the UST and dispenser system is compatible, such as a manufacturer acknowledgement. Dispensing ethanol blends higher than 10 percent with non-certified equipment exposes retailers to legal liability for non-compliance with federal and state UST regulations and state fire codes, and will subject them to significant civil penalties and possible closures.

The National Renewable Energy Laboratory and UL tested the compatibility of new and used service station equipment. NREL found 70 percent of equipment currently in use as well as 40 percent of new equipment failed E15 compatibility tests¹. A brand-new location built today would only be compatible if the equipment installed was specifically designed for E10 plus blends.

Another report by the Association of State and Territorial Solid Waste Management Officials (ASTSWMO) states that compatibility of existing UST facilities is one of the biggest challenges and concerns with biofuel blend storage including gasoline/ethanol blends up to E10 – “Many UST inspectors have seen the impact biofuel blends can have on the corrosion of equipment within STP sumps, and an increased prevalence of leaks from equipment inside dispenser cabinets. Gaskets, adhesives, glues, and sealants (including the standard ‘pipe dope’ commonly used on older systems) have not always been compatible with conventional motor fuels up to E10. Compatibility issues have also been observed in some of the early generation flexible piping systems manufactured in the early to mid-1990s.”

Retrofit Costs for E15 Compatible Equipment

The cost to petroleum marketers for UST system retrofit would be enormous. PMAA estimates that the average cost to replace the UST system at a retail gasoline station to sell E10 plus blends is likely to reach \$200,000 per site. Replacement of piping alone would cost a minimum \$100,000. Such compliance costs would be staggering for small business retailers and would undoubtedly force many, particularly those in rural areas, to close. In August 2017, PMAA Executive member Vern Kelley (Kelley Fuels, Shakopee, Minnesota), who is a petroleum marketer and a corn farmer, highlighted to the EPA that few existing UST system components have been certified to handle E10 plus blends, and that marketers have no

¹Source: *A Comprehensive Analysis of Current Research on E15 Dispensing Component Compatibility* <http://www.api.org/~media/files/policy/fuels-and-renewables/e15-infrastructure-comprehensive-analysis.pdf> pg. 1

practical way to demonstrate existing underground storage tank (UST) systems are compatible with ethanol blends greater than E10 - a key legal hurdle. To read Kelley's testimony, please go to:

http://www.pmaa.org/nfch/attachments/PMAA_Comments_RFS_PublicHearing_August2017.pdf

Misfueling Concerns

Although the EPA has approved E15 for use in 2001 and newer vehicles, only a few auto manufacturers have just recently certified E15 for use in newer cars.

WAS YOUR VEHICLE DESIGNED AND WARRANTED TO OPERATE ON E15?

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
BMW	No	No	No	No													
Chrysler	No	No	Most*	Most*													
Ford	No	Yes	Yes	Yes	Yes	Yes											
GM	No	Yes	Yes	Yes	Most ⁴	Most ⁴	Most ⁴										
Honda/Acura	No	Some ¹	Yes	Yes	Yes												
Hyundai/Kia	No	No	No	Most ⁷													
Jaguar/Land Rover	No	Yes	Yes	Yes	Yes												
Mazda	No	No	No	No													
Mercedes	No	No ²	No ²	No	No												
Mitsubishi	No	No	No	No													
Nissan/Infiniti	No	No	No	No													
Subaru	No	No	No	No													
Toyota/Lexus	No	Some ¹	Most ⁴	Most ⁴	Yes												
VW/Audi/Porsche	No	Yes	Yes	Yes	Yes												
Volvo	No	No	No	No													

E15 Chart Sources: <http://www.edmunds.com/ownership/howto/articles/120189/article.html> and auto company contacts

¹Accord, Civic, Crosstour, CR-V, CR-Z, Insight, Odyssey, Pilot; Acura: ILX, MDX, RDX, RLX, but not TL, TSX, TSL Wagon

²Some owner manuals for 2014 and 2015 incorrectly stated that E15 was allowed.

