

The Push of a Button: Choosing Higher Blends

"While we do not recommend the blends for non-FFVs, we are giving customers a choice."

By Lacey Horkey

Grassroots leaders of the ethanol industry have been described as tenacious individuals who commit to increasing awareness of and commitment to renewable fuels. Today's self-described ethanol zealots have focused their efforts on expanding the parameters of the ethanol market by advocating the need for blender pumps which can dispense blends of ethanol beyond ten percent.

Diesel customers in Northern climates have always used variable blends of #1 and #2 diesel during the winter, lowering the cold-flow properties of the mixture by raising the percentage of #1 fuel in the blend. In a similar fashion, today's ethanol blender pumps combine ethanol and gasoline from two underground storage tanks, one with unleaded and one with E85, providing consumers the opportunity to purchase increased ethanol blends such as E20, E30, and E40.

With the push of a button, motorists traveling through the South Dakota cities of Watertown, Britton, Webster, and others are benefiting from a slash in petroleum prices and ethanol's higher octane by selecting increased ethanol blends from blender pumps, thus prompting discussion throughout the region and nation concerning the benefits of ethanol blends beyond E10.

The drawing board

Although increased ethanol blends are now available in a few locations though automated blender pumps, ethanol enthusiasts, with flexible fuel vehicles (FFVs) and without, once mixed E85 and unleaded by hand from two separate pumps to create a variety of blends bridging the gap between E10 and E85.



As the practice gained followers, the discussion of ethanol blender pumps that mirrored diesel blender pumps prompted a number of South Dakota stations to broaden their renewable fuel inventory with blends between 10 and 85 percent.

In March 2006, 4 Seasons Cooperative installed blender pump infrastructure at its retail station in Britton, South Dakota. Led by General Manager Dave Andresen and former cooperative chairman and current ACE Director Owen Jones, the cooperative married its underground fuel and ethanol tanks, installed blender pumps purchased from WestMor Industries of Morris, Minnesota, and invited customers to test a variety of ethanol blends.

Clearly labeled for use by FFVs, the increased ethanol blends offer consumers a selection of fuel choices including E10 and E85, as well as E20, E30, and E40. Jones emphasizes that the community has taken a step toward energy security through the installation of blender pumps.

“We need to do something else for energy,” Jones said. “This is one small step we can make to reach that point.”

Although the pumps are labeled for use by FFVs only, sales volumes indicate that other motorists are opting to choose the higher ethanol blends as well. According to Andresen, the cooperative has received a positive response from the blender pump customers, regardless of vehicle type.

“We have not had one complaint, not one,” he said. “While we do not recommend the blends for non-FFVs, we are giving customers a choice.”

He added that the choice to improve the environment and protect energy supplies through the use of renewable fuel is “one that has been well-received. I honestly think they [blender pumps] should be in every state.”

Since April 2006, Sioux Valley Cooperative (SVC) in Watertown, South Dakota has benefited from the blender pumps at its C-Store on Highway 212. Although SVC General Manager Gary French initially sought to simply install E85 pumps, suggestions from area ethanol supporters prompted a new choice.

“I was in the process of putting in dispensers so we could have E85,” he said. However, he recognized another viable option for motorists living in or passing through Watertown. “Instead of putting those in, we put in blender pumps.”

Tom Branhan, CEO of Glacial Lakes Energy, the ethanol production facility in Watertown, regards the blender pumps as a staple to the community, reinforcing the value of ethanol for the local economy and prefacing the possibility of future ethanol blends between E10 and E85.

“Blender pumps in Watertown, South Dakota offer a choice for the consumer,” Branhan said. “The benefit to the gas station is pumps that are capable of mixing any blend from no ethanol to 85 percent ethanol.”

Branhan added that the benefits can be evidenced by the community’s enthusiasm for blender pumps. “The community response has been overwhelming from the standpoint that quite often you have to wait for a blender pump to get your fuel. Before the blender pumps, you never had to wait for a pump.”

According to French, “We haven’t had any customer complaints.” He recognizes the success of the blender pumps as an extension of support for the ethanol industry, both through local support for Glacial Lakes Energy and broad support for the nation’s ethanol producers.

“With a lot of local people invested in that plant, they want to see it succeed,” French said. “They support us and the ethanol plant because they invest in both places.”

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"We are in small town America - Britton, South Dakota - and in a 12-month period our ethanol sales went from 3 percent to 57 percent. We added 26,000 gallons of ethanol at this little station."

The success story

Andresen emphasizes that the community's support for the cooperative's blender pumps contributes to each month's sales figures. Before installing the blender pumps, 50 percent of fuel sales at the Britton station were those that did not contain ethanol. Today, sales of unleaded fuel without ethanol have dropped to 25 percent - a change Andresen accredits to broadened consumer awareness for ethanol and for blender pumps.

