

**IOWA RENEWABLE FUELS ASSOCIATION**



**10<sup>TH</sup> ANNIVERSARY**



**PROGRESS AND PROSPERITY:  
A LOOK INTO IOWA'S RENEWABLE FUELS INDUSTRY**



# Iowa Renewable Fuels Association

After 10 years of hard work and persistence for Iowa's ethanol and biodiesel industries, the Iowa Renewable Fuels Association (IRFA) has compiled a set of unique stories that capture the spirit of innovation and community that resulted in a decade of progress and prosperity. Behind each plant is a person, an idea, and a story that shines a gleaming spotlight on the renewable fuels industry's ability to positively impact the individuals, neighborhoods and communities of the people of Iowa.

**The IRFA was established in 2002 to bring together Iowa ethanol and biodiesel producers to foster the development and growth of the state's renewable fuels industry through education, promotion and infrastructure development. IRFA is committed to making Iowa a leader in producing and using renewable fuels and value-added co-products.**



# Renewable Fuels Power Iowa's Economy

## Decade Economic Impact Study

It's hard to overstate the importance of the renewable fuels industry to Iowa. A study by Economist John Urbanchuk of Cardno ENTRIX explained that Iowa's renewable fuels industry helped power the state through the recession and has had immense impacts on the growth of Iowa's economy over the last decade.

### According to Urbanchuk's study:

- Over the last decade in Iowa, ethanol production has increased 741%, while biodiesel production has increased an astounding 1,600%;
- The portion of Iowa's agricultural economic output attributable to the renewable fuels industry increased from 4.6% in 2002 to more than 37% in 2011;
- The price of farm land in Iowa has tripled over the past decade with the average price for all grades of cropland increasing from \$2,083 per acre in 2002 to \$6,708 in 2011. For acres planted to principal crops, the overall value of cropland in Iowa has increased from \$51.2 billion in 2002 to \$165.9 billion in 2011, an increase of 224%;
- In 2002 the renewable fuels industry was a negligible component of Iowa's manufacturing sector. By 2011, ethanol and biodiesel production accounted for nearly 7% of manufacturing sector output;
- The total number of jobs in the entire Iowa economy supported by the renewable fuels industry has grown from about 3,500 full-time equivalent jobs in 2002 to more than 79,000 in 2011, an increase of more than 2,000%. By 2011, the renewable fuels industry directly or indirectly supported 5.4% of Iowa employment;
- The renewable fuels industry has added \$12.9 billion of income to the pockets of Iowans over the past decade; and,
- The renewable fuels industry has generated \$1.8 billion of tax revenue for Iowa over the past decade.

### To read the entire study, go to:

<http://www.iowarfa.org/documents/10YearEconomicImpact.FINAL.pdf>

*"The last decade really has been one of progress and prosperity for renewable fuels and rural Iowa. The study highlights the profound impact ethanol and biodiesel production has on Iowa jobs, Iowa income, and Iowa wealth creation. Clearly, Iowa's economy would be in a much different place if ethanol and biodiesel production were still at 2002 levels."*

**IRFA Executive Director Monte Shaw**

# IRFA Timeline



## Iowa Renewable Fuels Association

- February 27, 2002**  
IRFA is incorporated in the state of Iowa
- May 13, 2002**  
President George W. Bush signs first Farm Bill to contain Energy Title
- June 30, 2002**  
Crude oil is \$25/barrel
- June 12, 2003**  
IRFA works with DNR to develop "E85" checklist – allowing retailers to move forward with offering E85 to customers
- October 22, 2004**  
President Bush signs into law the first Biodiesel Blenders Tax Credit
- August 8, 2005**  
President Bush signs into law the Renewable Fuels Standard
- September 19, 2005**  
IRFA opens its office and hires full-time staff
- December 31, 2005**  
Iowa becomes first state to produce one billion gallons of ethanol
- February 15, 2006**  
Over 500 supporters flood the Iowa Capitol for "Ethanol Day on the Hill"
- May 30, 2006**  
Gov. Tom Vilsack signs into law Iowa's 25% Renewable Fuels Standard
- February 28, 2007**  
IRFA hosts first Iowa Renewable Fuels Summit
- May 27, 2007**  
Indianapolis 500 runs on E100
- August 1, 2007**  
IRFA and Iowa Corn "Pop the Popcorn Propaganda," pointing out the absurd "food vs. fuel" claims being made
- September 27, 2007**  
IRFA forms a political action committee (PAC)
- December 19, 2007**  
President Bush signs the Renewable Fuels Standard II into law.
- May 12, 2008**  
Gov. Chet Culver signs into law the Renewable Fuels Infrastructure Enhancement Act
- June 13, 2008**  
IRFA donates over \$10,000 for biodiesel to the Parkersburg tornado relief effort
- July 4, 2008**  
Crude oil hits \$145/barrel
- November 24, 2008**  
Iowa opens its 100th E85 pump
- December 31, 2008**  
Iowa becomes first state to produce two billion gallons of ethanol

# A Decade of Progress and Prosperity

- January 1, 2009**  
Western Iowa Energy's Denny Mauser becomes the first biodiesel member to serve as IRFA's Board President
- January 16, 2009**  
Crude oil drops to \$36/barrel
- March 6, 2009**  
Ethanol industry petitions EPA for approval of E15 blends
- October 2, 2009**  
IRFA creates Safety Alliance with Iowa OSHA
- December 31, 2009**  
Biodiesel blenders tax credit expires
- December 31, 2009**  
Iowa becomes first state to produce three billion gallons of ethanol
- January 25, 2010**  
Ret. General Wesley Clark addresses 4th Annual Iowa Renewable Fuels Summit
- February 5, 2010**  
IRFA and its members donate over \$40,000 to the disaster relief efforts in Haiti
- August 9, 2010**  
IRFA PAC announces first-ever Champion of Renewable Fuels awards
- December 17, 2010**  
Biodiesel Blenders Tax Credit is reinstated
- January 25, 2011**  
NASCAR Champion Rusty Wallace addresses 5th Annual Iowa Renewable Fuels Summit
- February 20, 2011**  
Daytona 500 runs on E15
- April 29, 2011**  
Crude oil hits \$114/barrel
- May 26, 2011**  
Gov. Terry Branstad signs into law the Comprehensive Renewable Fuels Incentives Act
- August 23, 2011**  
IRFA receives the 2011 Legislative Leadership Award from the American Coalition for Ethanol (ACE)
- December 28, 2011**  
As part of Iowans Fueled with Pride, IRFA releases the 2012 Iowa Caucus Voter Guide
- December 31, 2011**  
Ethanol and Biodiesel Blenders Tax Credits expire
- June 15, 2012**  
Gov. Branstad proclaims "Iowa Ethanol Day" in honor of IRFA's 10th Anniversary
- June 15, 2012**  
EPA clears final hurdle to approve E15 – Iowa is "good to go"
- September 5, 2012**  
IRFA recognizes founding board members during 10th Anniversary Members' Day

## Green Plains Renewable Energy (GPRE)

### Locations:

Lakota, Shenandoah, and Superior, Iowa

### Total Ethanol Production Capacity:

220 MMgy

Began Operations: 2002

[www.gpreinc.com](http://www.gpreinc.com)



# Green Plains

RENEWABLE ENERGY, INC.

## Renewable Energy Powering Renewable Energy

BioProcess Algae Harvester



Why have the U.S. Environmental Protection Agency (EPA), the U.S. Department of Energy (DOE), the U.S. Department of Agriculture (USDA), the White House and countless high-ranking officials visited Shenandoah, Iowa? One word: Algae.

Green Plains Renewable Energy (GPRE), Clarcor Inc. and BioProcessH2O have come together to form the joint venture, BioProcess Algae LLC, as part of GPRE's commitment to next-generation biofuels. BioProcess Algae grows its algae through photosynthesis in large-scale biofilms exposed to light (shown on left) and uses waste heat and carbon dioxide (CO<sub>2</sub>) to feed the algae from the co-located ethanol facility.

Co-location is a theme throughout many of Green Plains' facilities, including its partnership with Iowa Lake Electric Cooperative (ILEC) as the nation's first wind project to provide renewable electricity to power the production of another renewable energy, ethanol.

