

# **2021 RFS Standards: Reflect Market Realities and Promote a Level Playing Field**

## **Agenda:**

- 2021 Compliance Percentage Standards
- Ethanol Use
- Small Refinery Exemptions
- Carryover RINs
- Biomass Based Diesel
- 2016 Remand
- General Waiver for Severe Economic Harm

## 2021 Compliance Percentage

- Multiple factors could significantly increase the RFS compliance percentage standard in 2021
  - Small refinery exemption (SRE) policy
  - Increased cellulosic biofuel mandate
  - Reduced gasoline and diesel demand
  - 2016 Remand volume
- A key factor is the uncertainty about gasoline and diesel demand in 2021

EIA Gasoline and Diesel Demand Forecast Data

Forecast Year	EIA STEO Version	billion gals/year			% Change from 2020		
		Gasoline	Diesel	Total	Gasoline	Diesel	Total
2020	Oct 2019	142.7	55.3	198.0	0%	0%	0%
2021	Apr 2019	138.0	57.6	195.6	-3%	4%	-1%
2021	May 2019	135.5	56.7	192.2	-5%	3%	-3%

# 2021 Compliance Percentage – Modeling Scenarios

## Total Renewable Fuel Compliance Percentage - 2021 Modeling

	2019 Final RFS	2020 Final RFS	2021 Modeling Scenarios					
			1	2	3	4	5	6
<b>Total Renewable Fuel Compliance %:</b>	10.97%	11.56%	<b>11.16%</b>	<b>11.62%</b>	<b>11.68%</b>	<b>11.79%</b>	<b>12.01%</b>	<b>12.30%</b>

### Key factors included in modeling:

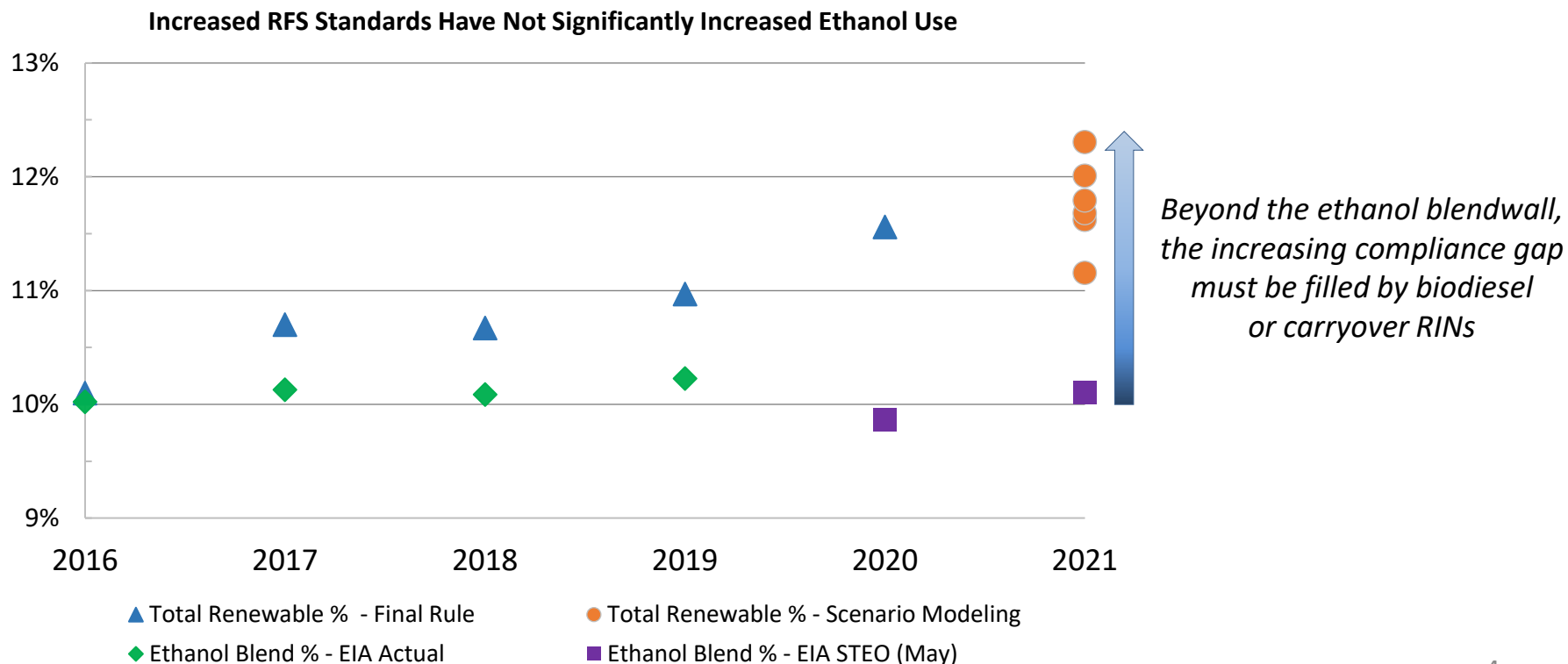
SRE Reallocation	Yes	No	Yes	Yes	Yes	Yes	Yes
Cellulosic = 700 million RINs <sup>1</sup>	Yes	Yes	No	No	No	No	No
Cellulosic = 800 million RINs	No	No	Yes	Yes	Yes	Yes	Yes
2021 Demand Forecast - 04/20 EIA STEO	No	No	No	Yes	No	No	No
2021 Demand Forecast - 05/20 EIA STEO	No	No	No	No	Yes	Yes	Yes
2016 Remand +500 million RINs <sup>2</sup>	No	No	No	No	No	No	Yes

