

# Looking at Pinal Energy:

## Arizona's First Ethanol Project

By: Hannah Lipps

*"The Company's overall goal is to sell all of our ethanol in Arizona, buy our crops from Arizona farmers and use Arizona workers to make our product."*

**T**hat's the message that John Skelley, General Manager of Pinal Energy, LLC near Maricopa, Arizona most wants to drive home.

Pinal Energy is serious about making a positive impact on the economy and the environment. Just seven months after beginning ethanol production at its new facility, Arizona's first, the company is well on its way to accomplishing those goals. Pinal Energy is a vertically integrated, 52 million gallon per year (mgpy) ethanol plant. It is located about 20 miles southeast of Phoenix on farm land with palm trees in the foreground, and mountains in the background.

"We started up in August of 2007 and we are using about 18 million bushels of corn and grain sorghum per year. Ninety percent of our distiller's grain by-products are used at feed

lots and dairies within a 15-mile radius of the plant. Our goal here is grown, made and used in Arizona."

### *A Unique Situation*

Pinal Energy,

LLC is unique in many ways, not the least of which is the fact that they are vertically integrated from grain delivery to feeding. "Arizona Grain is our sister company on the same site, and we are connected by conveyer belt to the elevator," says Skelley. "The grain is conveyed to the plant where it is processed into ethanol. We have 1.5 million gallon storage tanks. Most of our ethanol goes to Phoenix and Tucson."

"The distiller's grain is conveyed across the road to our feed plant, which mixes the cattle rations. We are putting in more centrifuges and a pipeline to pipe our whole stillage over to the feed mill."



Pinal Energy is using innovative technologies to lower its carbon footprint.

The plant produces 450,000 tons of wet distiller's grain for feed. "We have a modern grain dryer but we'd rather not ever fire it up if we can help it." The vast majority of the feed Pinal sells is used wet, saving money and time.

## Vital Stats

Production:

**52 mgpy**

Jobs Created:

**48**

Cost:

**\$65 million**

Annual Rainfall:

**7 to 8 inches**

Carbon Footprint Goal:

**0**



## A Master Plan

Brilliant planning is just one phrase that might describe this state-of-the-art plant. Pinal Energy, LLC plans for the future to increase profitability and efficiency.

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### **“Ninety percent of our distiller’s grain by-products are used at feedlots and dairies within a 15-mile radius of the plant.”**

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Pinal Energy is observing other ethanol facilities that are testing dry manure fired boilers. “If we see that these boilers work effectively, we will certainly consider using this fuel which can be collected from nearby feedlots and dairies,” said Skelley. “If we’re able to do that, the steam will turn a turbine that will make enough electricity to power our operation. We’ll sell the bala onto the grid nearby and save about \$1 million per month in utilities.”

“We plan to begin construction on a CO<sub>2</sub> plant in March. We will capture the CO<sub>2</sub> to make dry ice and liquid CO<sub>2</sub> which we will then sell to Tucson and Phoenix markets.” The plant will produce 170,000 tons of per year.



Pinal Energy is also considering a centrifuge that will spin syrup off the distiller’s grain. They could then use the oil to make biodiesel. “We have a market for that here so it could be an additional source of revenue.”

The plant is located next to the main line Union Pacific Railroad where 100 car trains of corn and sorghum are off loaded. “We will still ship the grain in to use in the plant,” says Skelley. “But we use as much local sorghum as we can get.” They would eventually like to stop shipping in grain