Green Plains' Lakota and Superior, Iowa plants are both powered by 10.5 megawatt wind farms. The 55 million gallon per year capacity facility in Superior, Iowa receives all of its electrical power from wind turbines, while the 100 million gallon per year capacity plant in Lakota receives about half of its electrical power from the wind turbines.





## Western Iowa Energy

**Location:** Wall Lake, Iowa  
**Biodiesel Production Capacity:** 30 MMgy  
**Began Operations:** 2006  
[www.westerniowaenergy.com](http://www.westerniowaenergy.com)

## Biodiesel Also Comes From Corn Oil and Animal Fats

Western Iowa Energy (WIE), a biodiesel plant located in Wall Lake, Iowa, was one of the first plants to be built in Iowa since the early entrance of industry pioneers REG and AGP. WIE entered the market by taking an innovative approach to producing biodiesel, using other feedstocks in addition to soybean oil.

The decision to build the plant to process multiple feedstocks wasn't an easy one. "This became quite a battle in the WIE board room," said WIE Board Member Denny Mauser. "There were many directors on both sides of the issue, and this had not been done in the U.S. with a plant of this size," noted Mauser. Ultimately, the decision was made to develop a facility that could produce biodiesel from soybean oil, animal fats, corn oil, and many others.

Since then, Western Iowa Energy has had success because of its flexibility in adapting to changing markets with different types of feedstocks. Denny Mauser said this success has given WIE the ability to reinvest in its operation. "Currently, we're adding infrastructure at our facility, increasing its holding capacity, adding new tanks, and looking into new processes to increase our efficiency," stated Mauser.

*WIE offers a high pay scale and the plant has lured many young families back to rural Iowa from as far away as California. Because of the workforce, the schools have more kids, the churches have more attendees, and there are a lot less empty homes in the area of Wall Lake.*

**- Western Iowa Energy Board Member Denny Mauser**



Western Iowa Energy board director  
Denny Mauser





# Big River Resources, LLC

## Big River Resources, LLC

**Locations:** Dyersville and West Burlington, Iowa

**Total Ethanol Production Capacity:** 215 MMgy

**Began Operations:** 2004

[www.bigriverresources.com](http://www.bigriverresources.com)

## Jobs You Can Raise a Family On



Big River Resources Headquarters

*Being able to participate in the growth of a new industry that utilized my education, work experiences and provided new challenges with stable employment within the state is a huge bonus for my family.*

— General Manager Jim Leiting

One constant challenge the state of Iowa faces is the ability to offer good paying jobs in its rural communities. Locals who leave their small towns to attend large universities and receive degrees in economics, chemistry, engineering and business often leave Iowa because there are not jobs in their communities challenging and enticing enough to keep them in the state. Now, right down the road from the family farm is often such a job, thanks to the renewable fuels industry.

After graduating from Iowa State University with a major in Agricultural Business and a minor in Marketing, Jim Leiting did what many new grads do and left the state for bigger and better job opportunities. But, after 25 years of working for a couple of grain businesses, Jim was able to return to Iowa because of a good paying job opportunity with **Big River Resources**.

“Having the opportunity to move back to Iowa and closer to family and friends after 20 years moving around to different locations was a great opportunity to reconnect with both my spouse and my roots in Iowa agriculture,” stated Leiting. “Being able to participate in the growth of a new industry that utilized my education, work experiences and provided new challenges with stable employment within the state is a huge bonus for my family,” he added.



# *A Decade of Efficiency and Technology Innovations*

## **Plant Technology and Efficiency Top 10**

A great deal has been said about the growth of ethanol and biodiesel production since the enactment of the Renewable Fuels Standard (RFS) in 2005. The untold story is the corresponding efficiency and technology innovations these industries have made to increase productivity, decrease energy inputs, and lower the industry's impact on the environment. This Top 10 list tells a small piece of this story of breakthroughs that have enabled the renewable fuels industry to persevere in challenging economic times while still producing low cost, high performance motor fuel.

- 1.) Increased corn yields per acre have allowed U.S. ethanol production to grow from 1.77 billion gallons in 2001 to 13.9 billion gallons in 2011 while not taking corn away from food, feed, export or industrial uses.
- 2.) Since 2001, the average ethanol yield in the U.S. has increased 3-5% to roughly 2.8 gallons per bushel due to improved yeast and enzymes.
- 3.) Over the past decade, the gallons of water used in dry mill ethanol plants has dropped from 4.7 to 2.72 per gallon of ethanol produced.
- 4.) Compared to 2001, ethanol production today requires 28% less thermal energy (from natural gas or coal) per gallon and 32% less electricity.
- 5.) Technology advancements have made it possible to convert lower cost waste oils and fats into biodiesel providing producers much-needed feedstock flexibility to manage costs.
- 6.) Corn oil extraction from distillers grains, which was nonexistent in 2001, is now a source of revenue for approximately 80% of all dry mill ethanol plants. It is sold as a feed additive and biodiesel feedstock.
- 7.) In 2001, dried distillers grains (DDGS) shipped cross-country in rail cars often had to be broken apart with jackhammers to be unloaded, but today ethanol producers have overcome this challenge through the use of advanced process controls.
- 8.) Over the last ten years, improved biodiesel catalysts have sped up conversion rates, minimized waste solids and waste water and lowered operating costs.
- 9.) While the "human touch" is still essential, the adoption of Advanced Process Controls (APC) has brought a new level of precision to renewable fuels production, increasing profitability and improving operations.
- 10.) To support nationwide demand, today ethanol is shipped in efficient 80-100 car unit trains that power directly from an ethanol plant to the final destination.

*For more information, go to: [www.iowarfa.org/IRFAScrapbook.php](http://www.iowarfa.org/IRFAScrapbook.php)*

***Without the significant ethanol yield increase due to improved enzymes and yeast, it would have taken an additional 250 million bushels of corn to generate 2011's ethanol production levels.***



## Quad County Corn Processors (QCCP)

**Location:** Galva, Iowa

**Ethanol Production Capacity:** 30 MMgy

**Began Operations:** 2001

**www.quad-county.com**

## Pioneering Ethanol Production Efficiency

Quad County Corn Processors' (QCCP) 30 million gallon per year dry mill plant in Galva, Iowa was the second dry mill to begin operating in Iowa. QCCP has always been an innovator in looking for new technologies to maximize its efficiency. Quad County's pioneering spirit has been important to its business because it is one of the few ethanol refineries not located directly next to a rail line. Consequently, the Galva plant has always needed to maximize its production efficiency to stay competitive in the evolving ethanol industry.

One way Quad County is maximizing its efficiency is through a special agreement with Syngenta, who's supplying the dry mill ethanol plant with Enogen. Enogen is corn specifically designed to express the alpha amylase enzyme used during the dry grind ethanol process. Instead of buying liquid alpha amylase, the key enzyme now comes to the plant in the endosperm of the grain itself, making the ethanol production process more efficient.

"Our positive experience is the reason we're moving forward with it now, and we're excited to see the benefits Enogen grain can create at our facility over time," stated Quad County Corn Processors General Manager Delayne Johnson.



**Enogen** is currently being grown by 70 to 90 corn farmers in Iowa this year and will be first harvested this fall for ethanol production.



# Corn, LP

**Location:** Goldfield, Iowa  
**Ethanol Production Capacity:** 60 MMgy  
**Began Operations:** 2006  
[www.cornlp.com](http://www.cornlp.com)



## Grain Co-op and Ethanol Project Come Together

When ethanol projects started being discussed throughout Iowa, many grain elevators worried about how this might impact their business. Some sat back, but others stepped forward. In 2003, there was a stir in the area that an ethanol entity was looking to build a facility in Gold-Eagle Cooperative's trade territory. These farmers and businessmen wanted control over their own destiny. "We decided if a plant was going to exist in our area, we needed to be involved," said Corn, LP General Manager Brad Davis. So, the grain coop got involved in a big way, and broke ground in October of 2004 on Goldfield's ethanol facility, Corn, LP.

