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Building the Ethanol Industry

RON FAGEN

He brought improved technology and design to ethanol-plant construction, just in time for an industry boom.

"One thing I can say, which we're very proud of, is we are very picky. We like to get business, but we will turn projects down that don't make financial sense."

"The majority of these [ethanol] plants are for farmers. Farmers are the owners of the plants. And it's been a tool for them to add value to their corn crop by being the manufacturer instead of selling their corn to somebody else to make something out of it."

It appears that ethanol's time has finally come. Ron Fagen was ready when it arrived.

The owner of two companies based in Granite Falls—Fagen, Inc., a heavy-industry construction business, and Fagen Engineering, which designs many of those construction projects—Fagen is building, by his estimate, "about 75 percent" of new ethanol plants in the United States. Fagen, Inc., posted sales of $315 million in fiscal 2004, which ended last September. He estimates sales of $375 million this year, and between $400 million and $500 million next year.

"Banks like to finance our plants, because they know they operate very well," says Fagen, whose 2000 Chevy Tahoe runs on E85, a fuel that is 85 percent ethanol, 15 percent gasoline.

A native of Maynard, a town near Granite Falls, Fagen says he "had zero construction experience growing up." In 1968, during the Vietnam War, he joined the Army and its Combat Engineer Corps, building infrastructure and roads. "That's where I got the construction fever."

He worked for a road-construction company in Alexandria after his discharge and helped build Interstate 90. Living back in Maynard in 1972, he and business partner Bud Pulsifer started Fagen-Pulsifer Building, Inc. Pulsifer was married, Fagen wasn't in those days, and he took no salary for their first two years in business to help get the company off the ground. Fagen-Pulsifer specialized in grain bins and other small commercial projects.

The partners went their separate ways in 1988, and the business became Fagen, Inc. That was the same year Fagen worked on his first ethanol plant, building it for Marshall-based Minnesota Corn Processors. Over the years, Fagen-Pulsifer had turned to heavy-industrial work—grain elevators and mills, paper mills, and power plants.

That first ethanol plant would be the start of something big for Fagen, Inc., though not quite yet. Ethanol was widely touted as a fuel 20 years ago, but it was expensive to produce. When oil prices stabilized in the 1980s after spiking early in the decade, the ethanol boom fizzled.

Ron Fagen says efficiency gains in his company's new-generation ethanol plants have reduced per-gallon production costs by more than two-thirds.

Fagen expanded his business with other industrial projects and added branch offices in Nebraska and South Carolina in the 1990s. More significantly, in 1996, he started Fagen Engineering to turn his operations from a construction business into a design-build business.

Then a few years ago, ethanol started to gain momentum again. This time, it was thanks not to oil prices but to a chem-

Fagen's construction experience started in the Army's Combat Engineer Corps, where he served from 1968 to 1970 and got "construction fever." (Center top) Flying restored WWII fighters is a hobby Fagen shares with one of his sons.

His father was a cattle buyer when Fagen was growing up in Maynard. (Center bottom) A South Dakota plant built for VeraSun Energy represents Fagen's new-style ethanol plants.

ical called methyl tertiary-butyl ether. MTBE, a derivative of petroleum refining, has been widely used as an oxygenate, a fuel additive that reduces the amount of unburned hydrocarbons and carbon monoxide in automobile exhaust. The problem, Fagen says, is that MTBE "got into wells in California, and it has something like a 500-year half-life." Health risks have led many states, including Minnesota, to ban MTBE as a fuel additive.

The problem of reducing auto emissions remained, though, and as an oxygenate, "ethanol is great," Fagen explains. More recently, of course, the jump in gas prices has provided a second kick for the ethanol industry.

Prior to 2000, Fagen says, "we were building one or two ethanol plants a year. Now we're building a dozen at a time." Of the approximately 90 ethanol plants operating in the United States, Fagen has built more than 50.

He calls his recent ethanol projects "new generation" plants. In 2001, he teamed up with Kansas-based process-design firm ICM, which has developed technologies to make ethanol plants run more efficiently. "In 1990, a plant that we built, on a good day, can manufacture at a 50-million-gallon rate. That plant has 127 employees. The plant we build today on a good day can run at a 50-million-gallon rate and has 34 employees. The plant we build today is two-thirds physically smaller." Those efficiencies have helped reduce the cost of producing a gallon of ethanol from about $3.60 in the mid-1980s to around $1 today, give or take a little depending on the price of corn, Fagen says.

He explains that new technology also allows plants to run cleaner, and advanced design makes them easier to maintain. His engineers "keep making improvements," Fagen says. "It drives the construction people crazy, because they'd like to build the same thing every time." Fagen employed, on average, a little more than 1,000 construction workers last year, and he expects that to climb to about 1,400 this summer. At the Granite Falls headquarters, he employs about 100 people, plus another 20 at his two regional offices.

The Fagens are in business as a family. Son Aaron (left, with his wife, Traci, and son, Ethan) is chief operating officer of Fagen, Inc. Diane Fagen (center, with her husband, Ron) is the company's human resources director and corporate secretary-treasurer. Son Evan (right, with his wife, Melissa, at their wedding last year) is project manager for an ethanol plant being built in Iowa, and soon to be an officer of Fagen, Inc.

Ethanol's boosters include the Minnesota Legislature, which just passed a law increasing the ethanol level required in gasoline sold in the state. The industry does have its critics. Some say that government incentives for producers don't reach small farmer cooperatives and go mostly to the likes of Illinois-based Archer Daniels Midland (which acquired Minnesota Corn Processors in 2002). Others speculate that ethanol supply will soon outstrip demand. Fagen's rejoinder: "When I see the last [oil] tanker coming out of the Mideast, then I'll believe we have enough ethanol."

Granite Falls, a community of 3,100 people in west-central Minnesota, has been an excellent place to build his companies, Fagen says: "There are engineers that were born in small towns, and they want small-town life." Ten years ago, the state helped pay to pave the local airstrip, making it easy for his companies' planes to take off for rural project sites.

Fagen, 56, is a trained pilot whose hobby is restoring World War II American fighter planes. But thanks to the ethanol boom, it's his construction company that's flying high.