Jones agrees that the blender pumps encourage consumers to test higher ethanol blends.

"You can give a lot of that credit to the blender pumps being there," Jones said. "It increased awareness, giving the consumer the option to choose the best product for his or her vehicle."

According to Andresen's figures from 4 Seasons Cooperative, ethanol fuel blends comprise more than 55 percent of the local station's fuel sales. During the past year, ethanol-blended fuel sales, from E10 to E85, have exceeded 55 percent 10 out of 12 months.

Excluding E85, ethanol blends have comprised between 45 and 56 percent of sales. Blends of E20 and E30 can be as much as 20 to 25 cents per gallon cheaper than unleaded fuel, giving customers an additional reason to fill up using ethanol in higher percentages.

Andresen pointed out that the total sales of ethanol through use of the blender pumps have reached nearly 50,000 gallons in the past 12 months.

"We are in small town America - Britton, South Dakota - and in a 12-month period our ethanol sales went from 3 percent to 57 percent," he said. "We added 26,000 gallons of ethanol at this little station."

According to French, local customers represent the largest demographic for blender pump usage in Watertown.

"The biggest group is the local repeat customer, though I am sure that there are people traveling through that see it costs less than

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10 percent and push the button,” French said. “The pumps have definitely increased the ethanol portion of our sales.”

French reports that Watertown’s sales figures, like Britton’s, demonstrate the popularity of increased ethanol blends and an overall increase in ethanol-blended fuel sales. SVC’s April sales of ethanol blends totaled 71 percent of fuel sales.

The station’s most popular blend is E30, which French recognizes as a potential blend for the future ethanol market.

“I would expect that on in the future E30 will be the higher-selling one,” French said. “E30 is more economical, more manageable, and gets better mileage.”

Increased energy security

Branhan identifies the reduced price of higher ethanol blends as an incentive that will introduce customers to countless other benefits.

“The community benefits from the use of higher blends of ethanol with a correspondingly lower price of its daily fuel,” he said. “The industry benefits because the higher blends of ethanol consume more of our homegrown fuel which benefits all of us that use gasoline which comes from the Middle East. The industry also benefits from the increased usage of our ethanol at blender pumps which helps drive demand.”

Wayne Kothe, a resident of Watertown, regards himself as an avid blender pump user. While purchasing ethanol-blended fuel, Kothe explained that blender pumps provide countless benefits, including energy security and a broadened ethanol marketplace.

“I’ve been using E30 ever since it came out,” he said. Based on his positive experience, Kothe predicted that E30 would emerge as a popular blend: “You know, the blend is the answer.”

According to Jones, energy security should be the fundamental reason consumers choose increased ethanol blends.

“A lot of us are concerned that, more than adding a market for corn, we’ve got to do something about replacing foreign oil, and this is something in the Midwest we can do to do our part.”

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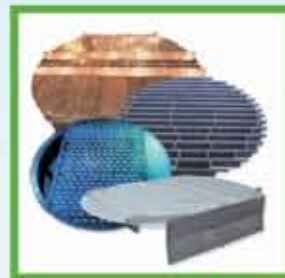
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"A lot of us are concerned that, more than adding a market for corn, we've got to do something about replacing foreign oil, and this is something in the Midwest we can do to do our part."

"I really think that a lot of us are concerned that, more than adding a market for corn, we've got to do something about replacing foreign oil, and this is something in the Midwest we can do to do our part," Jones said. "One of the real benefits of ethanol is the simple fact that those dollars are staying at home helping schools and churches. It is a value-added product and those dollars stay here."

French agreed that ethanol's roots in the local community encourage consumers to choose ethanol blends for national security.

"I think it is the right thing to do. We sit and talk about dependence on foreign oil, and our sons and daughters and grandkids over there are fighting over it. The more ethanol we sell, the more we can reduce that dependency," he said.

Regulatory matters

Despite marked consumer choices for increased ethanol blends, the nation's renewable fuels infrastructure and regulations have not kept pace with the growth of the industry. While the nation's

use of E85 and blender pumps continued to increase throughout the fall of 2006, Underwriters Laboratories (UL) made an announcement in October that curtailed the growing fervor.

As pump manufacturers elicited warranties for E85 dispensers, UL announced that it did not certify equipment distributing increased ethanol blends. While UL applies standards for testing fuel tanks and lines for multiple blends, the group does not apply standards to fuel-pumping equipment regardless of blend.

Some E85 supporters see the UL decision as one aimed at taking advantage of the E85 niche market and eliciting payment for testing ethanol distribution systems that have been functioning without any problems. As stated on the UL website, the group received "no documented reports of field failures or safety issues associated with UL listed or recognized components used with E85."

Although the certification concerns did not make the installation or use of such equipment illegal, the statement clarifying UL's standards



generated concern for the effects of ethanol distribution and disrupted retail stations currently offering increased ethanol blends to customers.

