

# GCX<sup>®</sup>

**GLOBAL CORPORATE EXPANSION**

## RENEWABLE ENERGY

LEARN THE LATEST IN REGARD TO:

- BIOENERGY
- SOLAR ENERGY
- WIND ENERGY



The GCX website has a new look!  
[www.GCXmag.com](http://www.GCXmag.com)

### ALSO INSIDE:

**COMPOSITE MATERIALS INDUSTRY TURNS THE TIDE**

**COLLABORATION WITH COMMUNITIES HELPS FOOD PROCESSORS FLOURISH**

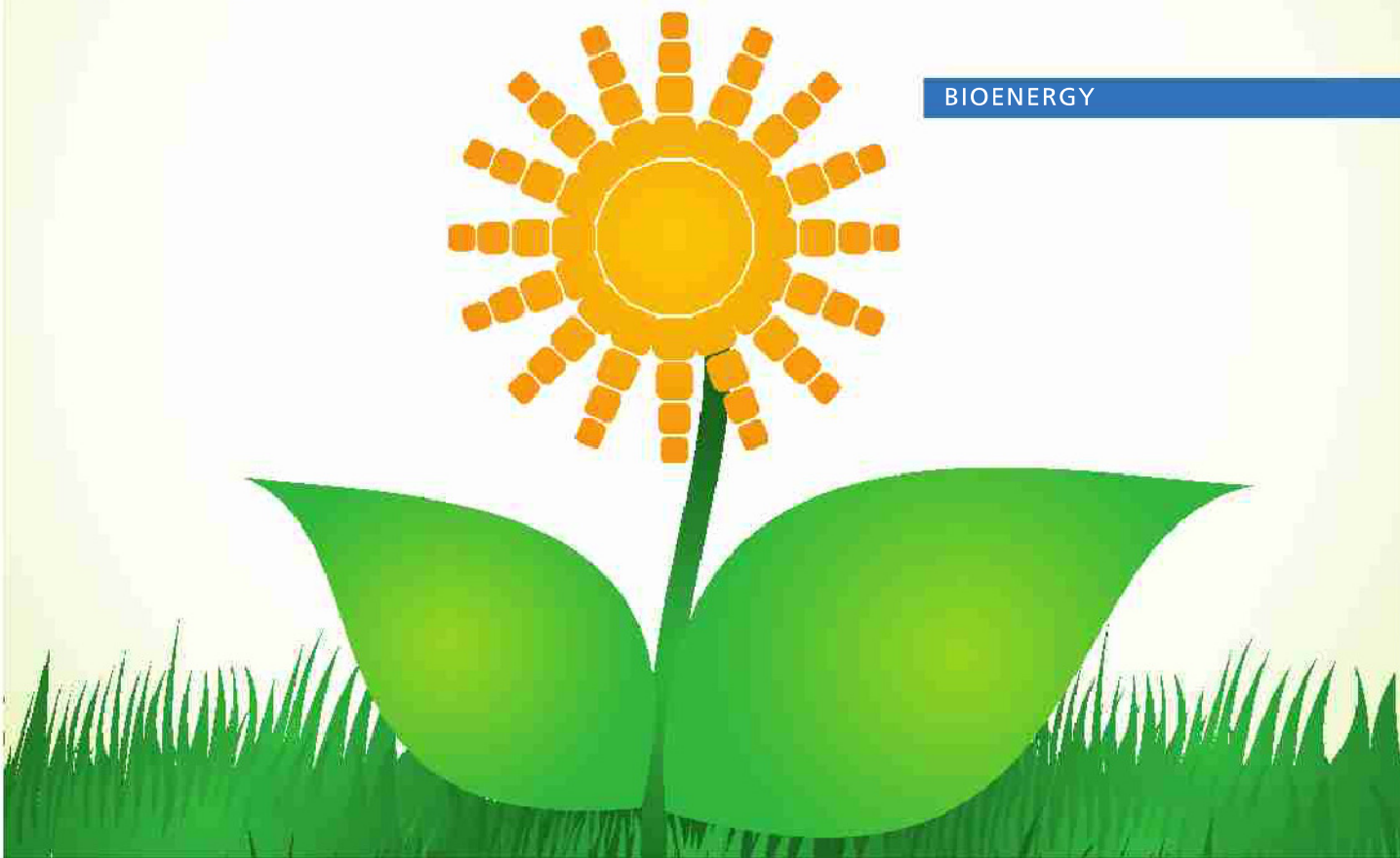


**REGIONAL PROFILES:**

U.S. SOUTHEAST

CANADA'S ATLANTIC PROVINCES

ANNUAL FOCUS 2012



## BIOMASS: GETTING READY FOR GROWTH

Biomass industry sees slower but meaningful growth, with larger projects coming on line.

