

Waste Not, Want Not

County's unique idea means jobs, energy at landfill

By Andrew Mackie

Green is more than a buzzword at Catawba County's Eco-complex.

The operation includes a range of businesses and public facilities near the Blackburn Landfill that embody the environmentally friendly concept.

The advantages from the relationships are many – jobs and energy savings, as well as being good for the environment.

A handful of businesses have located operations near the landfill to capitalize on the concept. Waste products from the businesses will eventually be converted into energy to operate the landfill and partner businesses and create educational research facilities and a new sludge plant.

In essence, it's taking the concept of turning trash into treasure to a new level.

"It's sort of like it's alive", said Barry Edwards, Catawba County director of utilities and engineering, who oversees the project.

While still in its infancy, the complex's successes have already garnered national attention. It earned the county the 2007 Thomas Mulenbeck Award for Excellence from the Alliance for Innovation. The award is presented for outstanding achievement to one local government in the nation.

Edwards and other officials confidently say the Eco-Complex appears to be the most developed operation of its kind in the nation.

"There are companies that contact us and say, 'We want to be a part of that,'" Edwards said.

A few facts about the complex:

- Methane extracted from Blackburn Landfill powers three large generators to create electricity and as heat to dry a future bio-solids operation.
- Gregory Wood Products has operated there since 2005 with a \$24 million investment. The company, which employs 93 people, buys more than 5,000 tons of logs each week, adding about \$10 million a year to the local economy.
- Pallet One, another wood-related company, is slated to open at the complex this year. The company will use the wood waste from Gregory's operations and turn it into wood pallets.
- Sawdust and ground wood particle waste will be used in the Bio-Energy Facility to generate steam and heat energy used in the company's wood drying kilns.
- Catawba County is finalizing a contract with Appalachian State University to locate a biodiesel research facility at the complex. Research will include testing biodiesel produced by several companies in the region, along with growing test crops.

- An organic waste management facility would be part of the Bio-Solids Processing Facility. Construction is delayed until the need to share relationships at the EcoComplex.

It's been 10 years since the complex's conception and officials say they're now looking forward to seeing the operation move to the next level.

"We're at the cusp of having everything come together," said Jack Chandler, Catawba County's public services administrator.

A Bio-Energy Steam Plant is slated for a late fall, early winter 2009 opening. The sludge facility is projected for a 2010 completion.

Long-term plans call for a biodiesel facility, which also will remove Freon from the waste.

Eventually, the biodiesel should support the landfill's daily operations.

And officials fully expect other companies and advantages to emerge. Edwards predicts the operation will continue to evolve during the next five to 10 years.

"Some of it is our own doing from realizing it's a good fit for this complex," he said.

KEY PARTNERS IN ECO-COMPLEX OPERATION

Existing:

- The Blackburn Landfill
- The Blackburn Landfill Gas to Energy Plant
 - Processes about 600 tons of waste daily.
- Gregory Wood Products (Lumber manufacturing)
 - Employs 93 people
- Pallet One, Inc. (Pallet manufacturing)
 - Employs 35 people

Components in design phase:

- The Bio-Energy Plant (Wood burning; electricity, steam and heat production)
 - Produced electricity since Nov. 1999. As of Jan. 2007, produced 112,000 megawatts and sales of \$3.5 million.
- New sludge management plant
- Appalachian State University Biodiesel Research Facility
- Composting/Soils Amendment
- Brick Specialties Company
- Greenhouses