"Gold-Eagle Cooperative was the founder of Corn, LP, manages Corn, LP and has the largest ownership piece of Corn, LP, but Corn, LP is an investor-owned facility," Davis added. Thanks to this giant leap of faith by the grain co-op, the plant now consumes all of the corn Gold-Eagle's members produce. "We are now in the middle of our seventh year of operations, and I think Corn, LP and Gold-Eagle complement each other," continued Davis.

The facility also gives back in the form of dried distillers grains (DDGS) and by keeping the local rail line viable. DDGS make feed cheaper for livestock farmers and, "Corn, LP contributes somewhere between \$10 and \$15 million annually to the Union Pacific revenue stream," stated Davis. He believes this ensures the rail line's existence for many years to come, maintaining Corn, LP's benefit to the local community in more ways than one.

*We are now in the middle of our seventh year of operations, and I think Corn, LP and Gold-Eagle complement each other.*

**– General Manager Brad Davis**



# POET<sup>®</sup>

## POET Biorefining - Coon Rapids

**Locations:** Coon Rapids, Iowa

**Ethanol Production Capacity:** 54 MMgy

**Began Operations:** 2002

[www.poet.com](http://www.poet.com)

## Pioneering the Development of New Technologies

Since POET Biorefining - Coon Rapids early entrance into the ethanol industry, it has been a trailblazer in developing new technologies. Like the Iowa Renewable Fuels Association, POET Biorefining-Coon Rapids is celebrating its 10th anniversary. Over that decade, the plant has already produced 450 million gallons of ethanol and bought nearly 180 million bushels of corn.

Through the plant's first 10 years, POET Biorefining - Coon Rapids utilized a patented BPX<sup>™</sup> technology that eliminates an energy intensive step in the ethanol production process—liquefaction, or “cooking.” The innovative technology uses enzymes that convert starch to sugar without cooking the product, and the sugar is then fermented into ethanol.

Currently, POET Biorefining - Coon Rapids has added Voilá<sup>™</sup>, a high quality corn oil derived from the POET BPX<sup>™</sup> dry mill process. Voilá<sup>™</sup> is a versatile product due to its high level of purity and low free fatty acid (FFA) content compared with many other industrial and feed grade corn oils.



Voilá<sup>™</sup> corn oil



*POET Biorefining – Coon Rapids is excited to be celebrating its 10th year of ethanol production, as we have made great strides in the pursuit of America's energy independence through a history of innovation. Like the successful BPX<sup>™</sup> technology, we view Voilá<sup>™</sup> corn oil as the next step in energy evolution.*

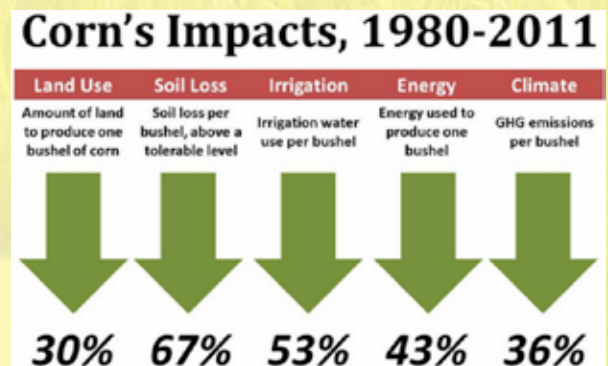
**– POET Biorefining - Coon Rapids General Manager Bill Howell**

# A Decade of Cleaner Air and Water through Renewable Fuels

## Environmental Benefits Top 10

While the renewable fuels industry's ability to create jobs, displace foreign oil and boost rural economies is paramount, it is also important to remember the positive impact that renewable fuels have on the environment compared to their petroleum-based counterparts. This Top 10 list highlights several ways in which ethanol and biodiesel have benefited the environment over the past decade through improvements at the plant, on the farm, and out of the tailpipe.

- 1.) According to USDA, for every unit of energy needed to produce biodiesel, 5.5 units of energy are gained, while ethanol generates 2.3 units of energy for every unit of energy input. By comparison, gasoline and diesel fuel have negative energy balances.
- 2.) The adoption of regenerative thermal oxidizers (RTO) has significantly reduced volatile organic compound emissions from ethanol plants.
- 3.) On a per gallon basis, today's ethanol plants require 28% less thermal energy and 32% less electricity than a decade ago, according to the University of Illinois at Chicago.
- 4.) According to U.S. EPA, biodiesel reduces greenhouse gases (GHG) by up to 86% compared to petroleum diesel, while Yale University found that ethanol reduces GHG by up to 59% compared to gasoline.
- 5.) Less water is required to produce a gallon of biodiesel or ethanol than to produce a gallon of petroleum diesel or gasoline, and water use at both ethanol and biodiesel plants has dropped significantly.
- 6.) Increased income from ethanol demand for corn has allowed farmers to invest in precision farming equipment and stronger conservation and environmental protections.
- 7.) The environmental footprint of U.S. corn production has improved greatly since the advent of the ethanol industry, including significant reductions in soil loss, irrigation, energy use and the amount of land required to produce a bushel of corn.
- 8.) Ethanol and biodiesel are both highly biodegradable and non-toxic.
- 9.) Biodiesel and ethanol significantly reduce tailpipe carbon monoxide emissions, air toxics, fine particulate matter and smog pollution compared to petroleum diesel and gasoline, making our air healthier to breathe.
- 10.) In 2011, ethanol and biodiesel use reduced lifecycle GHG emissions by nearly 72 billion pounds, the equivalent of removing 5.4 million vehicles from U.S. roads.



Source: National Corn Growers Association

For more information, go to: [www.iowarfa.org/IRFAScrapbook.php](http://www.iowarfa.org/IRFAScrapbook.php)

# Fiberight

## Fiberight, LLC

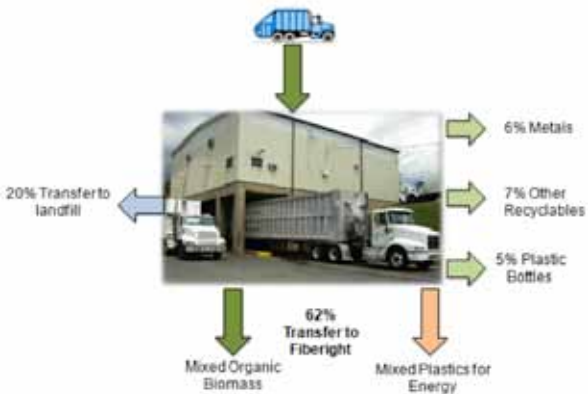
**Location:** Blairstown, Iowa

**Production Capacity:** 2 MMGY

**Began Operations:** 2010

[www.fiberight.com](http://www.fiberight.com)

## Turning Trash Into Ethanol



Fiberight can produce 85 gallons of renewable fuel from every ton of non-recycled trash, with a carbon footprint 80% lower than petroleum-based gasoline.

Disposing of America's garbage is an enormous challenge requiring increasing amounts of precious land. However that waste is on the verge of becoming a solution to our foreign oil dependence.

Fiberight, LLC is one of the first companies in the U.S. to successfully convert waste into biofuel on an industrial scale. Fiberight's process begins by dividing municipal solid waste (MSW) into organic and inorganic categories and then uses chemicals and enzymes to transform the MSW into cellulosic biofuel.

Fiberight General Manager Steve Gerber said, "An important aspect of Fiberight's process is the separation of organic biomass from the other recyclables in the waste stream. We separate and recycle glass, metals, plastics and textiles. The organic portion will be used to produce sugars that can then be further processed into biofuels and the solubilized organics feed an anaerobic digester to create energy to operate the plant."

Locating production facilities near large community waste deposits eliminates a great deal of transportation costs, effectively taking advantage of a low-cost, high-availability feedstock. If applied to all of America's garbage, more than 10 billion gallons of cleaner burning, American-made, renewable fuel could be produced.



*We expect to recover, use or recycle up to 80% of the waste stream. Therefore, potentially 80% of all MSW going to the landfill can be reused.*

**– General Manager Steve Gerber**

# Golden Grain Energy

**Location:** Mason City, Iowa

**Total Production Capacity:** 110 MMGY

**Began Operations:** 2004

[www.goldengrainenergy.com](http://www.goldengrainenergy.com)



## Bringing Home a Petroleum Refugee



Chief Operations Officer Chad Kuhlers

When Golden Grain Energy (GGE) began operations in the fall of 2004 the plant was able to bring one of its locals back home after working for an Oklahoma petroleum refinery.

