Fueling the Future

Reality Mixes With Hope in BioTown

By Candace Gwaltney

It's an unseasonably cold April day in Reynolds, and the coffee is flowing freely at the USA Family Restaurant.

For people across the country who read about this one-stoplight town in *The New York Times* or *The Wall Street Journal*, Reynolds is better known as BioTown. For the men gathered for some fried eggs and java, it's home.

And they say little has changed since Gov. Mitch Daniels came to town in fall 2005 (an event still talked about) to announce plans to make this small farming community into an energy self-sufficient town of the future independent from foreign fuel sources. The vision set three years ago called for transforming biomass from farms into energy. Problems securing private funding delayed construction and plans were pared down.

Reynolds, located in White County, began its quest to become the model of energy efficiency in 2005 when Gov. Mitch Daniels declared it BioTown, USA.

Some Reynolds residents lost hope, others grasped onto "cautious optimism" and others around town back in April weren't even aware the BioTown movement was, well, still moving. Media reports earlier in the year portrayed the efforts as a pipe dream.

Now a new timeline is in place and officials say BioTown may soon become a reality.

What is BioTown?

A driving force for BioTown "is showing the state of Indiana that you can take innovative technologies and have a dramatic impact on small towns and rural communities," explains Andy Miller, Indiana State Department of Agriculture director. This isn't just about Reynolds producing renewable energy – it's about the future of the whole state, he adds.

In all, the BioTown project would have three phases:

- Phase one – Educate residents on alternative fuel, install an E85 (85% ethanol, 15% gasoline) fuel station and offer flex-fuel vehicles to residents and town operations
- Phase two – Research, develop and implement plans to convert agricultural and municipal waste into electricity
- Phase three – Produce biodiesel from renewable sources (in conjunction with phase two)

Nearly three years later, phase one is complete (finished in 2006) and phase two is being pursued.

Months after the initiative began, Lt. Gov. Becky Skillman announced a random drawing that awarded 20 residents the use of a two-year lease on a General Motors flex-fuel vehicle. GM awarded incentives to purchase a flex-fuel car or truck to anyone living in the Reynolds zip code.

The town's only gas station added an E85 fuel pump in 2006 to accommodate the influx of flex-fuel vehicles.

"A lot of residents took advantage of that," notes John Heimlich, BioTown Development Authority president. "I know at one time (there were) 170 flex-fuel vehicles in the 47980 zip code. I'm pretty sure it would be the highest per capita in the country in flex-fuel vehicles."

With a population of 1,130 for that zip code (Reynolds population: 521 in 2006) according to the U.S. Census Bureau's latest survey, that means an estimated 15% of residents in this rural community drive a flex-fuel vehicle. Phase one was completed in September 2006 when the town's only gas station opened an E85 fuel pump.

The longer process to achieve phase two is what frustrated and confused some residents. At a March 2007 groundbreaking attended by the governor, officials declared the technology that would convert waste to electricity would be operational by the end of the year.

Diners at Reynolds's USA Family Restaurant expressed disappointment (in April) with BioTown's slow progress, noting little has changed in the small community.

Construction has yet to begin (as of *BizVoice*® press time).

Once, BioTown was the talk of the town. B.J. Spry, a local plumber and lifelong Reynolds resident, recalls all the big plans that people discussed. They talked about building a motel and an airport because all of the dignitaries visiting would need easy access and a place to stay.

"They compared it to – and I'll never forget this – they compared it to Silicon Valley," Spry recalls of a presentation he attended.

"It's pretty frustrating at this point," he said in April while finishing breakfast at the local diner. "I never could believe all of it." Spry thinks finding renewable energy sources is important, but after all the delays with BioTown he is taking the "seeing is believing" attitude.

Resident Gary Dedaker says he is "still cautiously optimistic" about BioTown. He isn't as excited as he was two years ago, but admits he hasn't attended recent meetings about the project and its progress. He wants to know the plans to take BioTown through the proposed phase three and how everything will be funded.

Dedaker, who owns an insurance agency in Reynolds, says the only visible change in town so far is the updated gas station and the E85 pump. He hopes BioTown accomplishes more, noting the bigger issue: "We've got to get away from our dependency on foreign oil."

Originally BioTown contracted with Rose Energy Discovery Inc. to install technology to produce renewable energy from biomass, but the company dropped out last year.

Energy Systems Group (ESG) joined the project in early 2007 and construction on the digester should begin in July, says Jim Groeschl, ESG project engineer. The digester will convert manure into energy, and the site will be developed to allow for future expansions to the system.

ESG has put forth financial commitments that the state never saw before (with Rose Energy), notes Cary Aubrey, Indiana State Department of Agriculture program manager. Everyone is more comfortable with ESG and the project is closer than ever to completion, he said during a BioTown Development Authority meeting in April. The authority consists of state and local representatives and guides BioTown decisions.

As of late May, ESG was applying to rezone the land from agricultural to industrial use. The "aggressive schedule" should have the digester operational by the end of the year, Groeschl notes.

BioTown Ag (formed by a White County farmer) has an agreement with ESG to provide the manure to feed into the digester. The manure will initially come from one local farming operation, but discussions are ongoing to secure other sites, Groeschl says.

