

# Can Ethanol Get a Ticket to Ride?

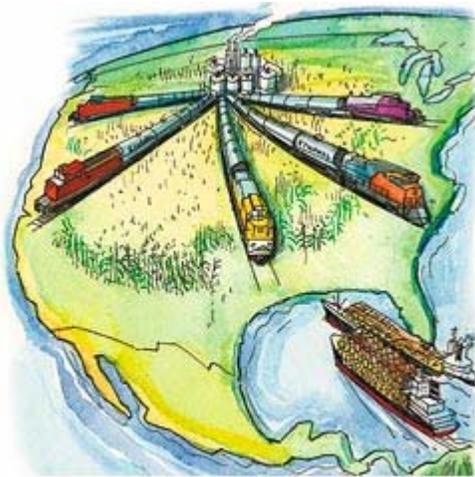
As Its Popularity Increases, Railroads, Producers Strain to Get the Biofuel to Market

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Like the corn it's made from, ethanol is largely a product of the small-town Midwest, distilled in places like Nevada, Iowa, and shipped to market by train.

Now, as ethanol producers ramp up production, they are straining railroads already taxed by burgeoning shipments of coal, containers and grain. And they worry that the transportation crunch could make it difficult for ethanol, despite its surge of support in Washington, to compete with energy rivals.



Rail and transportation logistics for the ethanol industry is "the mountain to climb...as we go forward," says Ken Eriksen, a senior vice president of Informa Economics Inc., an agricultural and renewable fuels consulting firm in Memphis, Tenn.

Unlike gasoline, natural gas and oil, ethanol attracts water and other chemicals, so it can't be sent through the long-established pipelines that move those fuels. That means the ethanol industry has been forced into a marriage with the already groaning railroads.

"It's supply and demand," says Walt Wendland, president and CEO of Golden Grain Energy LLC in Mason City, Iowa. "We're a captive market for them."

Few people think the strains will derail the boom, fueled first when it became a popular replacement for the gasoline additive methyl tertiary-butyl ether (MTBE) and boosted by President Bush's call for more homegrown energy alternatives. But ethanol's popularity has meant that producers have had to struggle to upgrade their rail yards and secure enough tank and grain cars to efficiently ship both ethanol and its byproducts. Railroads are prodding them to make the changes while also rushing to expand their own tracks and freight yards to handle the increasing shipments. Even though some parts of the economy have slowed recently, rail freight volumes are still near record highs.

Despite the concern about the rail system, producers aren't flocking to the waterways. Barges are considered too slow to handle ethanol's rush to market, most plants aren't located near bodies of water and other liquid commodities already have soaked up the majority of the tank-barge capacity.

Railroad executives say ethanol, though still a small part of their total freight traffic, promises to be a lucrative growth opportunity. Shipments of ethanol have nearly tripled since 2001 to about 106,000 rail carloads last year and are projected to increase to at least 140,000 in 2007, according to the Association of American Railroads in Washington. Each tank car has a capacity of 30,000 gallons.

"We had a hiccup here and there, absolutely," says David Lawson, vice president of industrial products at Norfolk Southern Corp., a large railroad based in Norfolk, Va. "But we feel like we handled the growth very well."



Golden Grain Energy in Mason City, Iowa, is tripling the size of its rail yard to ship ethanol more efficiently.

Railroads have been pushing producers toward shipping by longer, more-efficient trains, called unit trains. Such trains carry 75 to 95 tank cars of ethanol and provide a faster and more economical alternative to shipping a few ethanol cars at a time. Burlington Northern Santa Fe Corp. in October 2003 began running its Ethanol Express to shuttle ethanol to California from the Midwest. It now runs two to three times a

week. But some producers have chafed under the industry's initiatives.

After the corn is distilled into ethanol, it's mixed with a small amount of gasoline at the production plant before being shipped by train to a petroleum terminal, where it is blended with gasoline. Large petroleum terminals are accustomed to receiving their product by pipeline and then distributing locally by truck. Most terminals haven't developed the infrastructure of tracks, storage tanks and rapid unloading to receive ethanol by unit trains, says Kevin Kaufman, group vice president of agricultural products of BNSF's rail unit. Expanding is difficult because they are sometimes hemmed in by buildings, highways and bodies of water.

On the other end of the line in ethanol country, many of the producing plants aren't large enough or lack the track and facilities to fill unit trains themselves. That is forcing the producers to shell out millions on tracks and equipment they hadn't planned to spend. Engineers from rail giant Union Pacific Corp. in Omaha, Neb., are requiring Mr. Wendland to triple the size of Golden Grain's rail yard even though he is only doubling the size of the 65 million-gallon ethanol plant in land-locked Mason City.

The 24,000-foot track expansion will push him over his \$2 million budget by \$1.5 million. He also had to purchase 55 acres of nearby land for \$500,000. Mr. Wendland says Union Pacific told him their freight yards were too strapped for space to store his cars, so he'll have to store them himself. "It's a huge commitment, to say the least," he says. The railroad confirmed Mr. Wendland's account.

Lately, large railroads have used their newfound market power to raise prices on many commodities they carry. For producers it comes at a time when high corn prices are squeezing their margins.

To cope with the price increases, Rick Brehm has started packing tight every car of distillers dried grain, an ethanol byproduct sold as cattle feed, he ships out. The 50-million-gallon-a-year Lincolnway Energy LLC ethanol plant in Nevada, Iowa, sits beside Union Pacific's mainline. Mr. Brehm is having an employee shovel the grain into every corner of his rail cars. That way he can fill up an extra 3% to 4% of space that was lost to air pockets before.

Union Pacific is ratcheting up investment to expand its own yards and track lines to handle the extra shipments in ethanol producing areas in Iowa, Minnesota and Nebraska. Even small railroads are trying to climb aboard. Iowa Northern Railway Co. is helping to build a new ethanol-storage facility in Manly, Iowa. Trucks will collect ethanol from production plants over hundreds of miles and bring it to Manly, with unit trains heading out from there.

Still, some railroads question the durability of the ethanol boom. Oil prices could drop, corn supplies could dwindle and alternatives could crop up. Ethanol producers are pushing ahead despite their dependence on the railroads.

"We are going to do what it takes to move it," says **Dennis Miller, president and CEO of Iowa Interstate Railroad Ltd. in Cedar Rapids, Iowa.** "But you just don't bet the farm on something that is volatile and controlled by many different forces."

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