Chief Operations Officer Chad Kuhlers and his wife were originally from the Mason City area, but had to leave town to find a job that put his education and know-how to work. “I was excited for my wife and I to be able to return to our roots and work for a renewable industry,” stated Kuhlers. Golden Grain Energy told Chad to ignore the “nameplate” capacity of the plant and to focus solely on maximizing the plant’s production.

“I believe Chad was one of the first to increase a 40 million gallon per year (MMgy) nameplate facility by 25 MMgy. That means we can produce at over 150% of our nameplate capacity,” said President and CEO Walt Wendland. Golden Grain Energy also completed a major expansion in 2007 that nearly doubled its nameplate production capacity.



*I believe Chad [Kuhlers] was one of the first to increase a 40 million gallon per year (MMgy) nameplate facility by 25 MMgy. That means we can produce at over 150% of our nameplate capacity.*

*– President and CEO Walt Wendland*

GGE: Production started Dec. 13, 2004





# Archer Daniels Midland (ADM)

**Locations:** Cedar Rapids and Clinton, Iowa

**Total Ethanol Production Capacity:** 700 MMgy

**Began Operations:** 1982

[www.adm.com](http://www.adm.com)

## World's Largest Dry Mill Ethanol Plant



If Cedar Rapids was a state it would rank 7th in the nation in ethanol production capacity behind South Dakota but ahead of Ohio.

In 2011, Archer Daniels Midland (ADM) began production at a new 300 million gallon per year (MMgy) dry mill ethanol plant at its corn processing complex in Cedar Rapids, giving ADM the largest dry mill ethanol plant in the world and making Cedar Rapids arguably the center of the ethanol production universe. Being located next to ADM's existing 400 MMgy wet mill, the new dry mill is able to take advantage of ADM's energy and transportation resources already in place.

As an ethanol pioneer, ADM was known for its large wet mills, with the versatility to produce a variety of corn-based products. However, the dry mill process is much more efficient for producing ethanol. ADM's new dry mill in Cedar Rapids has the capacity to process an additional 100 million bushels of corn each year, which translates to about 275,000 bushels of locally grown corn every day.

When announcing the Cedar Rapids dry mill project, ADM Senior Vice President of Corn Milling and BioProducts, Edward Harjehausen said, "ADM is significantly expanding its domestic ethanol production with new dry mills...Biofuels are an important part of America's current and future energy mix, and we believe it is important to invest in expanded ethanol production to meet growing demand."



# Homeland Energy Solutions

Location: Lawler, Iowa

Total Production Capacity: 130 MMgy

Began Operations: 2009

[www.homelandenergysolutions.com](http://www.homelandenergysolutions.com)



## When Local Manufacturers Left, Ethanol Plant Stepped In



President and CEO Walt Wendland



Maintenance Manager Don Mork

Nearly a quarter of Homeland Energy Solutions' initial hires in 2009 were individuals that had been recently laid-off from area businesses.

When the Homeland Energy Solutions ethanol plant began hiring in 2009, many locals in the Lawler, Iowa area were suffering from closings and lay-offs taking place at several local businesses. Homeland realized the potential to give its neighbors a chance at new jobs in a expanding industry.

Subsequently, nearly a quarter of Homeland's initial hires were individuals that had recently been laid-off from area businesses. Homeland Energy Solutions Maintenance Manager Don Mork had recently been laid off from a nearby air filter manufacturer when he heard the new ethanol plant was hiring. "My role in the plant has given me the opportunity to use many of my skills from years ago in maintenance roles I have had, as well as engineering skills more recently used at my previous job," Mork stated. "Being a part of a growing industry, and putting my knowledge and skills to work at an area job has been great for me and my family."

Homeland Energy Solutions President and CEO Walt Wendland said, "Anytime you can hire someone for a job in their hometown they tend to want to retire from that job. I grew up in this area and in addition to a lot of great people, the work ethic is also very strong. These jobs pay well and that money is in turn spent in a lot of the local businesses."





## Renewable Energy Group (REG)

**Locations:** Newton, Ralston, with headquarters in Ames, Iowa

**Total Biodiesel Production Capacity:** 42 MMgy

**First Year Operational:** 1996

[www.regfuel.com](http://www.regfuel.com)

## The Highest Ranking Female in Iowa's Renewable Fuels Industry

Renewable Energy Group (REG) has several outstanding employees who've helped the renewable fuels industry in Iowa grow immensely. REG Treasurer Natalie Lischer is one gleaming example of some of the great people REG employs.

Natalie hails from Bedford, Iowa, but left the state after graduating from Perry High School to attend Truman State University in Kirksville, Missouri. There she received her Bachelor's and Master's Degrees in Accounting and found employment in Kansas City. Lischer, having many clients located in Iowa, began searching for good paying, challenging jobs that were closer to home. In 2007, her search came to an end as she was hired as senior financial analyst with REG. After two years of quick promotions, Lischer's hard work was rewarded, and she took over as Treasurer at REG, a publicly traded company, making Lischer the highest ranking female in Iowa's renewable fuels industry to date.

Natalie says she enjoys working in the biodiesel industry because "it feels rewarding doing something good for the environment and being a part of the energy solution for the nation." Natalie noted that one of the greatest things about REG is that: "We're committed to providing good, green-collar jobs for Iowans and developing a growing industry in rural communities across the state and the nation." The growth of REG is quite evident says Lischer, pointing to the fact that just a few years ago she was the 36th hire of a company that now employs more than 275 individuals nationwide.



Pictured on Right: Natalie Lischer

*We're committed to providing good, green-collar jobs for Iowans and developing a growing industry in rural communities across the state and the nation.*

**-Natalie Lischer,  
Treasurer, REG**



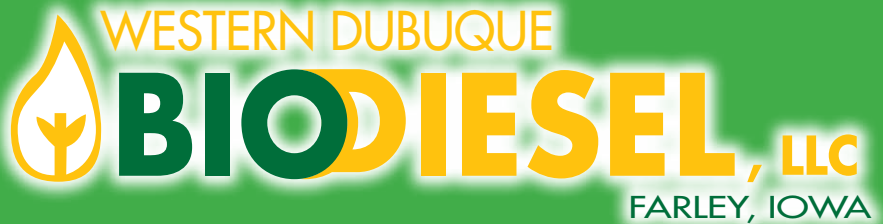
## Western Dubuque Biodiesel LLC

**Location:** Farley, Iowa

**Biodiesel Production Capacity:** 30MMgy

**Began Operations:** 2007

**www.wdbiodiesel.net**



## Bringing Business Development Back to Rural Iowa



Craig Breitbach and Tom Brooks of Western Dubuque Biodiesel (left to right)



Breaking Ground at Western Dubuque Biodiesel



Western Dubuque Biodiesel (WDB), a biodiesel plant located near Farley, Iowa, was formed by an enterprising group of Eastern Iowa farmers and business people in 2005. WDB set an industry record by raising the \$19.2 million of equity needed in just one day on June 6, 2006, and the plant has been operating since 2007. WDB produces biodiesel from crude and refined vegetable oils and refined animal fats.

Despite its record-breaking equity drive, what truly sets WDB apart is the employment and economic impact it has had on the small town of Farley, Iowa. "When Western Dubuque Biodiesel opened in 2007, it became the first new employer Farley had seen in nearly 15 years," said WDB General Manager Tom Brooks. "Our plant now has 24 full-time employees, and these are high-skilled, good paying jobs with benefits. We also support over 100 additional jobs at local businesses, including trucking companies, chemical suppliers, accounting and auditing personnel, and the local restaurant and hotel. The success of our plant has even spurred the development of new industries in the growing Farley Industrial Park."

Coming off a record-breaking year of production in 2011, Brooks sees a bright future ahead for WDB. "With a strong and growing Renewable Fuels Standard, WDB is well-positioned to grow and succeed for years to come—maintaining high quality jobs and pumping money into the local economy in Dubuque County."