<sup>1</sup> Cellulosic biofuel volume standard was 410 million gallons for 2019 and 590 million gallons for 2020

<sup>2</sup> If the 2016 remand volume is reduced to 250 million RINs in 2021, the compliance percentage would be 12.16%

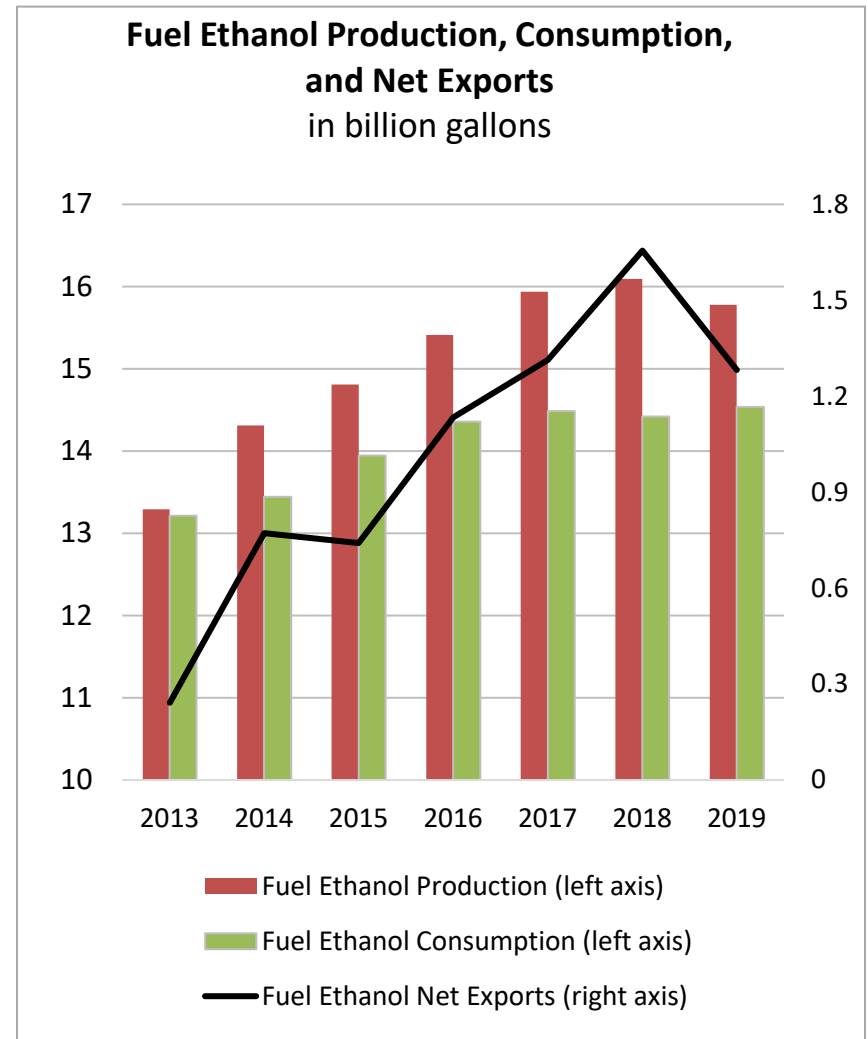
## 2021 Compliance Percentage and Ethanol Use