³Avalon, Camry, Corolla, Highlander, iQ, Prius, RAV-4, Scion tC, Sienna, Venza; Lexus: CT200H, ES350, GS300/350, G5450H, IS250, IS350, LS460, RX350, RX450H, but not 4Runner, FJ Cruiser, Land Cruiser,

Sequoia, Tacoma, Tundra, Yaris; Lexus: IS250C, IS350C, IS F, GX460, LX570

⁴Not Chevrolet City Express

⁵Not FR-S, xB (model discontinued after 2015).

⁶Not Dodge Viper

⁷Not Hyundai Santa Fe, Kia Optima

RFS REFORM EFFORTS

The Trump Administration continues to hash out an RFS reform deal between refining and ethanol industry interests. Recently, the Trump Administration has used its waiver authority under the RFS to exempt several small refiners from their renewable volume obligations (RVOs) which has dampened ethanol renewable identification numbers (RINs) values. The EPA has the authority to grant exemptions from the program to refineries with a capacity under 75,000 barrels per day if the company can demonstrate financial hardship. Over twenty exemptions have already been granted this year. According to the ethanol industry, this has effectively reduced the corn ethanol mandate from 15 billion to 13.8 billion gallons.

Additionally, reports have surfaced that President Trump has agreed to allow the sale of E15 year-round in exchange for allowing biofuel exports to qualify for RINs generation. The ethanol industry has already pushed back against any effort to cap RIN values and/or allow ethanol exports to qualify for RINs generation since any reduction in RINs will likely hurt E15 sales. In other words, for E15 to become a viable “new fuel” in the marketplace, the ethanol industry needs the 15-billion-gallon ethanol mandate to stay intact which maintains RIN values. It is unlikely that a cap on the price of RINs will be issued by the Trump Administration given that the current refinery exemptions and the possibility that biofuel exports could fulfill RIN obligations will likely do the same thing by reducing the value of RINs.

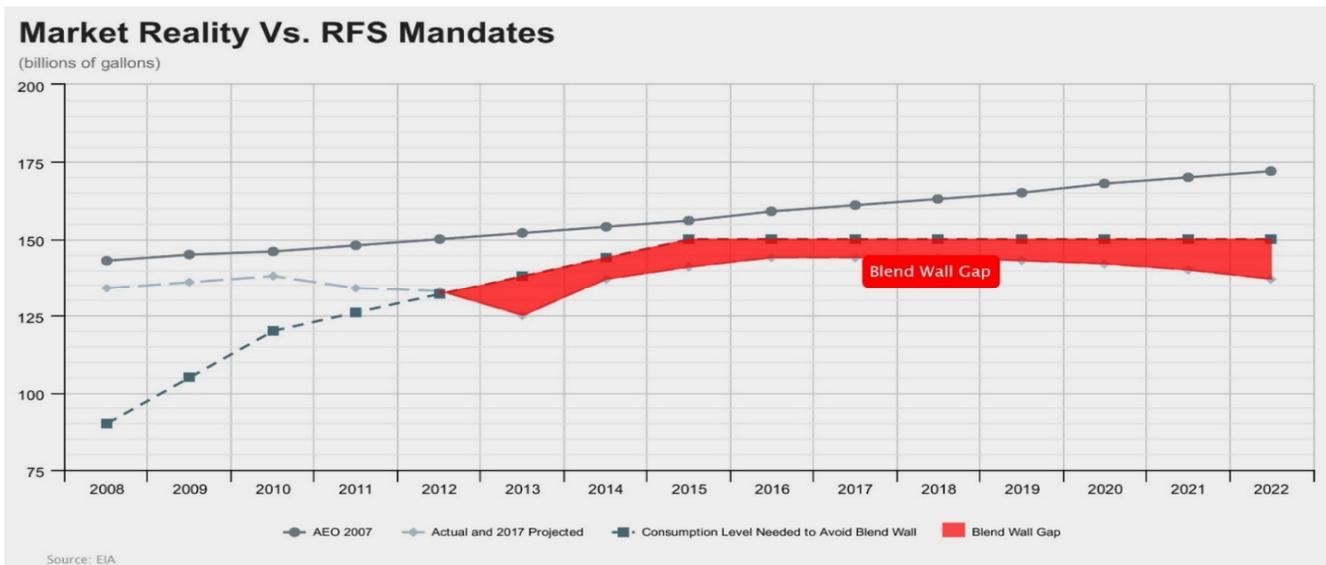
Additional options include introducing a new type of RIN category, D8 RIN, which some refiners argue would put downward pressure on today’s ethanol RIN blending credits. The D8 RIN would be generated for ethanol blends above E10. According to some refiners, the D8 RIN would cover a smaller portion of the market and sell at a premium, thereby, incentivizing more companies to invest in ethanol blending infrastructure. The existing D6 RIN pool would then cover only up to an E10 blend which represents most of the fuel sold in the country, and therefore, reduce D6 RIN prices. PMAA is concerned that expanding the RFS would only add more complexity to an already unworkable program.

