

Overcoming barriers to increased ethanol usage



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Overview

- Some great victories in the past 12 months, but a long way to go.
- Kansas City, year-round E15 not available
- California- low octane carbon standard
- The future is all about octane!

SREs, complex topic in 1 slide!

- SRE's: exemptions granted by EPA to refiners that have shown economic hardship from RFS compliance.
- 31 SREs issued in 2019 (for 2018 compliance year).
 - *2018 compliance year*
 - *1.43 billion gallons of ethanol*
 - *38 were requested (82% approval rate)*
- 85 SREs have been granted under this EPA Administration.
 - *4 billion gallons of ethanol*
 - *Previous administration approval rates were 50-62%*

RFS Compliance Points

- From a corn standpoint, at issue isn't the SREs themselves, but the reallocation.
- Impact of SREs on demand is argued, even within the corn and ethanol industries.
- In 2018 ethanol (\$1.23) was \$0.88 cheaper than gasoline (\$2.11).
- Over a quarter of US ethanol production is owned by oil companies and this is growing.

Kansas City

- EPA ruling in April of 2019 allowed for the sale of E15 year-round “nationwide”.
- Unfortunately, the Kansas City metro area is exempt from this law due to state and federal regulations from the 1990’s.
- Kansas Corn Commission, Renew Kansas and the Kansas and National Sorghum Producer’s invested in required air quality modeling.
- Kansas regulation changes underway, public comment portion will begin in the next 2 months. Missouri process is also underway, with public comments open now.
- Once state regulations are finalized, EPA will review.
- Goal is to have in place prior to June 2021.

California

- California adopted a low carbon fuel standard (LCFS) in 2011, which has resulted in:
 - *13.8 billion gallons of ethanol demand*
 - *1.5 billion gallons annually in 2018-2019*
 - *40% of all credits generated in the entire program have been from ethanol.*
- E15 is not yet approved in California but they recognize the need for it to meet stringent standards.
- Kansas Corn Commission (\$50K) along with other state associations, ethanol trade associations and autos in addition to CARB have agreed to invest nearly \$1.2M to test E15 emission standards.

LCFS

- Carbon is priced per ton in the open market (currently \$200 in CA)
- Sources that emit carbon above the baseline purchase credits.
- Sources below the baseline sell credits, at current prices:
 - *E10: 2 cents/gallon*
 - *E15 3 cents/gallon (if allowed):*
 - *E85: 16.9 cents/gallon (+ 16 cent RIN “profit”, makes E85 the most economical fuel in the state by far.)*
- Kansas Corn, ACE and RFA have participated in the development of a white paper exploring what a potential LCFS in the Midwest (focused on MN and IA) would look like.

2022?

- Without legislative intervention, RFS administration will go solely to the EPA in 2022 with limited congressional oversight.
 - *That should work well! (sarcasm)*
- Agriculture and ethanol industries are leery on this prospect and feel that the RFS has been “gutted”.
- Oil industry has adjusted to blend in ethanol, but still weary of compliance costs (RINs).
- Environmental groups argue RFS hasn’t done enough for the environment.
- Corn and ethanol groups largely agree we haven’t fully accounted for ethanol’s octane attributes.

Octane!

- A fuel's octane number is the standard measure of its ability to resist pre-ignition (or “knocking”) in the cylinder of a gasoline engine.
- Knocking leads to piston damage.
- High octane fuels allows for higher compression engines, increasing fuel economy and performance.
- Ethanol has a higher-octane content than regular gasoline at a much lower price.
- Blending refiners produce a “sub sim” product that is 84 octane or less and then utilize ethanol to make “legal” fuel (87 minimum in KS).

Looking Ahead-High Octane Fuel Standard

- Matching new engine technologies with “better” transportation fuels:
 - *Make vehicles more fuel efficient*
 - *Reduce emissions*
 - *Lower cost to consumers.*
- Corn growers and ethanol groups are working on policy that would increase the octane rating of fuel and harmonize infrastructure improvements and automobile specifications.

High-Octane Fuel Standard

- Fuel must be widely available day 1
 - *Future high-octane optimized vehicles will not be designed to operate on today's lower-octane fuels*
 - *Therefore, partnerships and adoption from fuel retailers is vital.*
- Fuel cost must not exceed fuel economy benefits
- Lots of moving pieces, but a high-octane standard could increase ethanol demand by 5 billion gallons in a few years, with much larger long-term potential.

THANK YOU!

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