**WDB produces biodiesel from crude and refined vegetable oils and refined animal fats.**

*When Western Dubuque Biodiesel opened in 2007, it became the first new employer in Farley, Iowa in nearly 15 years.*

*– WDB General Manager Tom Brooks*





## Absolute Energy, LLC

**Location:** St. Ansgar, Iowa

**Ethanol Production Capacity:** 115 MMgy

**Began Operations:** 2008

[www.absenergy.org](http://www.absenergy.org)

## Bringing Locals Back Home



Absolute Energy Environmental,  
Health and Safety Technician Tyler Schwarck



Absolute Energy Plant Manager Tim Hauge

Absolute Energy LLC's ethanol plant in St. Ansgar, Iowa (near the Iowa-Minnesota border) has had an immense impact on the local community, not only by creating good paying, local jobs, but by allowing several locals move back to the area after leaving for college or other endeavors.

After Tyler Schwarck completed high school he left for Cedar Falls to attend the University of Northern Iowa. After completing four years at the university, he returned to St. Ansgar in 2007 to become a Production Specialist with Absolute Energy. Due to Tyler's hard work ethic, knowledge, and skills, he was quickly promoted to Environmental, Health and Safety Technician. "Coming from a small town in Iowa, I knew that finding a job close to home in which I could utilize my degrees in Natural Resources Management and Earth Science would prove to be challenging. I was extremely fortunate to start my job at Absolute Energy just two days after graduating college and to stay in the same county I grew up in," said Tyler.

After Plant Manager and local Tim Hauge finished high school, he proudly served four years in the U.S. Navy. After the Navy, although he wanted to stay in the area where he grew up, Hauge noted: "I was just beginning to start a family and needed to take a chance and move to a larger community to get the experience and skills necessary to provide for my family." Hauge kept his family near home and worked for an oil refinery in the Twin Cities area of Minnesota. After over a decade of traveling between his family's home and his job in the Twin Cities area, Tim was able to return to living with his family near his hometown in 2007, and start working a good paying job as Plant Manager at Absolute Energy. "Absolute Energy has given the local community a place where we can provide careers, both directly through our employees and indirectly through supporting businesses. This can help our young people as they go through life's stages of starting and raising a family," Hauge added.



# Ethanol Production Boosts Iowa Livestock

## Livestock Impact Top 10

As the U.S. ethanol industry has expanded, so has the production of high-quality animal feed as a co-product of processing corn into ethanol. Incorporating distillers grains into rations improves feed efficiency while maintaining carcass quality and grade.

- 1.) According to the USDA, since 2002 the number of cattle and calves in Iowa has increased by about 350,000 and the number of hogs in Iowa has increased by approximately 5 million.
- 2.) One-third of every bushel of corn processed into ethanol returns to the livestock feed supply in the form of distillers grains.
- 3.) Distillers grains are a more efficient source of energy and protein than the ingredients they are replacing.
- 4.) Distillers grains provide approximately 130-150% of the energy of an equivalent amount of corn when fed to beef cattle, allowing the increased use of inexpensive roughage in livestock diets.
- 5.) Without distillers grains, the cost of cattle and hog rations in the Midwest would go up as distillers grains and roughage are replaced with expensive corn and soybean meal.
- 6.) Distillers grains can lower feed costs by reducing the need for some commercial feed additives, such as phosphorus.
- 7.) Distillers grains improve weight gains despite external factors, such as hot, dry weather.
- 8.) Distillers grains provide an economic source of energy, amino acids and phosphorus for hog diets.
- 9.) According to University of Minnesota research, feeding sows high levels of distillers grains (30-50% inclusion) improves the digestive health of grower-finisher pigs and may increase the size of litters.
- 10.) Many dry mill ethanol plants extract crude corn oil, which can be sold into the feed market as a more flexible feed ingredient option.

For more information, go to: [www.iowarfa.org/IRFAScrapbook.php](http://www.iowarfa.org/IRFAScrapbook.php)

Last year the amount of distillers grains produced was more than the total amount of grain consumed by all the beef cattle in American feedlots.



Research indicates distillers grains can account for 40-60% of beef cattle rations, 20-30% of dairy rations, 20-25% of swine rations, and 15-20% of poultry diets.



## Lincolnway Energy

Location: Nevada, Iowa

Ethanol Production Capacity: 55 MMgy

Began Operations: 2006

[www.lincolnwayenergy.com](http://www.lincolnwayenergy.com)

## A Full Circle Operation



Bill Couser

*It used to take 75 bushels of corn to finish a 1300 pound steer. Today, with distillers grains, we use only 16 to 30 bushels of corn and that number keeps dropping.*

*– Bill Couser*

The Couser operation is one that truly comes full circle—from seed production, to livestock, to growing crops, to producing renewable fuels and back again. Bill and Nancy Couser took over an existing feedlot in 1977, and it has now grown into a diverse farming operation with over 5,000 head of cattle and acres of row crops. Bill also has served as a founding member and driving force behind the development of Lincolnway Energy, an ethanol plant located in Nevada, Iowa, bringing the operation full circle.

Bill is in the seed production business for Monsanto, where he grows seed corn that will bring new traits to farmers the following year. He also grows corn for feed. Once the seed is planted, manure from the Couser Cattle Company feedlot is used as a natural fertilizer for his corn. The corn is then sent to be converted to fuel at the Lincolnway Energy ethanol plant. At the end of the ethanol production process, an ethanol co-product—dried distillers grains (DDGS)—is then sent to be used in the cattle feed rations at Couser Cattle Company.

Bill Couser said, “It’s amazing to see what ethanol has done for the cattle industry in the state...between renewable fuels and livestock, it’s something that fits together, it’s a part of that full circle operation that we have here. And it’s here to stay.”



Lincolnway Energy, Nevada, Iowa

# Siouxland Energy and Livestock Cooperative (SELC)

Location: Sioux Center, Iowa

Ethanol Production Capacity: 60 MMgy

Began Operations: 2002

[www.siouxlandenergy.com](http://www.siouxlandenergy.com)



## First and Forward Focused

Today when you think “ethanol plant” you think of the dry mill ethanol plants scattered across Iowa. But that was not always the case. From the 1980s to the mid 1990s, ethanol plants were large, expensive wet mills – usually owned by an agribusiness. Siouxland Energy and Livestock Cooperative, an ethanol plant near Sioux Center, Iowa, changed all that for Iowa.

While the trend started a few years earlier in Minnesota, area farmers formed a coop to bring “locally owned” ethanol to Iowa. On January 3, 2002, Siouxland became the first dry mill ethanol plant operating in Iowa. Since then, it has expanded twice to keep up with industry growth.

It is no surprise that Sioux County was home to the first “new” generation ethanol plant in Iowa. The county is “top ten” for corn production and a center for livestock production. Siouxland’s founders knew this combination would give the plant a competitive advantage. With strong local demand for distillers grains, Siouxland does not need to dry the high-protein feed co-product for long-range shipping. This saves money and dramatically reduces the plant’s energy footprint, making Siouxland’s ethanol attractive in “low carbon” markets like California.



*Our mission is to add value to our farmers’ bottom line. The ethanol plant will increase revenue for farmers by allowing them to deliver high-moisture corn to the plant and providing access to high-quality feed co-products.*

— Siouxland Energy’s original general manager noted at the startup



# Biofuels: Science and Sustainability Tour

Every year, the Iowa Renewable Fuels Association (IRFA) partners with Iowa State University (ISU) to bring together policy and decision makers from the federal and state levels and leading renewable fuels experts to present sound, science-based information and a “hands on” experience of the technology being adopted by the biofuels industry today.

Throughout the years, the Biofuels: Science and Sustainability Tour participants have received an up close and personal experience with the Iowa renewable fuels industry by visiting family farms, touring ethanol and biodiesel refineries, seeing ISU’s BioCentury Research Farm, discussing issues with policy and industry experts, and even feeling the power of ethanol in a race car at Iowa Speedway.

