

# The Renewable Fuel Standard: Where We Are Today & Where We Are Headed

Presented to the State Agriculture and Rural Leaders  
January 5, 2014

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# Key Events Leading to Current Situation

- Passage of the 2007 Energy Independence and Security Act
  - Created schedule of annual mandates through 2022 for biofuels
  - Includes 2014 mandate of 18.15 B gallons, with 14.4 B gallons of corn-based ethanol
- Gasoline consumption peaked in 2007 at 142 B gallons
  - In 2007, government projected growth to over 150 B gallons
  - Current consumption has actually declined 6% to 134 B gallons
- Cellulosic ethanol mandated, but essentially not invented yet
- Corn, soyoil prices up sharply, higher rates of food inflation

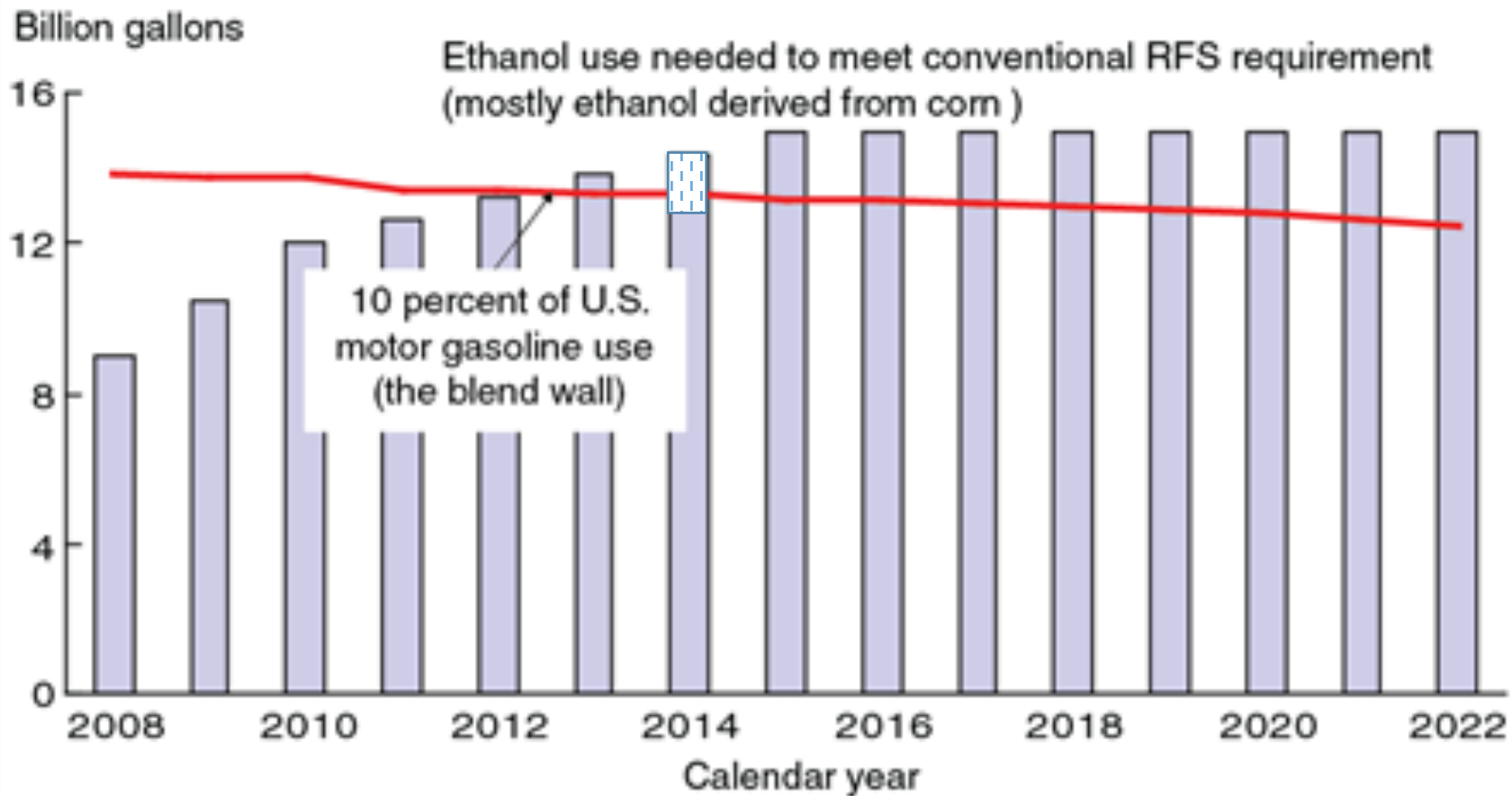
## NEW RENEWABLE FUELS STANDARD SCHEDULE