By Mark Kleszczewski

Even in a global and national economy marked by lower demand, the need for secure, cost-effective sources of energy continues unabated. Fossil fuels still reign supreme, but increasing emphasis on renewable energy sources and reduction of carbon emissions has resulted in the growing use of biomass and its liquid counterpart, biofuels.

Although regulatory hurdles and relatively low natural gas prices continue to affect the domestic market, demand for renewable energy is opening up new niche opportunities in biomass for communities offering the right mix of infrastructure and access to raw materials.

### Becoming a Big Business

According to the Biomass Power Association, biomass power is now a \$1 billion industry with 80 facilities in 20

states. The Union of Concerned Scientists recently projected that 680 million tons of biomass resources could be made available in a sustainable manner by 2030, enough to produce more than 54 billion gallons of ethanol by 2030 (four times as much corn ethanol as the United States produced in 2010) or 732 billion kilowatt-hours of electricity (19 percent of total U.S. power consumption in 2010).

On the demand side for biofuels, Hart Energy's newly released study, *Global Biofuels Outlook to 2025*, projects total market demand to grow by 23 percent from 2015 to 2020, and by 16 percent from 2020 to 2025. However, a key question is whether supply, given current challenges to feedstocks and capital availability, will meet these requirements.

Another challenge faced by the industry stems from the

current dynamics of the domestic U.S. energy market.

“Historically low natural gas prices are affecting all renewable technologies, including ours, and that’s clearly dampening the plans of developers who are struggling to find long-term power purchase agreements with off-takers like utilities,” says Bob Cleaves, president and CEO, Biomass Power Association. “Yet there are niche opportunities still available and a lot of development activity is moving forward. Indeed, the largest projects in the history of the industry have come on line in the last 12 to 24 months. We’re seeing slower, but meaningful, growth that we think that will continue into 2013.”

Among the states especially active in the sector today, Cleaves points to California, areas of the Pacific Northwest like Washington and Oregon, and states in the Southeast — with Georgia, Florida, North Carolina and South Carolina leading the way.

One of the growing industry specialists that call the Southeast home is Enviva LP, one of the largest manufacturers of processed biomass fuel in the form of 100 percent wood pellets in the United States and Europe. With U.S. manufacturing facilities and partner facilities in Mississippi, North Carolina and Virginia, the company has several projects currently underway aimed at taking advantage of emerging industry opportunities.

Last year Enviva announced the launch of a new, 500,000-metric-ton-capacity plant in Southampton County, Va., where pellets will be manufactured and procured locally using existing supply chains. The

plant’s output will be transported by truck to Enviva’s port in Chesapeake, Va., for export to European utilities.

The company has also begun building a 400,000-metric-ton wood pellet manufacturing facility in Northampton County, N.C. Supported by grants from the state’s One North Carolina Fund, this will be Enviva’s second wood pellet facility in the state and will bring 62 jobs to the area. When completed, it will bring Enviva’s production in North Carolina to more than 750,000 metric tons per year. Both facilities are expected to become operational during 2013.

“Biomass is a new industry — for all intents and purposes — from an industrial scale point of view,” says Elizabeth Woodworth, director of marketing and communications, Enviva LP. “So we’re building up expertise and growing very rapidly as we build these pellet manufacturing facilities to help supply some of the European demand for wood-based bioenergy.”

“What you’ll find common throughout the Southeast for all large-scale pellet manufacturers is several things, including close proximity to strong, sustainable commercial forests that have historically facilitated the pulp and paper, furniture and sawmill industries. Equally as important is proximity to a large, industrial-scale export port,” she continues.

“In terms of logistics and from a carbon standpoint, we have to find efficiencies from the forests all the way to when the pellets go onto our ship. Whether it’s rail, barge or highway, firm infrastructure for the transportation

## NORTH FLORIDA: PRIME SPOT FOR BIOFUELS COMPANIES

Fourteen counties in the north central region of Florida are letting the world know they are well positioned to serve biofuels-related companies. A combination of vast, available agricultural land to grow vegetation used in biofuels development; timber resources and their byproducts; and ideal transportation access, create opportunities for success.

In addition to service by interstates 10 and 5, and CSX Railway and shortline rail carriers in the area, the Port of Jacksonville is located in a range of 40 miles to 70 miles from the region.