The Biofuels Tour has hosted individuals from the U.S. Environmental Protection Agency (EPA), the U.S. Department of Agriculture (USDA), the U.S. Department of Energy (DOE), the National Renewable Energy Laboratory (NREL), many U.S. House and Senate offices.

IRFA Biofuels Manager Grant Menke said, “We invite federal staff from across the country regardless of their positions on renewable fuel policies. At the end of the day, a more knowledgeable and educated Congress will help lead to a more thoughtful American energy policy.”



*Attendees have come from the congressional staffs of California, Florida, Indiana, Iowa, Minnesota, Mississippi, Washington, Wisconsin, South Dakota, and Texas, as well as staff from the U.S. Environmental Protection Agency, U.S. Department of Energy, U.S. Department of Agriculture, Farm Credit Administration, National Renewable Energy Laboratory, Congressional Research Service, and many Senate and House Committees.*



## Little Sioux Corn Processors (LSCP)

**Location:** Marcus, Iowa

**Total Production Capacity:** 110 MMgy

**Began Operations:** 2003

[www.littlesiouxcornprocessors.com](http://www.littlesiouxcornprocessors.com)

## Developing Rural Areas Through Ethanol Production

Little Sioux Corn Processors (LSCP) resides in a town of about 1,100 residents and employs 45 individuals from within a 20 mile radius of the plant. If you're in the area of Marcus, Iowa, it's likely you'll see a business that has been directly affected by the local ethanol plant.

The local truck stop, Marcus Junction, opened in 2006 in response to the high volume of truckers entering and leaving LSCP daily. According to an owner of Marcus Lumber, Bob Leavitt, a great deal of the company's local repair jobs come from the ethanol plant, either directly or indirectly. Three local banks (Farmers State Bank, State Savings Bank, and First Trust) noted that corn prices are up but livestock feed prices are decreased by using distillers grains—thereby boosting farm income across the board. Frederick Welding and Sales, a local auto parts shop, Marcus Motel, and Marcus-area grocery store Jeff's Foods have all been positively impacted by the presence of LSCP.

Marcus Mayor Darrell Downs stated, "The American farmer has had a tough time making their operations viable until corn prices increased because of the growth of ethanol. It has been great to see Little Sioux Corn Processors and the small town of Marcus work and thrive together."



*If you're in the area of Marcus, Iowa, it's likely you'll see a business that has been directly affected by the local ethanol plant.*

**– Marcus Mayor  
Darrell Downs**



## Ag Processing, Inc. (AGP)

**Locations:** Algona and Sergeant Bluff, Iowa

**Total Biodiesel Production Capacity:** 90 MMGY

**Began Operations:** 1996

[www.agp.com](http://www.agp.com)

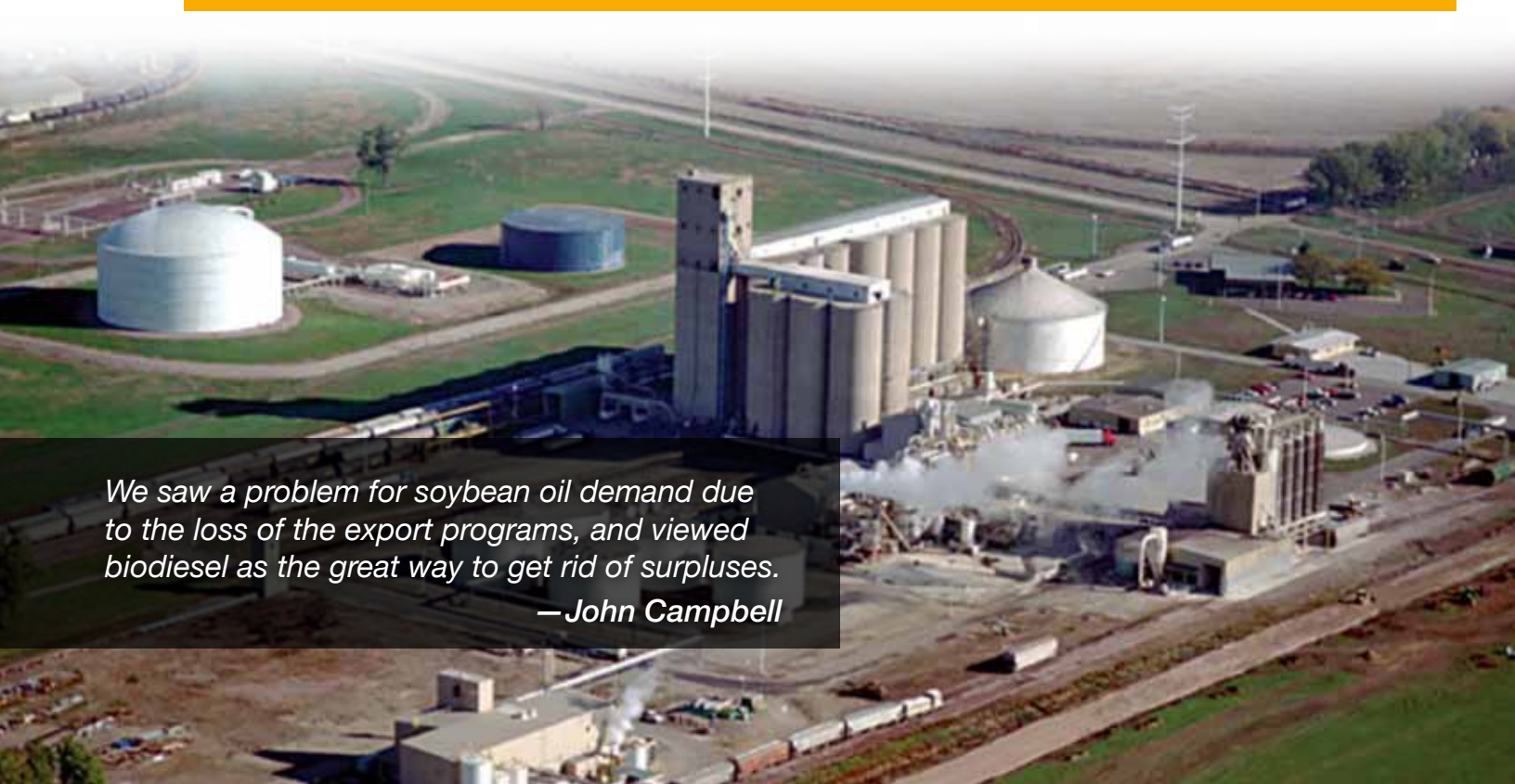


## The Nation's First Biodiesel Plant

Early in the 1990s Ag Processing (AGP) was working with state soybean associations and check-off boards to research and promote biodiesel. The company had been supplying the market for demonstration tests through production it purchased at a Kansas City oleochemical plant, but the plant shut down and AGP was running out of quality oil feedstocks to produce biodiesel. "We knew that if somebody did not step up and build a plant, all of our research and promotion efforts would be wasted," stated AGP Senior Vice President of Renewable Fuels and Government Relations John Campbell. "Our Board of Directors decided that our mission to add value to soybeans was consistent with taking a chance on biodiesel."

As a result, AGP built the nation's first biodiesel plant in Sergeant Bluff, Iowa, and it has been quite successful ever since. Looking to expand and build upon that success, AGP then purchased an idle plant near its Eagle Grove processing facility. "The plant worked logistically in our larger platform," stated Campbell. The AGP Algona plant is the largest biodiesel facility in the state capable of producing 60 million gallons annually.

Campbell said of AGP's success and impact, "I think you will find that wherever AGP operates the communities and the employees benefit. Rural communities are usually in need of good wage and good benefit jobs which we provide. We also increase the local tax base and create a hub of economic opportunity ranging from truck driving to metal fabrication."



*We saw a problem for soybean oil demand due to the loss of the export programs, and viewed biodiesel as the great way to get rid of surpluses.*

*—John Campbell*

# PINE LAKE CORN PROCESSORS LLC

*"Ethanol... We Grow it, We Process it, We Use It!"*

**Pine Lake Corn  
Processors, LLC**

**Location:** Steamboat Rock, Iowa  
**Ethanol Production Capacity:** 30 MMgy  
**Began Operations:** 2005  
**www.pinelakecorn.com**

## New Businesses Emerge out of Necessity and Locality



Pine Lake Corn Processors, an ethanol plant near Steamboat Rock, Iowa, needed an efficient way to get their ethanol and distillers grains to market—so they took matters into their own hands. Pine Lake formed the Iowa River Railroad and purchased abandoned rail lines adjacent to the plant that had been idle for 20 years.