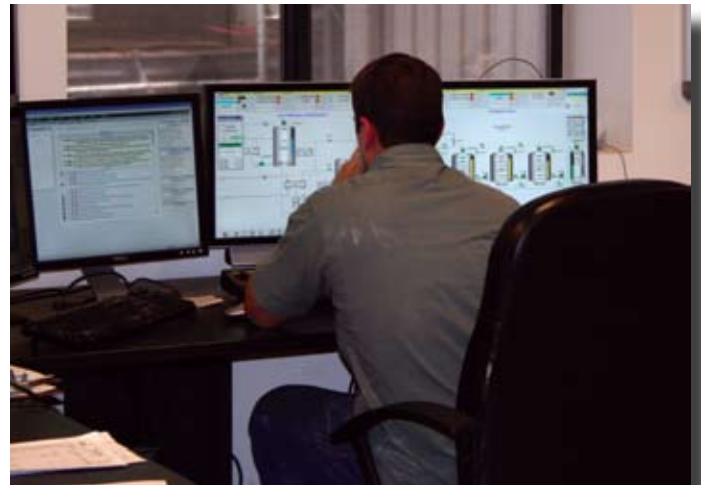
altogether. “We built this plant so that it can easily double,” says Skelley. “Our limiting factor right now is the ability to get rid of all our distiller’s grains.”

## Using Sorghum

Pinal Energy and Arizona Grain are both owned by an individual investor from Pheonix. “We located the plant here because the Arizona Grain facility and the feedlot are already here,” said Skelley. “We are a destination plant as opposed to an origin plant like many ethanol facilities. We ship in our grain but the product, the ethanol and all its by-products, stay local.”

Eventually, Pinal Energy is interested in having a zero carbon footprint. “We are not there yet,” says Skelley. “But we are working in that direction.”

As such, Pinal Energy, LLC is interested in using even more



Much of the plant’s operations are controlled and monitored from a state-of-the-art computer lab.

local sorghum than they have in the past. “Being a new plant, we’re still working through some things to keep the plant running smoothly. We’ve used anywhere from ten percent to fifty percent sorghum, depending on what was available, and we would like to see people in this area grow more sorghum than they are now.”

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Arizona Grain, Pinal Energy, a feed mill and a feedlot are all located on the same tract of land.

## E-Member...continued from page 24

flow to operate.”

Asked about his crystal ball projections for grain sorghum acreage this season, Evans said his area experienced a shift to grain acres last year. “I think we’ll maintain acres. Water is still our number one factor. Our volume is actually dependent on rainfall, even more so than planted acres. Areas that have more water available could see a larger increase in grain acres even more than arid areas.”

## Stepping Out for the Industry

As NSP’s charter e-member, Evans stepped up in support of the sorghum industry. Through the e-member program, NSP teams with handlers to allow producers to systemically invest in their own representation. E-dues are a half-cent per hundredweight or about a quarter cent per bushel and are deducted from settlement sheets. The e-member program is vital because checkoff funds cannot be used for legislative or regulatory work.

“I know how important it is that producers’ interests be represented and it seemed like an excellent way to do that. And anything that’s good for the producer is good for the elevator. The producer must do well for us to do well.”

When Barry puts on his grower hat, he sees added benefits. “As farmers, we look at the big things and can’t keep track of all the things that are going on in Washington. We know how important a farm bill is, but there are a lot of things that we never see, especially at EPA with drift and pesticide regulations or getting herbicides available on the market. We don’t have the time or expertise and that’s where industry groups keep track of what’s going on and can advocate for us.”

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The ethanol plant, with palm trees in the foreground and mountains in the background, is surrounded on three sides by a feedlot. 90 percent of the distillers’ grains produced by the plant are used in a 15-mile radius.

In Pinal Energy’s crop growing area in Arizona, cotton is king. The area receives between seven and eight inches of rainfall annually so most everything is irrigated. But sorghum is a smart choice for Arizona producers, especially right now when prices are high.

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**“We hope this facility will change that in the future because sorghum is a win-win situation for Pinal Energy, Arizona growers, and the state of Arizona.”**

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“Sorghum is a water efficient crop and water is starting to become more and more of an issue in our area,” says Eric Wilkey, President of Arizona Grain, Inc. “Years ago sorghum was a major crop here, but subsidies have tended to favor cotton. We hope this facility will change that in the future because sorghum is a win-win situation for Pinal Energy, Arizona growers, and the state of Arizona.”

*On the Web: [www.pinalenergyllc.com](http://www.pinalenergyllc.com)*