The north central Florida region features a density of timberland, particularly pine trees, to support the needs of biofuels firms. “We have had a number of companies inquiring about the byproduct,” says Jeff Hendry, executive director, North Florida Economic Development Partnership. “If you were to look at processing that timber, the offshoots are wood pellet companies, and we have had a number of international companies inquire about our timber industry.”

European firms, for instance, are attracted to the abundance of timber resources they can find in the United States. Hendry says companies tell the partnership’s officials that the regulatory structure in Europe is time consuming, and that planting and harvesting ratios, as well as the amount of timber that is available on a rotating basis is not meeting demand.

And meeting industry demand is an area where the North Florida Economic Development Partnership thrives. “The partnership has gone a long way in educating our local governments with regard to how critical it is for a company to get to market,” Hendry says. “The permitting process is one area of focus.”

What’s more, the state of Florida has begun expediting its permit processes, such as with emissions permits, says Allen Cherry, chair, North Florida Economic Development Partnership. “In Madison County, we can permit a company, outside of the state regulations, in a month,” Cherry says.

What’s more, when an international company, which is in the negotiation stage, began researching one county’s timber industry, at the end of the day, one component that pushed Florida ahead of four other states was the ability to award the state’s air quality permit first.

.....  
*For complete details, visit the partnership at [www.nfedp.com](http://www.nfedp.com).*



of the product and ample storage and handling facilities at a port are musts,” Woodworth says.

Elsewhere in the Southeast, a new expansion project is underway in South Carolina where LowCountry Biomass LLC, a recycler of wood residues, recently announced plans to expand its existing wood pellet manufacturing operations in Jasper County. The \$16 million investment, expected to generate at least 26 new jobs, is slated to ramp up throughout 2014 and then reach full capacity by the end of that year.

The company, which recently took over the operations of Champion Wood Pellets, a manufacturer of wood pellets used in home heating fuel, alternative industrial energy and equine bedding, is currently operating the pellet manufacturing facility and is in the process of increasing the production capacity at the plant to 200,000 metric tons per year.

“It was a market-driven decision for us since utilities are adapting their business plans and starting to burn pellets, which means allocating funds to continue to expand that fuel base,” says Rhett Harwell, vice president, LowCountry Biomass. “We felt that the export market had expanded and matured over the last few years, especially to the UK, which is going to have a real sharp increase in demand over the next 48 months.”

“There’s proximity to the port here and a fiber basket that’s fairly well-proven,” Harwell says. “There’s a lot of timber in this area that’s currently being harvested and a lot of existing assets on the ground and in the forest

used to source biomass.” Harwell also cites the supportive environment, skilled workforce, and very enthusiastic host community as major considerations behind the successful acquisition.

Activity in the sector is certainly not limited to the Southeast. Some communities are finding that their existing assets are an excellent potential fit for the maturing bioenergy industry.

For example, the 18-county “New North” region of Wisconsin has most of the needed pre-conditions to support the emerging biofuels energy sector. A large supply of potential feedstocks (manure, wood, food waste, sewage sludge, etc.), the engineering and manufacturing capacity to build out a supply chain and a supportive infrastructure can form the foundation for new business formation and industry investment. The region’s two best growth options under favorable financial conditions are seen as biogas-to-electricity from organic waste and cellulosic ethanol from woody biomass (trees and crops).

“Within this part of the country, we have a strong legacy of paper-making and food production, especially dairy, so we have this great affinity for two unique feedstocks suitable for energy generation — wood fiber and food production waste,” says Jerry Murphy, executive director, The New North Inc. “The wood harvesting industry is very vital, since there’s a lot of waste wood and residual logging material available as a low-cost, almost ‘waste-cost’ fuel.”

Murphy points to a shuttered paper mill in Niagara — built to manage a large industrial complex, and featuring

# 446 ACRE INDUSTRIAL SITE



- Dual-Feed Electric Power
- Cumberland River Access
- Clean-Air Attainment
- Warehousing Space
- Business/Manufacturing Incubator Facility



**FOUR LAKE AUTHORITY**  
**615-374-4607**

P.O. Box 464  
702 McMurry Blvd.  
Hartsville, TN 37074  
(Nashville’s Neighbor)  
[www.fourlake.org](http://www.fourlake.org)

a hydro-generating facility on an adjacent river — as a project with the potential for being repurposed toward wood-fired electrical generation.