For example, the cooperatives in Britton and Watertown addressed a number of concerns before proceeding with their current distribution schedules. While Watertown temporarily stopped sales at its blender pumps for liability reasons concerning EPA approval of E20 and E30 blends, the cooperative in Britton chose to keep its blender pumps operational until documentation could substantiate UL's concerns.

In response to concerns from ACE members, media outlets, and fuel retailers, ACE Vice President / Market Development Ron Lamberty contacted individuals with UL and spoke with countless media representatives to correct misinformation concerning ethanol blends and corrosion. Additionally, ACE armed state and federal officials with important blender pump information, enabling them to make decisions based on the evidence of success.

"Although E85 pumps have been in use for more than 10 years without failures or problems, the UL proceeded to degrade public confidence in higher blends of ethanol without documentation of failures or complaints," Lamberty said. "The UL's actions reflected concern for an issue unsubstantiated by evidence."

Efforts by the South Dakota Petroleum and Propane Marketers Association / South Dakota Association of Convenience Stores to obtain clarification concerning ethanol blend distribution resulted in a November 28, 2006 letter from the EPA. The letter reinforces the protection of ethanol blends exceeding 10 percent under the Clean Air Act, thus supporting market-expansion efforts for FFVs.

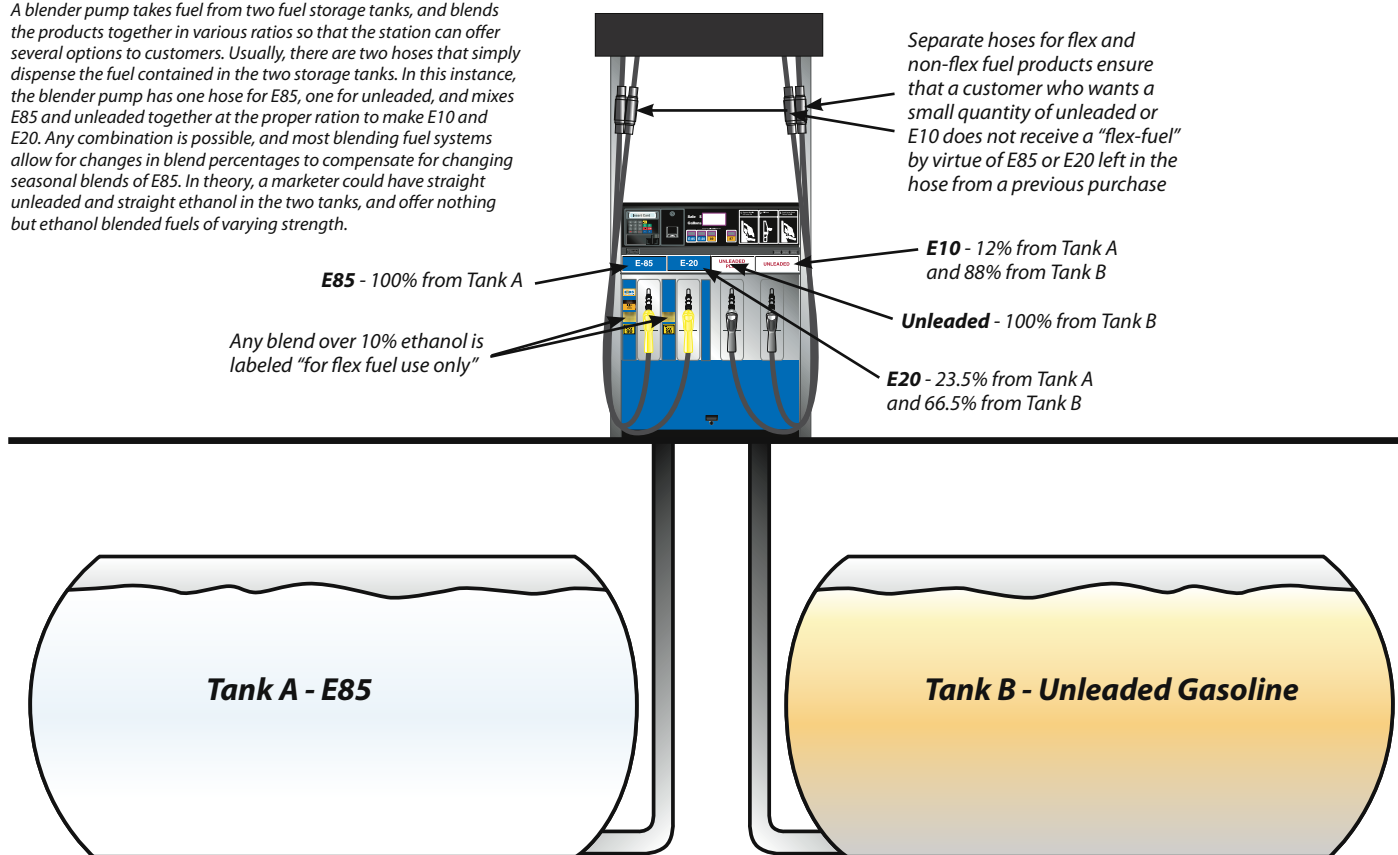
According to the letter from Margo Tsirigotis Oge, director of the office of transportation and air quality for the EPA, "With respect to the sale of blends such as E20 and E30 for use in FFVs, such blends are covered under the emissions certification for an E85 FFV, and thus are not prohibited under the Clean Air Act. I am not aware of any federal law that prohibits the sale of such blends for use in FFVs."