A combination of 42 miles of track was purchased from the Union Pacific and North Central Railroad Authority. Putting this stretch of railroad into operation provides rail service from Ackley to Marshalltown. The Iowa River Railroad is now shared by four other customers, enabling more cost-effective transportation of value-added goods produced in the state. The new rail line has created jobs for central Iowans and infused more investment into the economy.



With one creative partnership under their belt, Pine Lake moved on to another: combining pets and ethanol. Usually distillers grains, the co-product of ethanol processing, is fed to cattle, dairy and other livestock, but a pet food company also recognized its value. Naturally Recycled Proteins LLC (NRP) purchases distillers grains from Pine Lake to include in its line of pet foods that are shipped around the world. In order to have ready access to distillers grains, NRP purchased land from Pine Lake and built an adjacent production facility.



Through innovation and partnerships, Pine Lake is laying the foundation for expanded economic development in rural Iowa that will continue to open new markets.

**Pine Lake Corn Processors revived an abandoned rail line that had been idle for 20 years.**



# Plymouth Energy, LLC

**Location:** Merrill, Iowa

**Ethanol Production Capacity:** 50 MMgy

**Began Operations:** 2009

[www.plymouth-energy.com](http://www.plymouth-energy.com)



**Plymouth  
Energy, LLC**

## Turning an Irishman into an Iowan



Plymouth Energy  
CEO Eamonn Byrne

How does an Irishman become an Iowan? By playing a major role in the renewable fuels industry. A few years back, Ireland native Eamonn Byrne introduced an Irish investor to Plymouth Energy, LLC as the company was building an ethanol plant in Iowa. Byrne was named the Irish investor's representative on Plymouth Energy's board and made his way to Iowa.

"My first impressions were that the people of the Midwest had very similar personalities compared to the people of Ireland, and that there was a vast landscape that looked like some of the best agricultural land in the world," stated Byrne. After three years of dedication to the plant, Eamonn learned he was here to stay as he was named CEO of Plymouth Energy. "I've always been a farm boy, but farm policy in Europe doesn't allow for great growth or expansion. The ethanol industry in America is a true reflection of the 'can do' attitude in America, and the American farmers' ability to respond swiftly to changing environments. It's just great to be part of this experience," noted Byrne.

"At Plymouth Energy, we're doing our bit to aide national security, while at the same time creating sustainable jobs and enhancing the economy of rural America," stated Eamonn.

*The ethanol industry in America is a true reflection of the 'can do' attitude in America, and the American farmers' ability to respond swiftly to changing environments. It's just great to be part of this experience.*

*—Plymouth Energy CEO Eamonn Byrne.*



# Iowa Renewable Fuels Summit

Each year hundreds of individuals from dozens of states gather in Iowa to hear from renewable fuels experts, industry leaders and decision makers as they discuss the future of the renewable fuels industry at IRFA's Iowa Renewable Fuels Summit. This free event is open to the public and it provides participants with the latest and greatest information on the status and future of Iowa's renewable fuels industry.

IRFA Managing Director Lucy Norton said, "It's important to present our side of the story and show the facts regarding the tremendous progress this industry has made since its inception."

At the Summit, IRFA also announces the winner of its annual "Fuel the Future" video contest, which challenges Iowa high school students to create a one-of-a-kind video highlighting the importance of renewable fuels to local communities, Iowa, and the nation. The videos are then judged by a panel of five experts in the film, television, marketing, and renewable fuels industries.

To watch some of the winning videos, go to: <http://www.youtube.com/iowarenewablefuels>

Featured speakers have included: Iowa Governors, former NASCAR Champion Rusty Wallace, retired Military Generals Wesley Clark and Paul J. Kern, industry expert Dr. Gal Luft, former speaker of the U.S. House of Representatives Newt Gingrich, bestselling author Robert Zubrin, and USDA Under Secretary for Rural Development Dallas Tonsager.

*The Summit is Iowa's premier renewable fuels event bringing together industry leaders, decision makers and the general public to shape Iowa's energy future.*

*—IRFA Managing Director Lucy Norton*



Iowa Governor Terry Branstad



Former NASCAR Champion Rust Wallace



IRFA 2012 "Fuel the Future" video contest winner Sam Ennis. To watch his winning video, go to: <http://www.youtube.com/iowaRenewableFuels>



Former Speaker of the House Newt Gingrich

## Southwest Iowa Renewable Energy (SIRE)

**Location:** Council Bluffs, Iowa

**Ethanol Production Capacity:** 125 MMgy

**Began Operations:** 2009

[www.sireethanol.com](http://www.sireethanol.com)



## National Impact, Local Connections



SIRE Plant Manager Dan Wych (left) and CEO Brian Cahill (right)

A 6600-foot steam line extends from MidAmerican Energy to SIRE.

Southwest Iowa Renewable Energy, LLC (SIRE), an ethanol plant near Council Bluffs, Iowa, may ship products all over the United States and around the world, but its local connections are what sets SIRE apart. The plant location was carefully selected to make the most of local advantages, such as the nexus of several different rail lines around the Council Bluffs area.

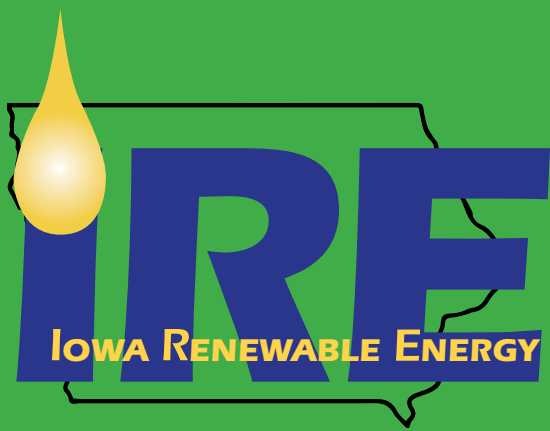
The ethanol plant is also across I-29 from a Bunge soybean processing facility. This provides truckers the opportunity to avoid empty backhauls. For example, a trucker hauling corn to SIRE might pick up a load of soybean meal at Bunge. Or a trucker hauling soybeans into the Bunge facility might pick up distillers grains from SIRE for the return leg of the trip.

However, the most unique local feature of SIRE stems from its location next to MidAmerican Energy's large electricity plant where a 6600-foot steam line extends from MidAmerican Energy to SIRE. Instead of venting the waste steam, MidAmerican can sell it to SIRE and SIRE benefits from not having to generate the steam at its own energy center.

*SIRE's motto is 'Farmers Fueling Our Future' and that's just what we do. SIRE takes over 44 million bushels of corn that used to leave the area with no value added. Now that corn is converted into ethanol, corn oil and distillers grains. But adding value to that corn also adds local jobs, local investment, and local opportunities to work with our neighbors.*

*– SIRE CEO Brian Cahill*





## Iowa Renewable Energy

**Location:** Washington, Iowa

**Biodiesel Production Capacity:** 30 MMgy

**Began Operations:** 2007

[www.irebiodiesel.com](http://www.irebiodiesel.com)

## Adding Value to Soybeans and Lowering Feed Costs

Organized in 2005, Iowa Renewable Energy (IRE), a biodiesel plant near Washington, Iowa, began producing renewable fuel in 2007. IRE has the ability to produce biodiesel from soybean oil and a variety of low-cost feedstocks due to its unique pre-treatment capabilities.

In addition to providing 30 high quality jobs to the Washington community, Iowa Renewable Energy has made a significant economic impact on area soybean growers and livestock producers. "Biodiesel production at IRE has created an important new market for soybean oil, and that demand has added value to Iowa soybeans," said IRE Director John Heisdorffer, who owns and operates a family farm near Keota, Iowa.

