



Renewable Fuel Opportunities with Ethanol

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Kansas Corn

**Corn Production
Increase, 515%**

500%
400%
300%
200%
100%
0%



**Corn Acreage
Increase, 336%**



70%
50%
30%
10%
-10%
-30%
-50%
-70%

**Land Required to
Produce a Bushel of
Corn Decrease, -44%**



**Soil Erosion
Decrease, -58%**



Kansas Corn Success Story 1971 - 2020

Environmental Benefits

In evaluating the carbon intensity of ethanol, carbon emissions from the entire process are considered, from feedstock inputs to tailpipe emissions.

2020 Study by Harvard-Tufts University concluded ethanol reduced carbon emissions by 50% compared to straight gasoline.

Blending ethanol reduces aromatic additives in gasoline, which are the largest contributor of greenhouse gas emissions from gasoline.

Economic Benefits

Kansas has 12 ethanol plants:

- Produce 600 million gallons of ethanol.
- Consume an average of 30% of the Kansas corn crop.
- Each employs an average of 45 people with an average salary over \$59,000
- Among the highest property taxpayers in a county, totaling more than \$12M in local taxes.

Ethanol blending saves consumers money:

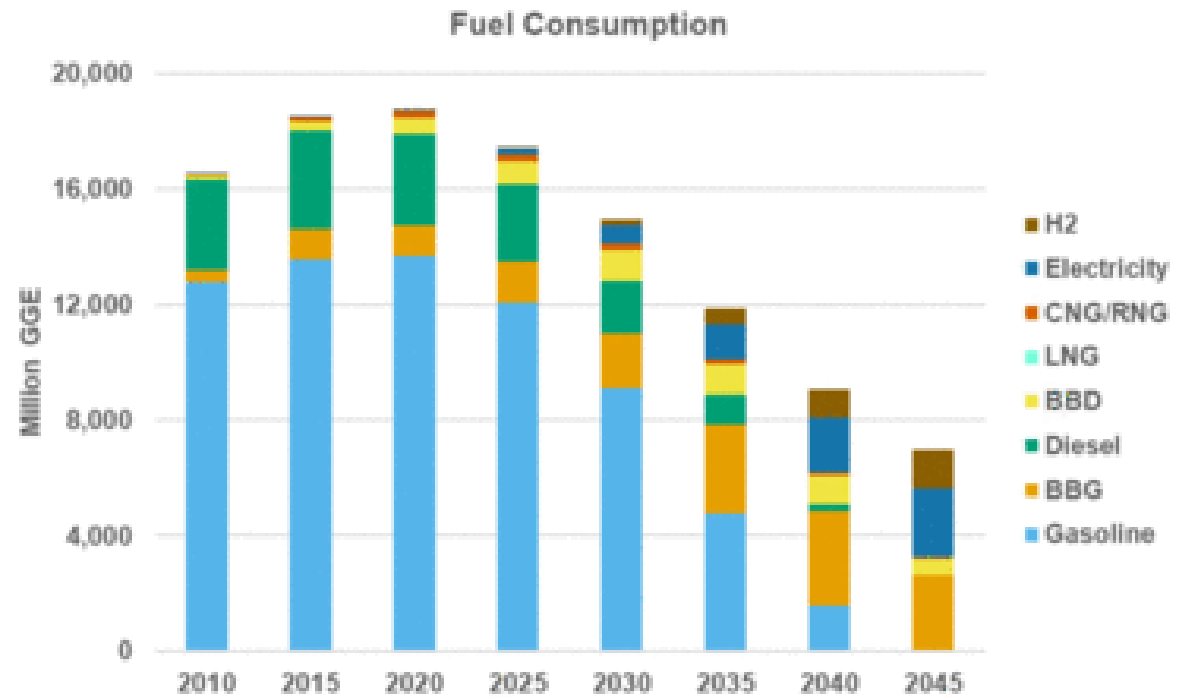
- E10 prices are 20-40 cents below E0
- E15 is approved for over 90% of the vehicles on the road today and is priced 5-10 cents below E10



CASH
REGULAR
4.15⁹/₁₀
SPECIAL
4.39⁹/₁₀
SUPREME
4.49⁹/₁₀
DIESEL #2
3.99⁹/₁₀
E-85
1.75⁹/₁₀

Ethanol in low carbon markets

- California is one of the largest markets for E85.
- E85 Sustained 27.5% growth for over 15 years.
- E85 sales held constant in 2020 despite 21% decline in gasoline consumption.



Minimum octane standard legislation

Next Generation Fuels
Act

Automakers mandated
to produce engines
that run on high
octane (95 RON) fuel.

Automakers receive
proportionate credits
for high octane and
flex fuel vehicles.

Reduce GHG emissions
by over one billion
tons.

Lower fuel costs for
consumers.

K A N S A S

CORN



Thank you!