Furthermore, the upcoming CAFE standards will likely drive auto manufacturers to make more fuel-efficient vehicles. One means that has gained traction to achieving this is through new high compression engines. These high compression engines will require the introduction of a 95-Research Octane Number (RON) which is similar to a 91-92 minimum octane rating. Transitioning to a high-octane baseline fuel would likely take nearly 20 years to happen and come with potentially significant costs. Refiners, the ethanol industry and auto manufacturers have argued that transitioning to 95-

RON fuel would lower emissions and help meet the new CAFE standards but differ on how to achieve them. PMAA is concerned that implementing a higher-octane fuel may be used as an excuse to mandate E15 or higher ethanol blends which would place small business petroleum marketers in a precarious situation because of the potential economic impacts including the costs associated with existing UST system incompatibility.

The Food and Fuel Consumer Protection Act – PMAA Supported

During the 114th Congress, PMAA supported legislation introduced by Reps. Bill Flores (R-TX), Peter Welch (D-VT), Bob Goodlatte (R-VA) and Jim Costa (D-CA) known as “The Food and Fuel Consumer Protection Act,” which would reduce the maximum volume of ethanol blends into the nation’s fuel supply at 9.7 percent of projected gasoline demand as determined by the Energy Information Administration (EIA). When the RVO mandates were established by Congress in the 2007 and 2009 energy bills, gasoline demand was expected to increase far more than it has which led the country to the current blendwall dilemma. Were it not for the outdated assumptions, the problem would not exist (see the graph that follows). Fortunately, the problems that the RFS has created can be mitigated by adopting legislation to reduce the corn ethanol mandate.



Furthermore, the demand for unblended gasoline (E0) is significant. The EIA estimated EO consumption to be 5.3 billion gallons per day in 2015. Blending limitations, refueling infrastructure, and consumer demand reinforce the ethanol blend wall.

Consumer and Fuel Retailer Choice Act (H.R. 1311, S. 517)

Each year, the EPA regulates Reid vapor pressure (RVP) for gasoline and gasoline-ethanol blended from June 1 until September 15. During these months, the RVP may not exceed 9.0 psi or 7.8 psi. EPA provides a 1.0 psi RVP allowance for gasoline containing ethanol up to 10 percent. H.R. 1311 and S. 517, known as the “Consumer and Fuel Retailer Choice Act,” would extend the RVP waiver to ethanol blends above 10 percent. The bills would allow retailers across the country to sell E15 and other higher-ethanol/gasoline fuel blends year-round. PMAA cannot support these bills until the corn ethanol mandate is reduced and all legal UST compatibility and infrastructure upgrade issues are settled.

“THE ASK”

Continue to remind lawmakers that UST system compatibility issues with E10 plus blends exist and urge them to fix the RFS by immediately reducing the maximum amount of ethanol blended into gasoline at 9.7 percent of expected demand for 2019 and future years. PMAA believes that reducing the ethanol mandate to this level is the most effective way to allow all petroleum marketers to compete on a level playing field. (Committees: House Energy and Commerce; Senate Environment and Public Works; All lawmakers)

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