- The implied 15-billion RIN volume for conventional biofuel can be satisfied by any renewable fuel, i.e. not a mandate exclusively for corn ethanol
- Standards set above the blendwall do not significantly increase ethanol blending
  - E15 and E85 are not blendwall solutions
- Historically, biodiesel has been used for compliance for volumes above the E10 blendwall
  - Increasing demand for imported biodiesel



# The RFS should not be used to address external challenges facing ethanol producers

- The RFS affects domestic renewable fuel consumption and should not be used to make up for lost export volumes
  - Fuel ethanol *consumption* was at record high levels in 2019
  - *Production* was down due to lost exports
- EPA should reject any calls to increase 2021 standards due to demand losses resulting from the COVID-19 pandemic



## **Small Refinery Exemptions (SRE) and Reallocation**

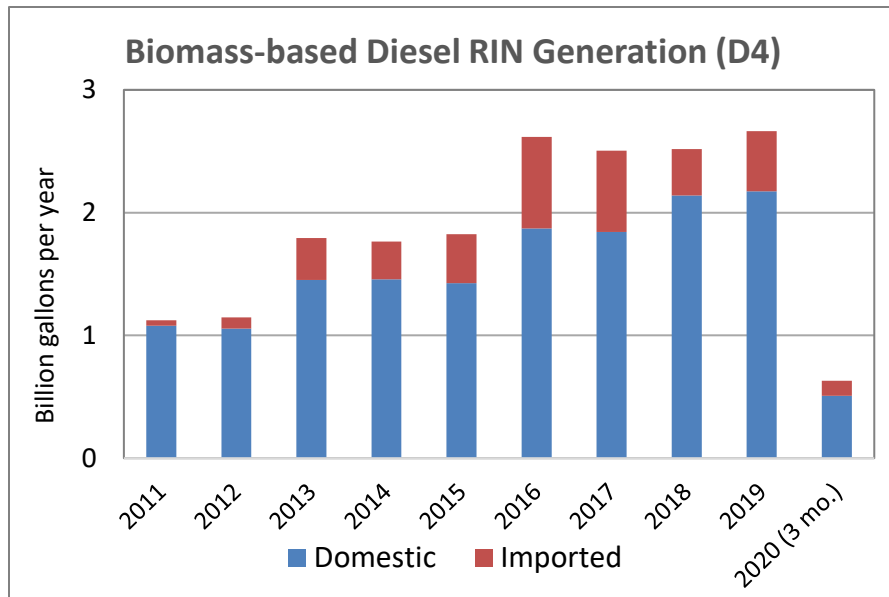
- EPA should apply 10<sup>th</sup> Circuit Court's decision nationally
- EPA should not reallocate SRE volumes

