

Fired up for Jobs

Wood scraps go up in smoke to create electricity, money for county

By Larry Clark

New Jobs can be built from old wood.

That's what Catawba County and a host of supporters think about the county's EcoComplex at the Blackburn Landfill.

The county already is producing electricity from landfill gas. The next step is to build a bio-energy system that will burn wood waste to make more electricity and thermal energy.

County Commissioners earlier this week gave the go-ahead to develop a bio-energy system that is expected to be up and running by the fall of 2012.

The projected cost is \$20.7 million. Over the 20 years of the loan needed to build the system, the county estimates a net profit of more the \$4.4 million.

The Commissioners' vote came at Catawba Valley Community College where university officials and faculty, a UNC Board of Governors member, industry representatives and county staff discussed the value of the EcoComplex and bio-energy facility.

The technology is amazing and the profits tantalizing, but the project was put into focus by Scott Millar, president of the Catawba County Economic Development Corp.

"The ability to generate green energy will put the county at a competitive advantage," he said about the EDC's efforts to recruit new industry.

"Green power is attractive to many businesses. One hundred percent green power in significant volume will get us a lot of looks from companies whose goal is to be environmentally sensitive."

Millar said he could approach another data center about locating in Catawba County.

And green energy is not subject to the carbon tax imposed on fossil fuels, another plus for many commercial interest.

There are several private companies at the EcoComplex now. The partnership of government, private enterprise and universities has created more than 150 jobs and \$30 million in taxable investments, according to information from Catawba County.

The EcoComplex was built without appropriating tax money, said Commission Chairwoman Kitty Barnes.

Several funding sources were used, including federal and state grants.

The county has been selling electricity produced at the landfill for several years. It was one of the first counties in the nation to convert the gas that occurs naturally in landfills to electrical energy.

The county produces 2.5 megawatts per hour. The bio-energy system will increase that output to about 5 megawatts per hour. A megawatt is 1 million watts.

So far, the county has sold about 140 million kilowatts of power to Duke Energy and other customers. That's enough power to run 1,400 homes continuously for 10 years.

Sales have produced more than \$5.75 million in revenue. The initial investment was \$3.2 million.

Doubling the output capability by burning scrap wood, leftover construction wood and virtually anything that's considered biomass – stuff like vegetation, wood products and yard waste – means more revenue from the out-set.

The carbon dioxide produced from combustion can be captured and used in agriculture. Making wood a resource instead of trash will save landfill space, enhance the county's recycling ability and cut dumping fees.

ASU, UNCC, CVCC, and N.C. A&T University officials are ecstatic about the possibilities for research and development of green initiatives.

An example is UNCC student Richard Giles, a Ph.D. candidate. He's working on using ordinary "stump fungus" as a way to make the preparation of wood for power generation more efficient.

"The education setup in Catawba County is a model for the state," said Hickory business leader Leroy Lail, a member of the UNC Board of Governors.

Development of green energy and the applications at the EcoComplex is a demand-driven initiative, he said.

Being actively engaged in economic diversity is a key to the future, Lail said.

He noted that a goal of the university system is to prepare students for new careers sprouting from green technology and business.

Barry Edwards, the county's utilities and engineering director, is the mastermind of the EcoComplex. He brought together all the partners to create the plant and secure the bio-energy expansion.

He's overseeing plans to incorporate biomass, synthetics and wastewater sludge to make energy, plus animal, agricultural and food waste, manure, grease, mixed paper and even algae.

"There's no limit to the possibilities," Edwards said.

Technicalities

The mechanics of the bio-energy system are fascinating. Nexterra of Canada will build the gasification system and General Electric will supply a Jenbacher power generator.

The system will be first installation of its kind in the United States.

To learn more, go to:

- www.nexterra.ca/technology/index.cfm
- www.gepower.com/prod_serv/products/ recip_engines/en/index.htm