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## Ethanol blend: Ready for prime time?

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# Ethanol blend: Ready for prime time?

People and decision-makers know about the jobs benefit from the Midwest's growing ethanol industry. However, the possibility of relief from high gasoline prices is not as well-advertised. E85, an ethanol-based fuel substitute for gasoline has potential. But important aspects of the market situation have been excluded or described in a one-sided fashion.

First, the ethanol industry has outgrown its reputation as a high-cost fuel producer. In fact, E85 production costs, adjusted for fuel economy equivalence with gasoline, are now less than wholesale gasoline prices in Iowa.

Ethanol cost reductions were achieved through higher processing yields, automation and larger plants. Higher gasoline and petroleum prices, with no relief in sight, also contribute to the competitive position of ethanol in Iowa's gasoline market.

Second, the E85 price that gasoline retailers pay is often higher than the equivalent gasoline price on the wholesale market. Currently, an ethanol price premium over



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regular gasoline can exist because ethanol competes in a regulation-laden additive market; ethanol has an exemption to the gasoline tax; and a recent sugar shortage is a strong incentive to divert ethanol supplies away from coastal U.S. customers.

But the E85 wholesale price sometimes falls below the wholesale gasoline price, creating a situation where consumer fuel savings with E85 could occur. This could occur more frequently in the future because ethanol capacity is expanding rapidly, because

some federal regulations were removed and because the sugar shortage will eventually recede.

Third, E85 may substitute more completely for gasoline than the Environmental Protection Agency advertises. I use 1.12 gallons of E85 per gallon of gasoline, based on an estimate from an Energy Department/State of Ohio experiment with state fleet cars. In the experiment, driving probably emphasized highway conditions and E85 was sometimes mixed in a partial tank of gasoline. Some drivers

in Iowa are having a similar experience with E85.

The Energy Department also reports another experiment in older cars using unmixed E85, suggesting 1.35 gallons of E85 per gallon of gas. Petroleum engineers tend to use the latter estimate, because it reflects the relative heat content of gasoline vs. E85. But many scientists who are familiar with renewable fuels believe that E85 does better, because the oxygen in ethanol improves combustion. More road tests are needed to identify the car models and driving conditions where E85 performs well.

Presently, many retailers do not pass wholesale price savings for E85 to retail consumers when they do occur. More retailing capacity and more users for E85 would create a market where consumer savings can be realized. But we may have to wait for high ethanol prices to return closer to production costs before consumer benefits can be realized.

— Paul W. Gallagher,  
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