

2017 RFS Rulemaking

- Similar to the 2014-2016 RFS rules:
 - EPA should continue to exercise its waiver authorities and lower the statutory volumes
 - Carryover RINs should not be considered when setting the standards
- EPA should set 2017 standards below the E10 blendwall
 - Ethanol should not exceed 9.7% of the gasoline pool
 - Limited E85, E15 demand; not solutions to the blendwall
- Feasible advanced standards; cellulosic should be based on demonstrated actual production
- EPA should not change the point of RFS obligation

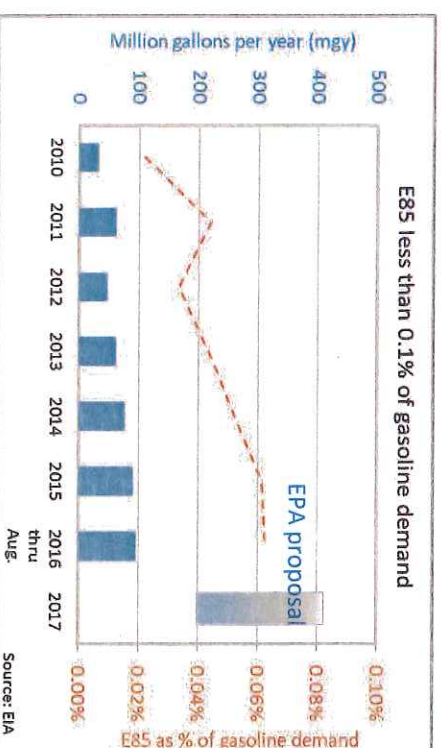
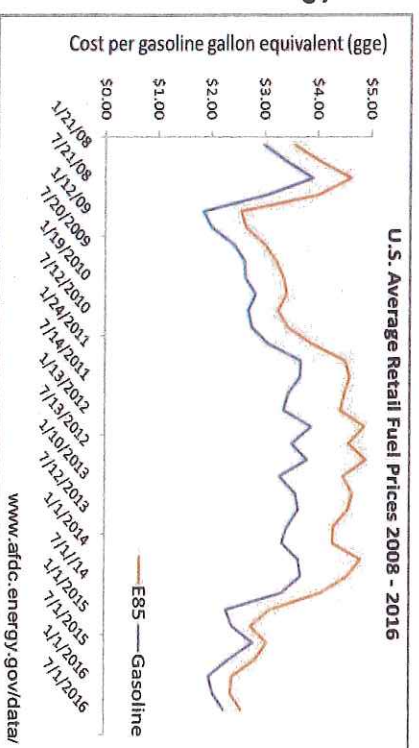
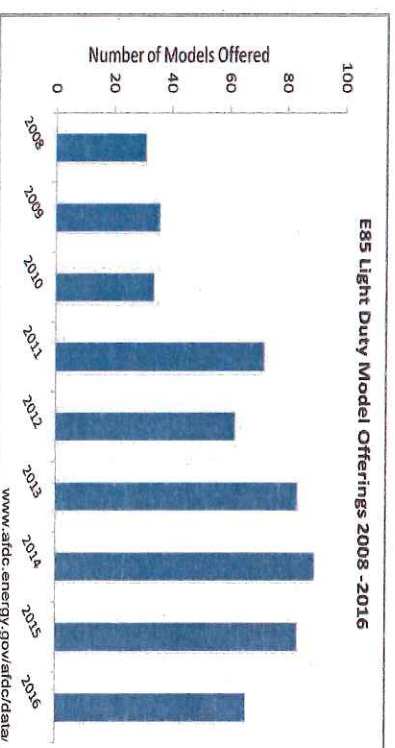
EPA should set 2017 Standards Below the Blendwall

- EPA has clear authority to waive the statutory volumes
- Total ethanol volume should not exceed 9.7% of the gasoline pool
 - Significant E0 demand, estimated by EIA¹ at 5.3 billion gallons or 3.8% of gasoline demand in 2015, *100 fold larger than the combined E85, E15 demand*
 - EPA should use the same E0 methodology outlined in the May 2016 EIA memo¹ vs. EPA's low E0 estimate of 200 million gallons stated in the 2017 proposal

¹ Today in Energy, *Almost all U.S. Gasoline is Blended with 10% Ethanol*, May 4, 2016.

Limited E85 Demand

- Only ~ 8% of fleet are Flex Fuel Vehicles (FFVs); automakers reducing number of FFV models
- E85 has lower energy density, not in cost parity with gasoline
- Range reduction means 4 tanks of E85 = 3 tanks of gasoline
- According to fueleconomy.gov data: cost per mile using E85 increases ~9-14%
- Lack of consumer demand: E85 is less than 0.1% of gasoline demand
- EPA's E85 estimate of 200 – 400 million gallons for 2017 is unrealistic



E15 is Not a Solution to the Blendwall

- E15 potential liability and compatibility concerns = not desirable for consumers
 - Coordinating Research Council: E15 can cause engine and fuel system damage
 - E15 is suitable for fueling in ~15% of the current fleet (incl. FFV's) based on auto manufacturer owner's manuals – use of E15 may void warranty
 - GAO: half of the retail infrastructure is incompatible with E15