Positioning legacy assets in new ways, Murphy suggests, is also the driving force behind the idea of co-locating a biomass generator with a data center. “There is a market preference — driven by consumer preference for companies with a ‘green’ culture — for new data center development to align itself with green power,” he says. To support the effort, the region offers over 20 prequalified data center sites featuring low ambient temperatures, low risk of natural disasters, reliable power sources to ensure maximum uptime, numerous telecom providers ensuring carrier neutrality and an affordable and highly trained technical workforce.

Although the results of the election and the future direction of overall economy remain unclear, it seems certain that biomass and biofuels will have staying power in the years ahead as one of several renewable energy choices.

“Although there will continue to be uncertainties in the near-term, I think the country is going to place greater emphasis on having a diverse energy portfolio. While natural gas prices are down right now, they’re going to creep upward as greater and greater demands are placed on that resource, especially as it becomes exportable,” Cleaves says.

“The other big trend we see is that as the country continues to experience droughts and very dry conditions in the West, in particular with forests that are not adequately managed, the role of biomass is going to take on a lot more importance,” he notes.

“To manage the carbon footprint of our society, we have to find solutions that include lots of different forms of renewable energy,” Woodworth says. “You’ll never hear me utter the words that biomass or pellets are the only way to go, but I think they are definitely a piece of the puzzle.” ■

.....  
*Mark Kleszczewski is president and CEO of GoBusiness Group LLC and a freelance writer on critical business topics. He can be reached at [mark@gobusinessgroup.net](mailto:mark@gobusinessgroup.net).*

**FOR COMPLETE DETAILS ABOUT THE ORGANIZATIONS FEATURED IN THIS ARTICLE, VISIT:**

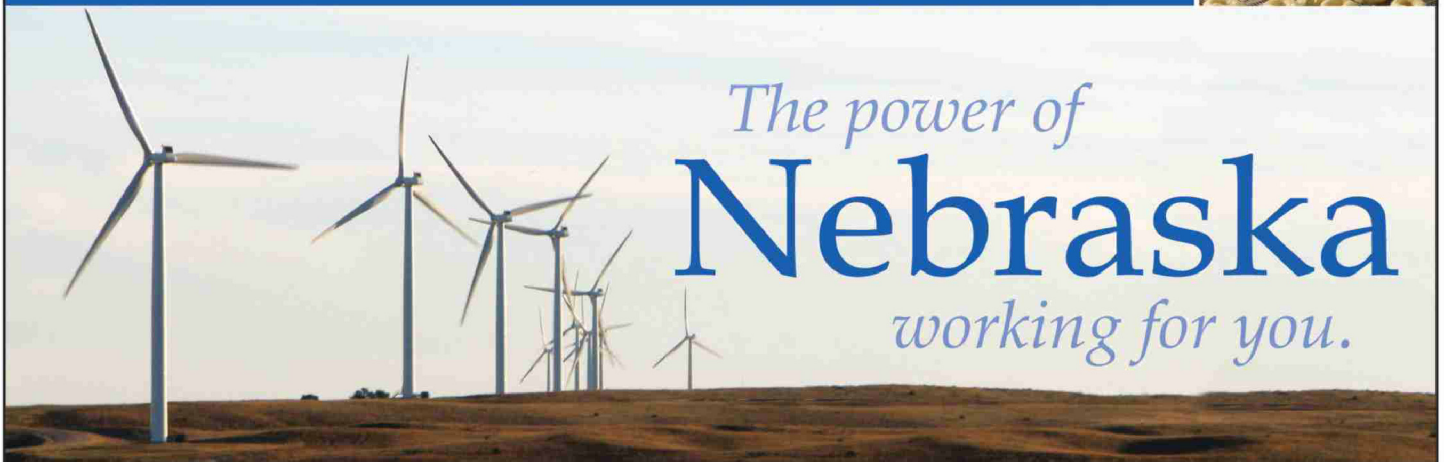
Biomass Power Association  
[www.biomasspowerassociation.com](http://www.biomasspowerassociation.com)

Enviva LP  
[www.envivabiomass.com](http://www.envivabiomass.com)

New North Inc.  
[www.thenewnorth.com](http://www.thenewnorth.com)



Global market access. Excellent labor force. Centralized transportation routes. Low energy costs. Thousands of businesses have already discovered what makes Nebraska a place of unequalled potential. There's ample opportunity for you, too. Consider this your personal invitation to enjoy everything that makes business in Nebraska great.



The power of  
**Nebraska**  
working for you.

G133605

800.282.6773, ext. 5534 | [econdev@nppd.com](mailto:econdev@nppd.com)

 **Sites.nppd.com**  
NEBRASKA PUBLIC POWER DISTRICT