Year	Renewable Biofuel	Advanced Biofuel	Cellulosic Biofuel	Biomass-based Diesel	Undifferentiated Advanced Biofuel	Total RFS
2008	9.0					9.0
2009	10.5	.6		.5	0.1	11.1
2010	12	.95	.1	.65	0.2	12.95
2011	12.6	1.35	.25	.8	0.3	13.95
2012	13.2	2	.5	1	0.5	15.2
2013	13.8	2.75	1		1.75	16.55
2014	14.4	3.75	1.75		2	18.15
2015	15	5.5	3		2.5	20.5
2016	15	7.25	4.25		3.0	22.25
2017	15	9	5.5		3.5	24
2018	15	11	7		4.0	26
2019	15	13	8.5		4.5	28
2020	15	15	10.5		4.5	30
2021	15	18	13.5		4.5	33
2022	15	21	16		5	36

# Current Situation

- Ethanol Blends above 10% not commercially accepted
  - Only 60 stations nationwide carry E15 (out of 170,000 total gasoline outlets)
  - E85 use (in flex-fuel vehicles) minimal - less than 2% of its potential
- *This means the E10 (10%) blend wall is a huge impediment to RFS mandates*
  - *Not only in 2014, but an even larger problem in future years*
- *Net Result: EPA proposed a reduction in 2014 RFS Mandates*
  - *2014 Total Mandate Proposed 15.21 B (vs. 2014 Statute = 18.15 B)*
  - *2014 Corn Ethanol Proposed 13.0 B (vs. 2014 Statute = 14.4 B)*
  - *2014 Advanced Mandate Proposed 2.21 B (vs. 2014 Statute = 3.75 B)*

## E10 blend wall and ethanol use needed to comply with conventional RFS



RFS = Renewable Fuel Standard. E10 = 10-percent ethanol/gasoline blend.  
Sources: USDA, Economic Research Service calculations derived from U.S. Department of Energy, Energy Information Administration, *Annual Energy Outlook, 2013* and the Energy Independence and Security Act of 2007.

# What Lies Ahead for Renewable Fuels

- Mostly Likely Scenario: EPA Proposed 2014 Standards Become Law
  - Total mandate set at 15.21 B gallons
  - Conventional (corn) ethanol requirement reduced to 13.0 B gallons
  - Advanced biofuel mandate set at 2.21 B gallons

## Implications:

- Blend wall challenges resolved for 2014
- But EPA's 2014 standards likely to be contested in court
  - Uncertainty for several years?
- Lower 2014 mandates set precedent for lowering mandates in future years
- Ethanol imports minimal
  
