UTILIZING VALUE IN SYNERGISTIC RELATIONSHIPS

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SYNERGY

the phenomenon in which the combined action of two or more things is greater than the sum of their effects individually.
CORRELATION

-a relationship in which two or more things are mutual or complementary, or one thing is caused by another
EVOLUTION

the gradual development of something into a more complex or better form. Using Existing Landfill Gas Project to Produce Additional Renewable Energy

- Landfill Gas Energy Process Generates Valuable HEAT Energy
- Find Opportunities to Utilize Excess Heat
- Create a Business/Industrial Park within the EcoComplex
- Identify Industrial Ecology Symbiosis
RENEWABLE ENERGY OPPORTUNITIES

- Biodiesel Research & Production Facility
- Algae Growth and Research for Mitigating CO$_2$
- Biosolids Management Facility
- Anaerobic Co-Digestion of Municipal, Industrial and Agricultural Waste
- Solar (Arrays) Farm
BUSINESS OPPORTUNITIES

- **PalletOne**
  - America’s #1 Pallet Builder’s Recycling Center
  - Industrial Recycling
BUSINESS OPPORTUNITIES

- Landfill
- Farming
- Biodiesel Manufacturing
- Farm-Food-Fuel
- Research & Development
- Derivative Products
The goal of the EcoComplex is facilitate synergistic public and private partnerships that minimize waste and optimize the recovery and utilization of energy and materials.

- The intent of the Biodiesel Research Facility was to serve NC and regional biodiesel producers and encourage the development of integrated and distributed biorefineries through research, educational, and outreach activities.

- Fuel produced at the EcoComplex is used in the Catawba County diesel fleet
The EcoComplex site contains 150 acres of buffer lands, historical agricultural land that is being utilized to grow seasonal and oilseed crops.

Harvested crops are processed and turn into vegetable oils in our Crushing Facility. The oil is cleaned and stored for future processing into biodiesel fuel and with further treatment could be used in a Field to Fryer to Fuel (F3) Program.

Oil has a higher value than the seed alone.
BIODIESEL PRODUCTION

- Multi-feedstock, operating on a variety of oils that include unrefined and semi-refined vegetable oils, waste vegetable oils, animal fats, and commodity oils.

- EcoComplex grown oilseed crops (rapeseed, sunflower, and soybeans) and in turn vegetable oils via a feedstock processing station on-site.
OTHER SYNERGIES

✓ Warhorse Soap Manufacturing: Uses natural vegetable glycerin (from biodiesel production) and other natural oils in their formulas.

✓ Combustion Emissions: Car system allows to test biodiesel fuels (B100) and to test emissions from pure vegetable oils or animal fats. It provides data on fuel temperature.
In October 2014 in an effort to improve the economic benefit (including increased fuel production) of the Biodiesel Facility and in keeping with the guidelines of the EcoComplex to facilitate the incubation of new business and industry in the County, the Board of Commissioners entered into a lease agreement with Blue Ridge Biofuels, LLC for the lease of the Biodiesel Production Facility.
ECOCOMPLEX TIMELINE

LEGEND

- EcoComplex Components
- Board of Commissioners (BOC) Actions
- Farming Practices
- New Structures/Components
SUMMARY

The most creative and beneficial outcomes of human endeavors have been those in which synergy has been involved.

- Collaborate When Feasible
- Look For Mutually Beneficial Relationships
- Evolve, Optimize, and Cultivate
- Synergies and Sustainability Lead to $avings
Visit the EcoComplex
www.ecocomplex.org

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