

Catawba County, UNC-Charlotte will partner on research

By Lee Barnes

Catawba County has a new partner in its efforts for reduce waste and recycle more at its landfill.

Tuesday night, the University of North Carolina at Charlotte signed on to partner with the county at the EcoComplex, an industrial park at the county landfill.

The two parties signed a “memorandum of understanding”, an agreement without, as a rule, the binding nature of a contract.

The trust of the agreement is to conduct research on new technologies to generate energy, reduce landfill operating costs and waste volume and improve waste processing.

The complex already includes a gas-to-energy facility that generates more than \$650,000 in revenue annually. The county also has public-private partnerships at the complex with Gregory Wood Products, as well as pallet recycling company.

Already on the table at the complex are such proposals as:

- An organic waste facility to process food, grease and agricultural waste.
- A compost and soil processing facility, with a goal of producing retail-grade bagged soil.
- A greenhouse operation.
- A brick and pottery manufacturing center.
- A facility recycling glass and ceramics
- A facility to convert shredded plastic into marketable plastic pellets.

Among the projects the county and the university plan to focus on are commercial uses for algae and production of wood ethanol.

“One man’s trash is another man’s treasure” may be a tired cliché, but it fits the concept behind the Catawba County EcoComplex and Resource Recovery Facility. The award-winning venture, which earned the county national notoriety via a televised feature that aired August 1-2 on CNN’s “Your Money” program, was the subject of an Aug. 27 tour during the 102nd Annual Conference.

While the EcoComplex is centered around the Blackburn Landfill, which opened in 1989, the park’s focus is waste management. By feeding off each other’s waste streams, partners save money. Barry Edwards, director of the county’s Utilities & Engineering Department, deemed the process “industrial ecology.”

“We’re building a system that ties things together,” Edwards explained. “It happens on its own.”

The EcoComplex includes three landfill gas-to-electricity generators that burn methane produced at the landfill and can generate enough electricity to power roughly 1,400 average sized homes. The county sells the electricity to Duke Energy but retains the credit for producing clean energy, allowing the county to sell those renewable energy credits and boost revenue.

The county is currently growing canola and sunflowers at the EcoComplex in partnership with Appalachian State University and is working to create a center for biodiesel research and production. The county has also entered into a research partnership with UNC Charlotte to study how algae can be used in seed mills to boost biofuel production.

Other partners include Gregory Wood Products, a lumber facility employing 115 people, and Pallet One, Inc., the nation's largest new pallet manufacturer. Gregory produces sawdust, wood shavings, bark, and other wood wastes, and Pallet One uses wood slats from Gregory as raw material for the construction of pallets. The two plants are located next to each other, generating substantial savings for Pallet One since it doesn't have to transport raw materials to its facility. The county will use wood waste from both companies, as well as county-produced bio-materials, to fuel a wood-fired gasifier and steam production plant expected to produce 3 megawatt hours of electricity and 15,000 pounds of steam per hour. The Bio-Energy Facility has yet to be built and is considered an "impending component" to the complex.

Other "impending components" include a biosolids (sludge) processing facility that will have the capacity to serve the county's wastewater sludge management needs for the next 20 years, and kiln space for local potters in a brick specialties company that has verbally agreed to locate in the EcoComplex.

"We've got things married together that work," Edwards said. "If it works together, they are placed together."

The county continues to explore potential green initiatives, including planting a type of grass atop landfill topsoil that could be used to produce biofuel. Edwards said the county is talking with state officials to obtain permission for such a project.