## **Carryover RINs**

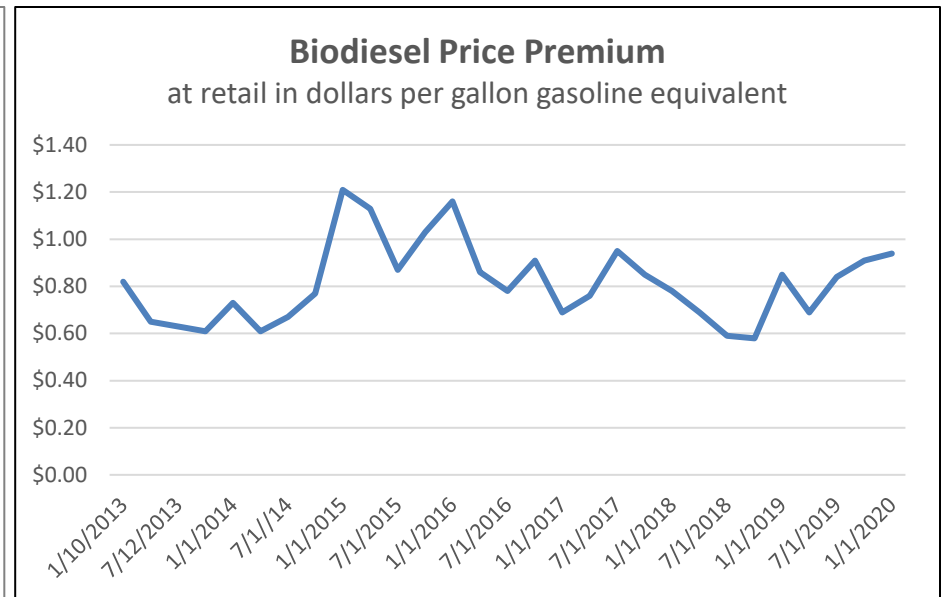
- Retirement of carryover RINs should not be considered as a viable mechanism to meet infeasible RFS standards
  - Intended to ensure market liquidity and to help mitigate unexpected events
  - Only provides short-term relief and compounds blendwall problem

# EPA should set reasonable 2022 Biomass-based Diesel standards

- EPA should not increase the current BBD standard in 2022, and a lower standard may be appropriate.
  - EPA should focus on domestic production and realistic utilization rates
  - Biodiesel use imposes a significant cost on the consumer



US EPA EMTS Data



[www.afdc.energy.gov](http://www.afdc.energy.gov)

# Remand of 2016 Rulemaking

- DC Circuit court remanded the 2016 RFS Final Rule to EPA to address the 500 million RINs that were waived from the total renewable fuel volume standard.
- EPA should not increase the RVO based on the remand of the 2016 rule. There is no way to retroactively correct the volume of renewable fuel blended in 2016.
- If EPA proceeds:
  - Apply the full volume of the 2016 cellulosic waiver to the total renewable fuel standard.
  - Full use of the cellulosic waiver in 2016 would have reduced the total renewable fuel standard by an additional 380 million RINs.
  - Therefore, 120 million RINs is the maximum adjustment that should be considered for the total renewable fuel standard in 2021.
  - EPA should consider spreading the remand volume over two years, with 60 million RINs in 2021 and 60 million RINs in 2022



# Use of General Waiver is Justified

- Depending on several EPA policy decisions, the 2021 RFS compliance standard could increase significantly.
- EPA should use its waiver authority to keep compliance volumes feasible, reduce costs to the consumer, and avoid a market impact due to exceeding the ethanol blendwall.
- The impact of exceeding the blendwall is significant in 2021:
  - Pessimistic EIA projections for 2021 fuel demand
  - The cellulosic waiver will not be sufficient to reduce the total and advanced standards to a feasible level.
  - Increased RFS standards do not result in increased ethanol use
  - Increased biodiesel use and carryover RINs will be required to meet compliance