Once the digester is operational, the energy produced will return to the power grid, he says. Originally BioTown's plan was for the town to produce its own energy so it could be removed from the power grid, but the infrastructure would have been too expensive.

Virtue of partnerships

Leading the way isn't always easy. That's one of the lessons learned from BioTown efforts.

In the last three years, officials have learned "the potential (for renewable energy) is unbelievable," Miller states. Considering all potential energy sources available in Reynolds, the town has 75 times more energy than it can use.

"The second thing we learned is that getting from that potential energy to realized energy is very, very challenging," he expresses. "Probably more challenging than any of us would have thought."

Miller notes that Gov. Daniels emphasized that if Indiana is going to tackle energy solutions, it needs to be through public-private partnerships. "That's how you make sure it's sustainable.

"The state was clear that while we needed to put in some resources to catalyze this and get over the humps, we wanted this to be an example that private industry in partnership with communities can come in and make these initiatives happen. (These companies) bear a lot of the financial risks, but also bear a lot of the financial reward when it does come to fruition."

Groeschl said he could not provide the specific cost of the digester, but confirmed it will be in the $10 million price range. According to the ag department, $596,862 in state and federal grants have helped fund the project. The Reynolds gas station also received a pump credit for adding E85, but that credit is not unique to BioTown, Miller explains.

Project lures ethanol plant

Dozens of companies have called Connie Neininger, director of White County Economic Development, inquiring about how they can become a part of BioTown. So far nothing concrete

BioTown efforts attracted VeraSun Energy to build an ethanol plant in Reynolds. The company suspended construction in 2007, but plans to resume this year.

Business owner Christine Dahlenburg uses a corn-burning furnace to heat her photography studio located on the central street in Reynolds.

From the Fields to the Furnace

Finding renewable sources of energy makes sense to one Reynolds resident who decided to take matters into his own hands for his family. Farmer Chad Dahlenburg turned to his most plentiful resource: corn.

Dahlenburg owns and operates six corn furnaces in the Reynolds area, mostly in the homes of family members. He had researched the furnaces prior to the BioTown announcement, but decided to pursue purchasing the corn-burning heating systems because it made sense with the BioTown efforts.

Christine Dahlenburg (Chad's sister) received the first furnace to heat her downtown Reynolds photography studio. With free corn from her family members' farms, her heating bill dropped from $500 a month to $30.

With rising corn prices the furnace may not make sense for everyone, but it provides more than a financial benefit for the Dahlenburg family.

"It makes you feel a little better to be burning renewable (resources) than putting money in oil companies," Chad Dahlenburg shares.

The corn furnaces and BioTown's purpose go hand in hand, he notes. Many people got pumped up when the plans were announced and he wishes the state had grabbed that momentum to keep more people involved.

If more people take actions themselves – such as changing to renewable energy at home – the accomplishments will be greater. That's what really could change Reynolds, Chad Dahlenburg concludes.

Corn feeds from a large vat into the furnace to produce heat.

has materialized (Neininger says some companies indicated they would wait until the new energy systems are in place) except for a major ethanol producer.

VeraSun Energy began construction in April 2007 on a plant capable of producing 110 million gallons of ethanol per year. Work on the plant ceased in October "due to market conditions," but construction is expected to resume in 2008, according to the company's web site. The project remains suspended as the company continues to monitor market conditions, say Mike Lockrem, company spokesman.

Due to the company's line of work, some residents confuse this project with BioTown and think it is directly associated, Neininger notes. Instead, BioTown's mission drew the company to locate in the town, Lockrem relates.

The company's web site states: "VeraSun's mission aligns with the purpose of BioTown to create a model community that is energy self-sufficient, while the Reynolds location was selected for its abundant corn supply, access to transportation and utilities, and community workforce."

Plans call for the plant to employ 60 skilled workers with production running 24 hours a day, seven days a week. VeraSun has had a lot of success hiring people locally, Lockrem says. He notes 90% or more of the employees at the Charles City, Iowa plant were hired from the nearby area.

As industries look to move to Reynolds and White County, local leaders want to ensure residents are prepared for job opportunities. North central Indiana (14 counties, including White) received a $15 million U.S. Department of Labor WIRED (Workforce Innovation in Regional Economic Development) grant in 2006. Some of those funds are earmarked for "looking at the workforce needs with the alternative energy industry," Neininger shares.

An education destination

BioTown has increased the awareness of clean energy among Reynolds and White County residents, Neininger notes. The BioTown Development Authority (Neininger is a member) hopes to transfer that knowledge to a broader audience through an education center focusing on alternative energy.

Plans are being developed for a temporary center and then a permanent facility that would host tourists, school outings and university groups, she explains.

Last year an Indiana State Museum exhibit detailed the BioTown project and progress as well as Indiana's bioenergy industry. That display will be moved to the Reynolds facility. State grant money awarded to the BioTown Development Authority will help fund the visitor center.

INFORMATION LINK

Resources: Indiana State Department of Agriculture at (317) 232-8770 or www.in.gov/isda

BioTown USA at www.in.gov/biotownusa

Connie Neininger, White County Economic Development, at (574) 583-6557 or www.whitecountyin.org

Energy Systems Group at www.energysystemsgroup.com

VeraSun Energy at www.verasun.com