



# Home Grown Fuel

Central Indiana Ethanol, Marion, IN, Inspired by 9-11

After the Sept. 11, 2001 terrorist attacks on the United States, Jay Berry of Marion, IN asked himself what he could do to make America more secure.

Berry said he recognized the answer right in Indiana's corn fields—home grown fuel to replace America's depen-

dence on foreign oil.

That was the kernel of the idea for Central Indiana Ethanol (CIE).

According to CIE President and General Manager Mitch Miller (765-384-4001), when Berry came back home to Indiana after a trip to Washington, DC for the Indiana Chamber of Commerce, he began to research why more ethanol plants were not in a state dominated by corn fields.

Less than six years after the terrorist attacks, a plant producing 40 million gallons of ethanol per year (MMGY) started grinding corn in July, providing 39 new jobs.

The plant also created another two jobs at an adjacent carbon dioxide (CO<sub>2</sub>) facility built for CIE's coproduct by another firm, EPCO Carbon Dioxide Products.

## Site Selection

Marion was on a short list of five communities when the site selection was made.

"We had no opposition to the plant in Marion," Miller said, indicating that the city of Marion annexed the property to provide tax increment financing (TIF).

With a TIF for 10 years, CIE will

receive a break on its property taxes based on the increase in property value (or increment) since the property was improved.

Miller said in addition to the TIF,

*"We are focused on diversification and adding value to the same feedstock that we are using to produce ethanol."*

**- Mitch Miller, CIE GM**

Marion was chosen for several reasons:

- Strong community support.
- Rail access to a nearby Norfolk Southern Class I Railyard.
- Location along Indiana State Highway 18 for truck access.
- An eight-inch natural gas line runs in front of property line.
- An American Electric power line runs through the property, with an underutilized transformer station next

## Facility Feature

### Central Indiana Ethanol, LLC

765-384-4001 | Marion, IN  
www.cie.us

Steve Berry, Board Chairman  
Mitch Miller, President and  
General Manager

Jason Jerke, Plant Manager  
Jeff Knutson, Operations  
Manager

Randy Baer, Maintenance  
Manager

Employees: 39

Capacity: 40 MMGY

Feedstock: Corn



Central Indiana Ethanol 27-year-old founder Jay Berry (left) receives the September 2007 Patriot Award from Indiana U.S. Sen. Dick Lugar.

door due to downsizing of a nearby General Motors auto plant.

### Coproducts

“I anticipate extreme levels of competition within the ethanol market as the U.S. production level reaches 14 billion gallons, which is considered the blend wall or at the maximum blend capacity in the United States for 10% blend,” Miller said.



CIE's stack emits steam, not CO<sub>2</sub>.

“Our facility is not focused on producing more gallons of ethanol. We are focused on diversification and adding value to the same feedstock that we are using to produce ethanol.”

For example, Miller said, most ethanol plants allow the CO<sub>2</sub> to escape into the atmosphere as part of the ethanol process.

CIE will produce approximately 105,000 tons of CO<sub>2</sub> per year, which will be converted to liquid form by the adjacent EPCO plant and trucked out.

“EPCO has the capability of capturing all of our CO<sub>2</sub> production,” Miller noted.

“EPCO's plant has the ability to grow with Central Indiana Ethanol,” he added.

The ethanol plant also will produce approximately 130,000 tons of dried distillers grains with solubles (DDGS).

Eventually, the Fagen-ICM-designed and built plant will separate corn oil for the production of biodiesel, Miller said.

“Our goal is to have our own biodiesel plant on-line by the end of 2008,” Miller added, saying it will produce 5 MMGY of biodiesel, “all from the same corn feedstock.”

He said diversification was a main goal of the company from its 2005 start.

“When I joined the company in 2005, that was one of our primary objectives early

on—number one was immediate diversification of our future plant,” Miller said. Construction began Feb. 14, 2006.

He sees diversification as a way to survive a future financial squeeze in the industry.

### Construction Challenges

One major obstacle in constructing the plant was the need to excavate an extra 12 feet of soil due to the soft ground.

“We had to add four feet of No. 2 stone for proper drainage and add well points,” Miller said. “We also added another eight feet of gravel on top of the stone.”

The additional excavation and drainage work added \$3 million to the ►

## SUPPLIER LIST

**Agitators** | ProQuip  
**Bucket elevators** | Schlagel  
**Catwalks** | Warrior MFG  
**Centrifuge** | AlfaLaval  
**Cooling tower filtration** | Lacose Filtration  
**Cooling Tower** | Midwest Towers  
**Concrete Storage tanks** | McCormick  
**Control Systems** | Siemens  
**Conveyor** | Various suppliers  
**Design-Builder** | Fagen, Inc.  
**Distillation Columns** | A&B Process Systems  
**Dryers** | ICM Energy Team  
**Dust Collectors** | ECSI  
**Electrical Contractors** | Schambaugh  
**Elevator construction** | McCormick Construction  
**Energy management** | U.S. Energy Services  
**Fermentation-Process Tanks** | Winbco Tank  
**General Contractor** | Fagen, Inc.  
**Grain Probe** | Intersystems  
**Heat exchanger** | Tranter  
**Process engineering** | ICM, Inc.  
**Railroad spur/track design** | Ameritrack  
**Risk management** | FCStone, John Stewart & Associates  
**Scale** | Kennedy Scales  
**Steel storage tanks** | WIMBCO, Brown Tank  
**Water treatment systems** | U.S. Waters, Weas Engineering



*Mitch Miller, president and general manager of Central Indiana Ethanol.*

plant's price tag, although Miller declined to reveal the total cost of the project.

The soft ground was due to a major source of water under the land, which the company used to its advantage, sinking its own well on the property, Miller noted.

"We are not on city water," Miller said. "We have a self-contained fire-suppression system for the plant, also. We did aquifer tests in early 2005."

He said the company tested to deter-

mine if a well at the site would affect the city's water supply adversely and learned it would not.

#### **Experienced Staff**

Besides Miller's experience as a operations manger at Chippewa Valley Ethanol in Benson, MN, his plant manager, Jason Jerke, was a process engineer at Chippewa Valley.

Jerke has a master's degree in industrial microbiology and a master's degree in chemical engineering.

Operations Manager Jeff Knutson,

spent five years with VeraSun in Aurora, SD as a shift lead operator.

#### **Transportation, Marketing**

Miller said 50% of the plant's ethanol will be transported by rail and 50% by truck. The plant also will be blending E85 on site and marketing it throughout Indiana, Miller added.

CNN Ethanol, based in Bloomington, MN, will market the ethanol.

DDGS will be sold by Land O' Lakes Purina Feed, Shoreview, MN.

#### **Future Infrastructure**

"One of the things I think is important is the aggressive development of the E85 infrastructure in the United States," Miller said.

He said organizations, companies, municipalities, universities, and government fleets should make a switch to flexible fuel vehicles that can run on E85.

"Companies by themselves should be creating initiatives to switch to flexible fuel vehicles and use E85," Miller said. "I think that's extremely important to the success of our industry."

*Myke Feinman, editor*

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