Manufacturer	Model Year															
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
BMW	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Chrysler	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Most ⁶
Ford	No	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes	Yes	Yes
GM	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes	Yes	Most ⁴	Most ⁴
Honda/Acura	No	No	No	No	No	No	No	No	No	No	No	No	No	Some ¹	Yes	Yes
Hyundai/Kia	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Jaguar/Land Rover	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes	Yes
Mazda	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Mercedes	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Mitsubishi	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Nissan/Infiniti	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Subaru	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Toyota/Lexus	No	No	No	No	No	No	No	No	No	No	No	No	No	Some ³	Most ⁵	Most ⁵
VW/Audi/Porsche	No	No	No	No	Yes	No	No	No	No	No	No	No	No	Yes	Yes	Yes
Volvo	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No

Source: Edmunds.com and auto company statements. See Endnotes for specific model information

Carryover RINs should not be relied upon for setting annual standards

- EPA correctly recognizes that standards should not rely on carryover RINs
 - Carryover RINs are needed to help ensure market liquidity and in the event of unforeseen circumstances
 - Reliance on carryover RINs only provides a short term relief, compounding the blendwall problem in subsequent years

Feasible Advanced Standards

- Advanced Renewable Fuel standards should be feasible, taking into account feedstock availability, renewable fuel production and blending infrastructure
 - EPA proposed an 11% increase of the 2017 advanced standard vs. 2016 – after a 25% increase in 2016
- DC Circuit Court of Appeals instructed EPA to “aim at accuracy”
- Cellulosic standard should be based on at least three months of actual production
 - Production ramp-up projections for liquid cellulosic biofuels have not materialized
 - Projections from cellulosic producers have consistently been wrong (e.g., Abengoa, Kior)
- Biomass Based Diesel volumes in 2018:
 - EPA should not increase the BBD standard
 - Reduces flexibility in meeting Advanced standard
 - Stakeholders have raised concerns with feedstock availability and costs
 - An increased biodiesel standard could be met with imports
 - Volume should have been set by October 31

EPA Should Not Change the RFS Point of Obligation

- **Changing the point of obligation:**
 - Will not fix the blend wall problem or impact the overall volume of renewable fuels.
 - Will create additional uncertainty in the RFS Program and RIN market.
 - Will complicate administration and function of the program.

Changing the RFS Point of Obligation:

Doesn't impact the overall volume of renewable fuels

- **Will not fix the blend wall problem or impact the overall volume of renewable fuels**
 - Will not alleviate infrastructure constraints throughout the distribution system
 - E15 and E85 will still face the current infrastructure hurdles including retail equipment compatibility
 - The current structure does not prevent renewable infrastructure investments; EPA recognized that renewable producers are free to make such investments
 - Will not increase the number of vehicles that are able to use higher ethanol content fuels
 - E15 still faces the potential liability hurdle due to vehicle incompatibility
 - E85 is still limited to use in Flex Fuel Vehicles
 - Will not change consumer behavior
 - E85 has faced the difficulty of consumer acceptance when discounted at a rate that corresponded to the mileage penalty, given consumers' past purchasing behavior
 - It will only shift the compliance responsibility to a different group of RFS participants, and will not impact the overall volume of renewable fuels
 - According to MIT and EPA studies, independent and merchant refiners are not competitively disadvantaged under the current system as they allege. Like other obligated parties, they recover RIN costs in the sale price of their products (see endnotes).

Changing the RFS Point of Obligation: Creates Additional Uncertainty

- **Will create additional uncertainty in the RFS Program and the RIN market**
 - Changing the point of obligation nine years into the RFS program disrupts RFS compliance plans -- investments and commercial agreements -- which were based on the current RFS structure
 - Deemphasizes development of petroleum refinery pathways for drop-in fuels which utilize existing facilities and infrastructure
 - e.g. renewable diesel
 - Creates additional uncertainty about whether other critical components of the RFS program might be changed in the future
 - Will create uncertainty even if EPA were only to request
 - Could affect the RIN market, investment decisions throughout the supply chain, and investments in renewable fuels and infrastructure

Changing the RFS Point of Obligation: Complicates Administration for EPA

- **Will complicate administration and function of the program**
 - EPA has twice considered placing the obligation on the blender and has declined to do so, due in part to concerns regarding the increase in the number of obligated parties
 - Will increase the number of obligated parties, adding complexity and cost for EPA to administer and enforce the program
 - The identification of covered fuels becomes more difficult, which could result in under-compliance or over-compliance with an obligated party's RVO
 - The RFS already includes provisions to facilitate compliance for all obligated parties, including the ability for obligated parties to separate RINs, and a 20% limit on the quantity of carryover RINs
 - Greater number of points of compliance means greater opportunity for error and/or fraud

Other Organizations Opposed to Moving the Point of RFS Obligation:

- **Marketer Groups:**
 - Society of Independent Gasoline Marketers of America (SIGMA)
 - National Association of Convenience Stores (NACS)
 - National Association of Truck Stop Operators (NATSO)
- **Biofuel Producers:**
 - Advanced Biofuels Association (ABFA)
 - Renewable Fuels Association (RFA)
 - Growth Energy
 - Renewable Energy Group (REG)
- **Bulk Fuel Consumers:**
 - UPS
 - Association of American Railroads

Endnotes

Slide 3 – E15 compatibility chart:

¹Accord, Civic, Crosstour, CR-V, CR-Z, Insight, Odyssey, Pilot; Acura: ILX, MDX, RDX, RLX, but not TL, TSX, TSX 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, GS450H, 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

Slide 8 - Per MIT: "... [A]n obligated party with a net RIN obligation, such as a merchant refiner, is able to recoup their RIN costs on average through the prices they receive in the wholesale market, although this mechanism would not be apparent on the balance sheet of the obligated party because there is no explicit revenue line item offsetting the explicit cost of purchasing RINs."