# Appendix

# E15 and higher ethanol blends are not blendwall solutions

- E15 has potential liability and compatibility concerns
  - E15 can cause engine and fuel system damage (CRC testing)
  - Only about 30% of vehicles were designed to accommodate E15 based on auto manufacturer owner's manuals
  - GAO: half of the retail infrastructure is incompatible with E15
  - EPA OUST: "Pipe dope used prior to 2007 is probably not compatible with ethanol blends greater than 10 percent"

Manufacturer	Model Year																			
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
BMW	No	No	No	No	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 <sup>6</sup>	Most <sup>6</sup>	Yes	Yes	Yes
Ford	No	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
GM	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes	Yes	Most <sup>4</sup>	Most <sup>4</sup>	Most <sup>4</sup>	Yes	Yes	Yes
Honda/Acura	No	No	No	No	No	No	No	No	No	No	No	No	No	Some <sup>1</sup>	Yes	Yes	Yes	Yes	Yes	Yes
Hyundai/Kia	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Most <sup>7</sup>	Most <sup>8</sup>	Yes	Yes
Jaguar/Land Rover	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mazda	No	No	No	No	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 <sup>2</sup>	No <sup>2</sup>	No	No	No	No	No
Mitsubishi	No	No	No	No	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	No	Most	Most	Most
Subaru	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Some <sup>9</sup>	Some <sup>9</sup>
Toyota/Lexus	No	No	No	No	No	No	No	No	No	No	No	No	No	Some <sup>3</sup>	Most <sup>5</sup>	Most <sup>5</sup>	Yes	Yes	Yes	Yes
VW/Audi/Porsche	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Volvo	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No

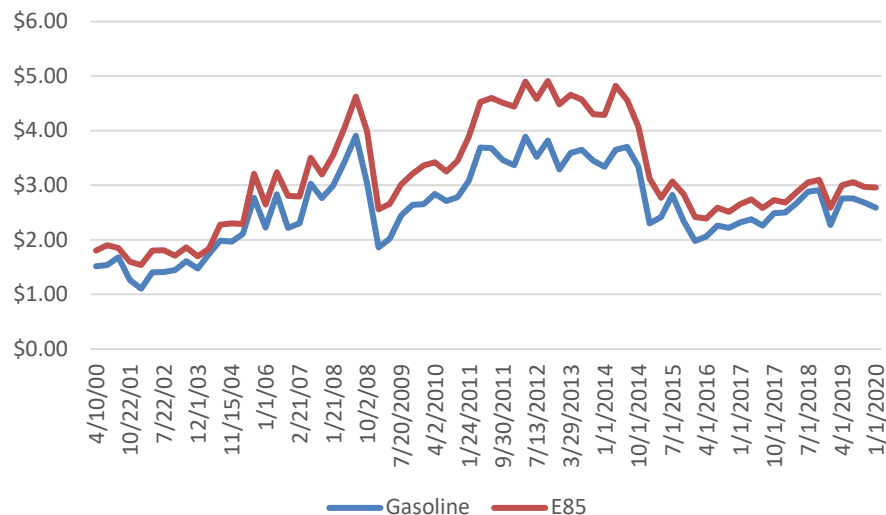
Source: Edmunds.com and auto company statements. See Endnotes for specific model information

# E85 is not a blendwall solution

- Only ~ 8% of fleet are Flex Fuel Vehicles (FFVs)
- E85 has lower energy density, not in cost parity with gasoline
  - Range reduction: distance traveled on 3 tanks of gasoline requires 4 tanks of E85
  - According to fueleconomy.gov data: cost per mile using E85 increases ~9-14%
- Limited consumer demand: E85 is about 0.1% of gasoline demand
  - Note: E85 blended into E15 at retail is included in E85 data

## Average Retail Fuel Prices in the U.S.

in \$ per gasoline gallon equivalents



## Demand for E85 remains limited