Having served as president of the Iowa Soybean Association as well as numerous offices at the National Biodiesel Board, Heisdorffer has been involved with IRE and the biodiesel industry from the very beginning. "I'm proud to see how far IRE and biodiesel have come over the years. A crazy idea by a bunch of soybean farmers in the 1990s has now turned into a billion gallon industry that is creating jobs, boosting local communities, and decreasing our reliance on foreign oil. It's a tremendous success story."



John Heisdorffer IRE Director

*The increased soybean oil demand for biodiesel has increased the production of soybean meal, lowering feed costs up to \$48 per ton for livestock producers.*

*-IRE Director John Heisdorffer*





# Platinum Ethanol, LLC

**Location:** Arthur, Iowa

**Ethanol Production Capacity:** 110 MMgy

**Began Operations:** 2008

**[www.platinumethanol.com](http://www.platinumethanol.com)**

## Getting Iowa's Ethanol Industry Off the Ground

Fagen, Inc. has constructed more than 90 ethanol refineries comprising over 60% of U.S. capacity on-line today.



Ron Fagen

Every industry has an individual or business that is the driving force in its early stages to truly get the endeavor off the ground. For the ethanol business, that individual is Ron Fagen.

As a rural Minnesotan, Ron Fagen didn't see the growing ethanol industry as just a lucrative opportunity for his construction business, he saw the ethanol industry as an answer to stagnant rural economies and foreign oil dependence. Consequently, Fagen often supplied the last bit of investment capital for locally owned ethanol plants and eventually built his own plant, Platinum Ethanol.

Twenty-three out of the 41 ethanol plants operating in Iowa were built by Fagen Inc., including the Ron Fagen-owned Platinum Ethanol plant in Arthur, Iowa. This success makes Fagen Inc. the nation's premier ethanol plant construction company.



# *It's Clean, It's Green... It's E15!*

E15 is the latest ethanol blend to hit Iowa pumps. E15 is a blend of 15% ethanol and 85% gasoline and is EPA approved for all 2001 and newer vehicles, light-duty trucks, SUVs and all flex-fuel vehicles. These vehicles consume more than 80% of all gasoline sold today, creating a potential market for up to 7 billion additional gallons of ethanol nationally. E15 has the same environmental and performance benefits of E10 but it can save motorists even more money at the pump.

In order to receive federal approval, E15 went through the most extensive testing of any fuel on the market. Based on durability, compatibility and performance testing the U.S. Environmental Protection Agency (EPA) found that E15 is a safe, reliable fuel.

As the use of ethanol increases, the price of fuel decreases. According to the Center for Agriculture and Rural Development (CARD) at Iowa State University, Midwest fuel prices would actually be \$1.69 more per gallon today if ethanol wasn't available. So, ethanol use is also extending lowans' household income for other necessities.

*For the entire CARD study, go to: <http://www.card.iastate.edu/publications/dbs/pdf/files/12wp528.pdf>*

*E15 is the most tested fuel in history and EPA approved for 2001 and newer vehicles, light-duty trucks and SUVs.*



Gas prices would be \$1.69 more in the Midwest if ethanol was not available.

# Renewable Fuels in 2022

Renewable fuels have come a long way during the past decade. The increased production and use of ethanol and biodiesel sparked a rural renaissance. Plants were built, good jobs created, and rural income growth outpaced the economy at large.

## **But we are only getting started.**

Ethanol and biodiesel are still relatively young industries. As they achieve scale, more resources are being devoted to improving – or radically altering – the production process and the products being produced. With high oil prices and national security concerns driving demand, it's exciting to think about the state of the renewable fuels industry in 2022.

## **IRFA Staff Looks Forward to 2022**



**IRFA Executive Director Monte Shaw:** *“I think we’re on the cusp of the most dramatic shift in fueling since the removal of lead. National security and environmental policy, CAFE standards and the RFS are dovetailing to create an exciting opportunity for ethanol. Auto companies need small, high-compression engines to achieve efficiency. Those engines, in turn, require high octane fuel. E25 or E30 would make an affordable, available fuel for the next generation of internal combustion engines. In short, ethanol is the fuel economy answer for the next decade.”*



**IRFA Managing Director Lucy Norton:** *“Ethanol made from cellulosic materials will emerge as the next generation feedstock for ethanol production in Iowa. Corn-based ethanol plants will be the likely candidates to initially adopt this new technology as a way of diversifying their production capacity or serving as the foundation for co-located cellulosic ethanol production. As the percentage of ethanol added to gasoline continues to increase, cellulosic ethanol will aid in meeting this new demand.”*



**IRFA Biofuels Manager Grant Menke:** *“In ten years, I can foresee the U.S. biodiesel industry producing 3 billion gallons annually, and Iowa will make up 10 percent of national production. Corn oil and other innovative feedstocks will challenge soybean oil as the most utilized biodiesel feedstock, while the “new normal” for plants will be the ability to process high-free fatty acid oils and fats. B10 will be the standard blend in Iowa, and B20 will be widely adopted in the spring and summer months. Nationwide, B5 will be the base diesel fuel—much like E10 is for gasoline today—and will be transported throughout the U.S. pipeline system.”*



**IRFA Communications Intern T.J. Page:** *“My generation has known nothing except filling their gas tanks with E10. When you combine the conflicts in the Middle-East that have dominated our lifetimes with our interest in new technologies and our commitment to environmental awareness, I see a bright and exciting future for renewable fuels over the next decade. I think the new consumers just now coming of age will not only accept, but will demand cleaner fuels that are produced in America using cutting-edge technology. The world is shrinking and I predict sustainable solutions like ethanol and biodiesel are here to stay.”*

# Words of Praise

## for IRFA's Decade of Progress and Prosperity



**Iowa Governor Terry Branstad:**  
*The Lieutenant Governor and I are strong supporters of renewable fuels. Iowa leads the nation in ethanol and biodiesel... As a leader of this state, we wish you nothing but the best for the future.*



**Senator Tom Harkin (D-Iowa):**  
*Today Iowa is the top biofuels producer in the United States... No question, the lion's share of the credit goes to IRFA which has done a terrific job of integrating and representing the diverse views of Iowa's more than 50 biofuels producers.*



**Iowa Lt. Gov. Kim Reynolds:**  
*Ethanol production supports over 75,000 jobs in Iowa and boosts family income... The industry is doing wonderful things for the state of Iowa, so congratulations Iowa Renewable Fuels Association!*



**Representative Tom Latham (R-Iowa):**  
*The last decade saw incredible leaps in the realm of biorenewables, and the Iowa Renewable Fuels Association was there every step of the way.*



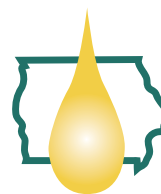
**Iowa Secretary of Agriculture Bill Northey:**  
*We had 440 million gallons of production back in 2002. In 2011, we had 3.7 billion gallons of ethanol production in the state of Iowa. That impact has been huge... so congratulations on a great 10 years and I'm sure a very bright future.*



**Representative Steve King (R-Iowa):**  
*You've done a lot, you've helped our land values, you've helped our resources... The equipment, the vehicles, the homes, the landscape are all better because of the work you've all done. Congratulations, let's go for another 10 years.*



**Representative Leonard Boswell (D-Iowa):**  
*It has truly been a great decade of progress and prosperity for renewable fuels. Over the last 10 years, we've seen renewable fuels production sky rocket, as we turn to safer, more secure and domestically produced sources of energy... I want to congratulate the Iowa Renewable Fuels Association, it's members and staff, as we celebrate its 10 year anniversary.*



**Iowa Renewable Fuels Association**

**Watch videos of these leaders congratulating the IRFA on its 10th Anniversary by visiting: <http://www.youtube.com/iowarenewablefuels>**



5505 NW 88th Street #100 | Johnston, Iowa 50131-2948 | Telephone : (515) 252-6249 | [www.IowaRFA.org/](http://www.IowaRFA.org/)

 [www.facebook.com/pages/Iowa-Renewable-Fuels-Association](https://www.facebook.com/pages/Iowa-Renewable-Fuels-Association) |  [@iowafuel](https://twitter.com/iowafuel) |  [www.youtube.com/iowarenewablefuels](https://www.youtube.com/iowarenewablefuels)