"I believe this, in a couple of years, could sweep the nation. This is ethanol's time."

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Ethanol Blender Pumps: How They Work

A blender pump takes fuel from two fuel storage tanks, and blends the products together in various ratios so that the station can offer several options to customers. Usually, there are two hoses that simply dispense the fuel contained in the two storage tanks. In this instance, the blender pump has one hose for E85, one for unleaded, and mixes E85 and unleaded together at the proper ration to make E10 and E20. Any combination is possible, and most blending fuel systems allow for changes in blend percentages to compensate for changing seasonal blends of E85. In theory, a marketer could have straight unleaded and straight ethanol in the two tanks, and offer nothing but ethanol blended fuels of varying strength.



Ethanol use as teaching tool

According to Branhan, the industry's avenue for ensuring consumer confidence and support from energy, manufacturing companies, and environmental groups is to demonstrate the benefits of ethanol through its use.

"I think the continued use of blender pumps will prove, over time, that higher levels of ethanol are not damaging to our automobiles, which should help the promoters of higher blends," he said. "I think the blender pumps will become more popular as we gain more time and experience."

French agrees that the solution to the concerns among suppliers and consumers is demonstrating the effective performance of higher ethanol blends.

"As we go down the road and get a little more exposure and a little more history of what has taken place, we will be able to provide evidence to our suppliers," he said.

Andresen said that the exposure to higher ethanol blends by FFV and non-FFV users will urge the necessary market development and research efforts needed to standardize higher ethanol blends.

"I believe this, in a couple of years, could sweep the nation," he said. "This is ethanol's time."

Just as the ethanol industry strives to demonstrate its value to consumers, groups such as Underwriters Laboratories continue to develop appropriate requirements for E85 compatibility. Today, the group's website notes that it "remains committed to continuing the thorough and broad-based effort necessary to develop the appropriate requirements that will adequately address E85 compatibility issues. We are continuing to work with industry and fire officials to develop a solution for this issue as expeditiously as possible."

As the ethanol industry continues to expand its infrastructure, Andresen recognizes the blender pumps as a hands-on educational tool that demonstrates the value and efficiency of homegrown energy in today's marketplace.

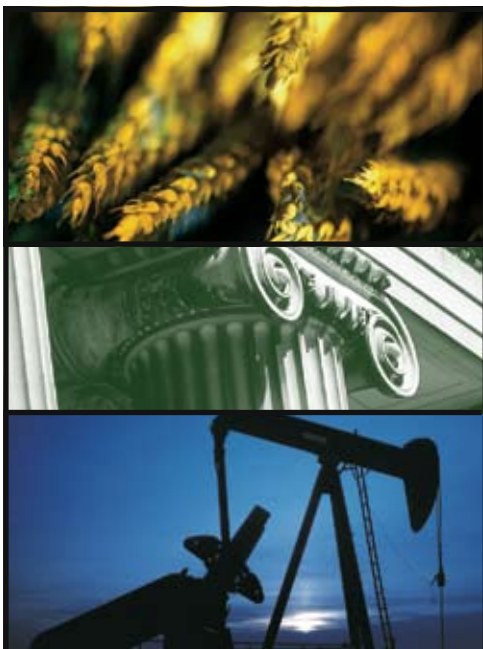
"We have a tremendous job to do in education," Andresen said. "And that is obviously a slow process."

According to Branhan, because informed consumers will choose higher ethanol blends for economic and environmental reasons, it is important to educate communities about ethanol.

"The most obvious advantage is that when the general public has a choice to use higher blends of ethanol, they choose to do it," he said. "This establishes a pull system for ethanol rather than a push system from the federal government."

French agrees that consumer education is the most powerful tool for ensuring a market for increased ethanol blends. "I certainly believe that is the way to increase usage," he said. "Let the customer decide. Let it be their choice."

Andresen points out that the resolve of the nation's ethanol advocates to push the parameters of today's renewable fuels market mirrors the tenacity of the nation's founders: "The country was built on the principles of somebody pushing the rules."



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