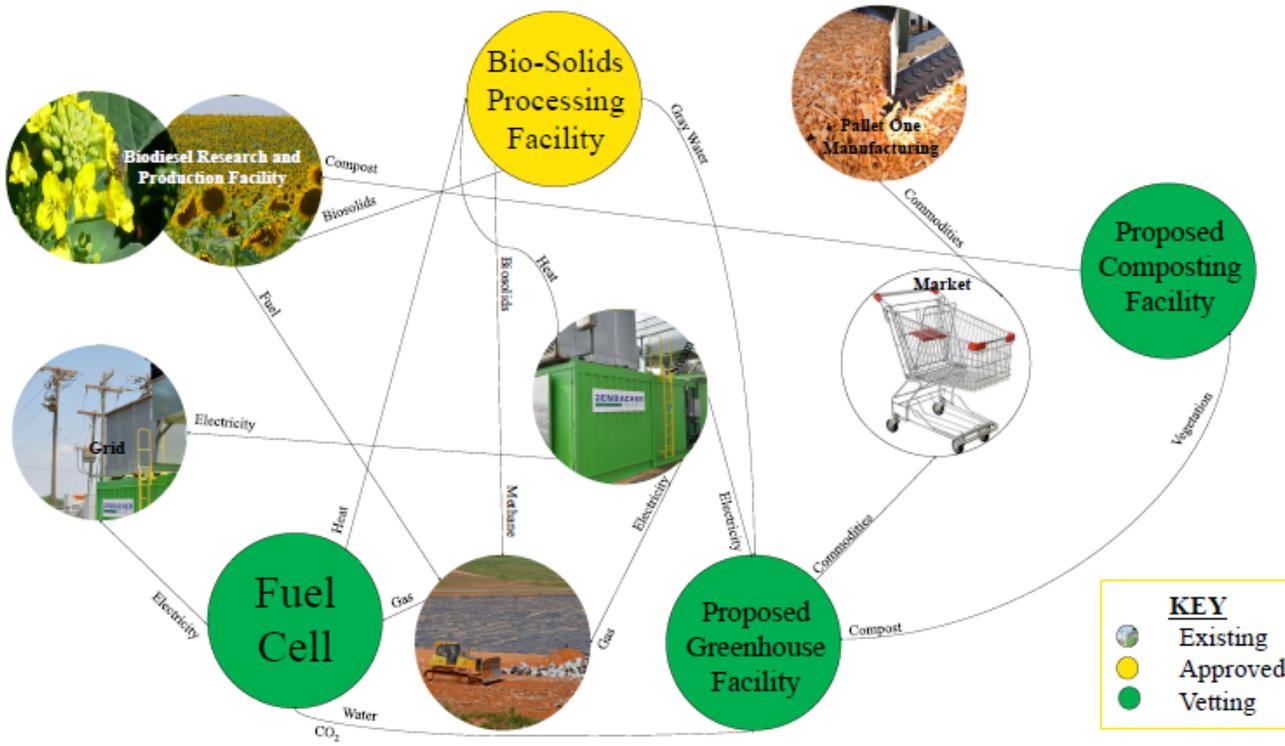


Catawba County Regional EcoComplex: Applied Industrial Ecology to Waste Management



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**Catawba County
EcoComplex and
Blackburn Resource
Recovery Facility**
(Updated September 2016)

Catawba County's EcoComplex components continue to evolve in order to meet the goal of developing a system that will recover all useable products and by-products from a group of private and public partners that will work together to use each other's waste products either as a source of energy or as a raw material for the manufacture of their own product. The EcoComplex is focused on making and using "green" energy and on the economic development of Catawba County.

The EcoComplex won the national 2007 Thomas H. Muehlenbeck Award for Excellence in Local Government, the 2008 National Association of Counties (NACo) Achievement Award, the 2010 NACo and Motorola award for wireless broadband connectivity throughout the EcoComplex, and the 2012 Grand Award for Engineering Excellence from the American Council of Engineering Companies.

The **Blackburn Landfill (Resource Recovery Facility)** is the largest component of the EcoComplex.

The Resource Recovery Facility currently accepts approximately 580 tons of municipal and construction/demolition waste per day.



The **Blackburn Landfill Gas-to-Energy Electricity Generating Facility** is made up of three landfill gas (methane) burning engine/generator sets that have the capacity to generate approximately 3 megawatts of renewable electricity per hour. Currently this facility generates 22,273 megawatts, which is enough electricity to power 1,400 average sized homes annually.



Pallet One Inc is the largest pallet manufacturer in the United States. The company began recycling pallets at its EcoComplex facility in 2008 and is currently employing 29 people while operating solely as a pallet recycling facility. In addition to other sources, Pallet One also recycles used and discarded pallets removed from the landfill



waste stream which increases their business while boosting the recycling efforts of the County by keeping the used pallets out of the landfill.

Blue Ridge Biofuels, LLC (Biodiesel Production Facility)

The Biodiesel, Research, Development, and Production Facility has been privatized through a public-private partnership with Blue Ridge Biofuels who plans to develop it into a two million gallons per year production facility. University research will continue as the F3 Program (a Farm to Food to Fuel Bio-oil cycle) will be initiated.

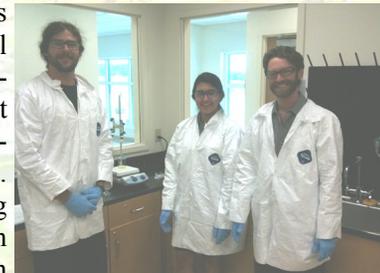


Feedstock Crop Management This facility can process crops grown on idle landfill property and buffer areas. It receives, cleans, dries, stores and crushes the harvested crops. Harvested crops are processed into two products (oil and seed meal) that have a higher value than the seed alone. The oil is cleaned and stored for future processing into food grade oil or biodiesel fuel. The seed meal has many potential uses such as a livestock feed additive, anaerobic digester feedstock, or a greenhouse soil amendment.



University Integration

Multiple universities have been and will continue to be integrated in the different components that comprise the EcoComplex. To date, the following universities have been involved in research related to sustainability and renewable energy.



- Appalachian State University
 - University of North Carolina at Charlotte
 - North Carolina State University
 - North Carolina Agricultural and Technical State University.
- Thus far, four (4) individuals have completed their PhD's through research performed within the EcoComplex.

Immigrant Agriculture Program Approximately 1-acre of land is provided for use as a horticultural demonstration site which includes a high tunnel structure that extends the growing season up to 6 weeks. The Immigrant Agriculture Program, a cooperative effort of Cooperative Extension, Utilities and Engineering, and North Carolina A&T State University, has been recognized by the International City/County Management Association (ICMA) with a 2014 ICMA Community Sustainability Program Excellence Award.

The Immigrant Agriculture Program works primarily with Hmong farmers living in Catawba County to help them become more successful in growing and marketing their produce. It features a Growers School, designed to teach participants basic production and marketing skills needed to be successful in a farming enterprise, and community gardens at the County's EcoComplex, which provide the participants with hands-on experience with new crops, equipment and methods.

