

FACT SHEET
**Catawba County-Appalachian State University Biodiesel Research,
Development and Production Facility**
Catawba County EcoComplex

The Catawba County-Appalachian State University Biodiesel Research, Development and Production Facility was officially opened on Monday, August 15, 2011. The facility is located at the Catawba County EcoComplex near the Blackburn Landfill.

Below are some facts about the Biodiesel Research Facility and the EcoComplex.

What is the Biodiesel Research Facility? Catawba County has partnered with Appalachian State University (ASU) to create a 7381 square foot center for biodiesel research, development and production. ASU's research will include the testing of biodiesel fuel being produced by several companies in the region and from the harvest of crops growing around the landfill to test which ones grow best in the local climate while producing the best oils for biodiesel. Canola and sunflowers are currently being grown and tested.



What kind of work will be done at the Biodiesel Research Facility? The facility will experiment with different processing elements to determine which components provide the best overall production performance, fuel quality and emissions.

It will expand ASU's current biofuels crop research efforts including: planting and harvesting, collection of data on seed yield and the measurement of oil yields from each of the viable crops.

It will develop and implement accurate, practical and sustainable biodiesel combustion and emissions test protocol, for fuels produced by the facility from various test feed stocks.

Staff will use a mobile emissions analyzer in a Volkswagen test vehicle to test 100% biodiesel fuels as well as blends by feedstock. This unit measures nitrogen oxide, sodium oxide, carbon monoxide, carbon dioxide and total hydrocarbons, using flame ionization and mass spectrometer analysis.



The facility houses a dynamometer for stationary testing of light and medium duty vehicles. This emissions component will further the work of quantifying biofuel carbon footprint.

The facility will also recover freon gas from white goods, insuring that the freon does not escape into the air.

What were the costs of the Biodiesel Research Facility? A total of \$3.2 million. ASU contributed \$1.6 million to the project, including \$1,449,333 in grants from the Golden LEAF Foundation, U.S. Department of Energy, UNC General Administration Research Competitiveness Fund, and the Biofuels Center of North Carolina.

The remaining \$1.6 million from Catawba County will come from funds the State of North Carolina requires counties to set aside for the closure of active landfill areas.

No local tax dollars have been, or will be, used for the design, construction, or operation of the facility.

How will the citizens of Catawba County benefit from Biodiesel Research Facility?

- The facility is expected to help the County attract more economic development opportunities by allowing more people to see what Catawba County has to offer while they are visiting or working at the facility. According to Scott Millar, President of the Catawba County Economic Development Corporation, “The presence of higher education institutions like Appalachian State in a sector producing this kind of energy is going to provide new avenues for growth, research, and investment for the future of Catawba County and its citizens.”
- The work of the facility will play a part in reducing the nation’s dependence on foreign petroleum-based oil and help Catawba County Government save money through the use of a lower cost fuel alternative.
- This facility can produce biodiesel fuel for about half the cost of regular diesel in the current diesel market. These fuel savings could be shared with municipalities and school systems in the future.
- The operational cost savings to the County will assist the County in keeping landfill tipping fees, already the lowest in the region, stable.
- Biodiesel fuel burns cleaner than regular diesel so the facility will improve air emissions and lower the county’s “carbon footprint”.
- There is potential to develop higher yielding cash crops that can be produced by area farmers and become part of their normal crop rotations.
- Research at this facility is expected to bring improvements to the biodiesel industry that make biodiesel more commercially viable for the private sector.
- The facility will eventually produce 100,000 gallons of biodiesel fuel each year, assisting the Biofuels Center of North Carolina in meeting a goal to produce 10% of the liquid fuels sold in North Carolina with locally grown and produced biofuels, by 2017.



What is the EcoComplex? A developing system that intends to recover all useable products and by-products from a group of private and public partners located in a close-knit, defined area. This group of partners works together to use each other’s waste products either as a source of energy (electricity, steam, or heat) or as a raw material for the production of their own product. These shared relationships bring the old saying of “one man’s trash is another man’s treasure” into real life. In addition to these cooperative relationships, the EcoComplex is also focused on producing and using “green” energy and on the economic development of Catawba County.

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