- Retail gasoline prices have limited impact
- Corn prices have limited impact

# What Lies Ahead for Renewable Fuels

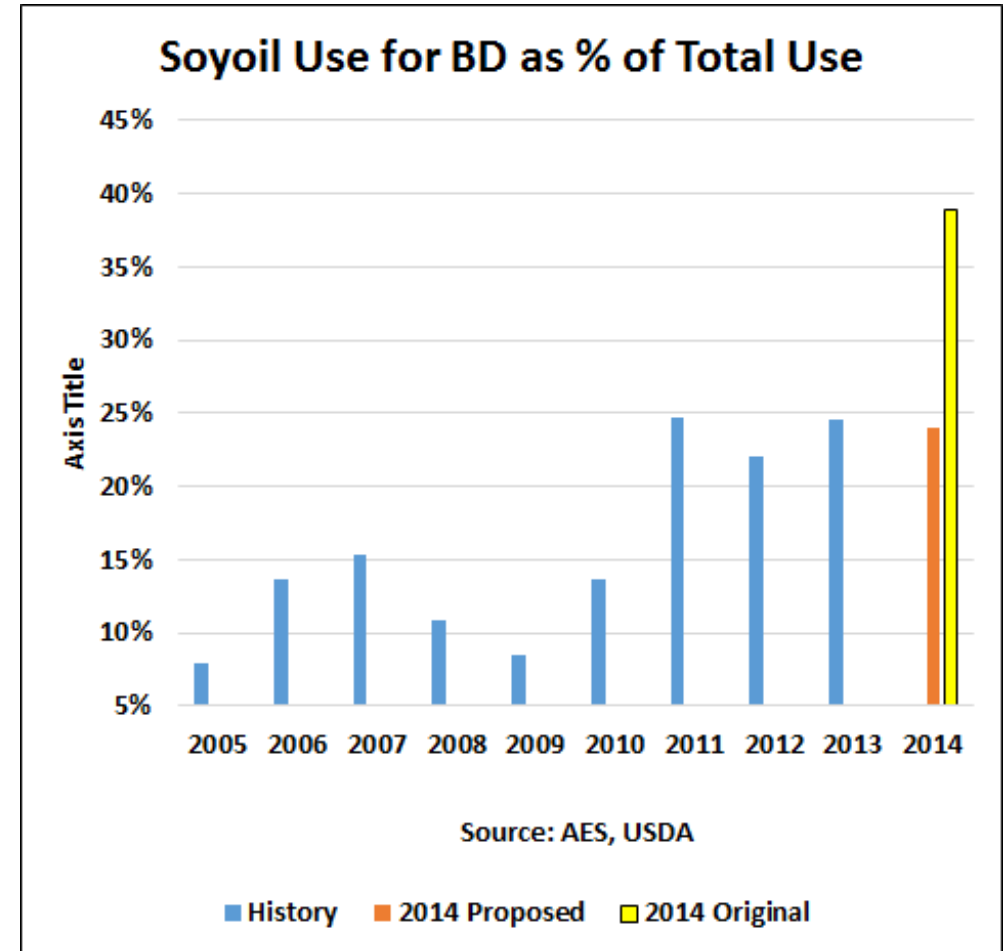
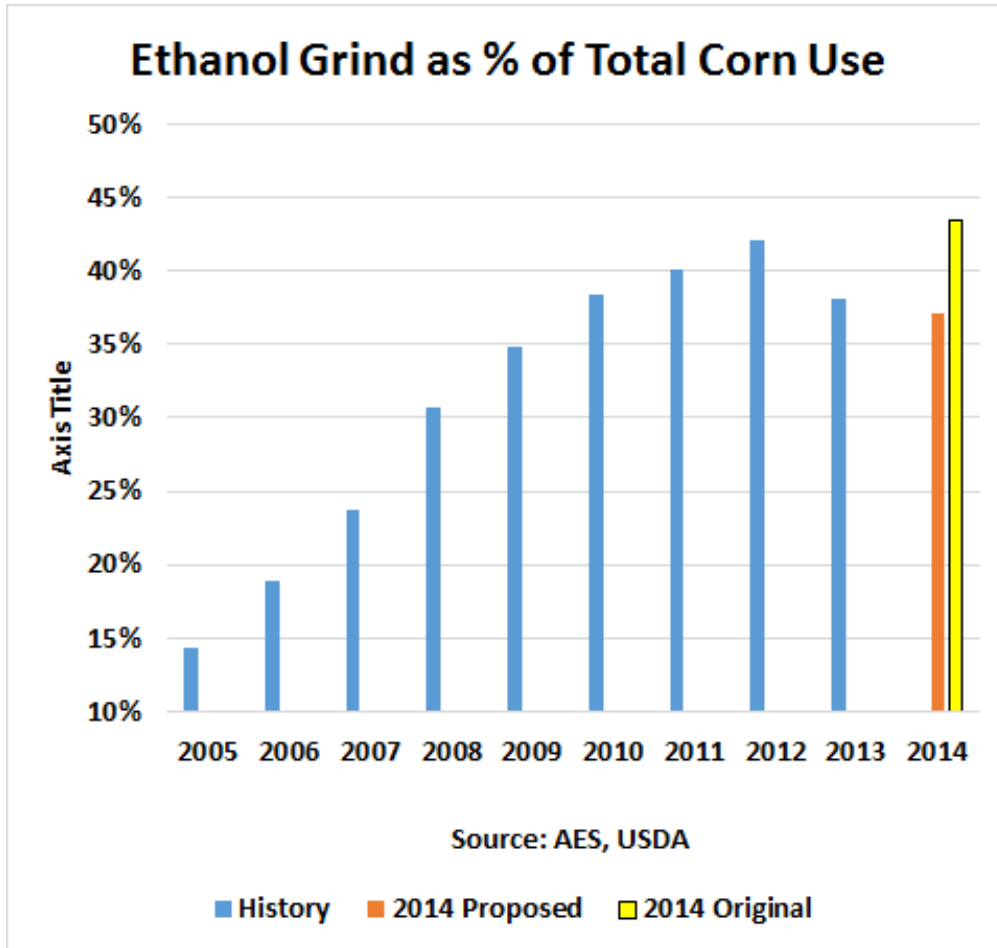
- Less Likely Scenario: EPA Reverts to Original 2014 Standards
  - Total mandate set at 18.15 B gallons
  - Conventional (corn) ethanol requirement increased to 14.4 B gallons
  - Advanced biofuel mandate set at 3.75 B gallons

## Implications:

- Blend wall becomes a major issue
- Ethanol imports and/or biodiesel production rises sharply
- E85 use forced to increase 14-fold
- Challenge of meeting 2014 mandates becomes bigger problem in 2015 and beyond
  
- RIN prices rise sharply, leading to higher gas prices (+\$.08 to +\$.26)
- Corn prices have limited impact
- Soybean prices driven significantly higher

# Proposed vs. Original 2014 Mandates:

*Limited impact on corn, dramatic impact on soyoil*





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