

How Do I Learn More?

To find out more about landfill
gas-to energy in your
community...

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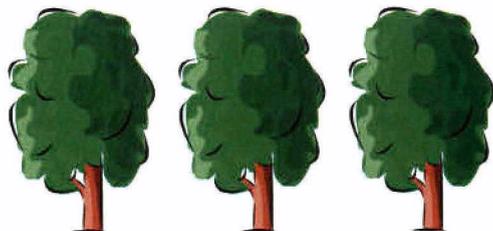
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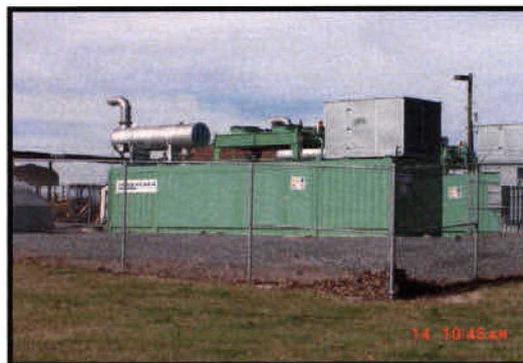
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www.catawbacountync.gov



**BLACKBURN
CO-GENERATION
FACILITY**

**ROCKY FORD RD
NEWTON, NC**



MISSION STATEMENT:

To provide an economical means to prevent methane migration and emissions from the County's Landfill, to protect the health and welfare of the people and the environment, while generating revenue by producing electricity from an otherwise wasted fuel source.



**UTILITIES
AND
ENGINEERING
CO-GENERATION
FACILITY**

ROCKY FORD RD
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PURPOSE OF A CO-GENERATION FACILITY

The purpose of the methane-to-energy project is to provide an economical means to prevent methane migration and emissions from the County's landfill. In doing so, the County is protecting the health and welfare of Catawba County citizens and the environment, while generating revenue by producing electricity from an otherwise waste fuel source.

Why is a Co-Generation Facility Needed?

Most of the waste we generate in our homes and businesses ends up in landfills. As this waste decomposes, it produces landfill gas which is made up of approximately 50% methane and 50% carbon dioxide. If left alone, these two potent greenhouse gases can escape into the environment and contribute to local smog and global climate change. Communities living near the landfill can also be subject to explosion hazards and unpleasant odors. The State of North Carolina recognizes these hazards and the Department of Environment and Natural Resources requires landfills to control and prevent methane migration and emissions.

The Landfill Gas-to-Energy project developed on this site will address all of those issues, while producing energy.

Is there another way to Eliminate Methane?

The most common process is the controlled burning of methane through a specially designed flare system. A typical system consists of wells drilled through the buried waste. These wells are then connected to a series of underground pipelines which carry the methane gas to the flare where it is ignited and burned harmlessly into the atmosphere. The State regulates these emissions through special permitting process.



Co-Generation Process

The Catawba County Methane-to-Energy project is North Carolina's first county-owned electricity generating facility fueled by landfill gas. The process included the collection of the methane gas, but rather than wasting this valuable resource through a flare system, it is directed into a 20-cylinder engine. This engine, which is



specially designed by Jenbacher Energiesystems, Inc., uses methane to produce 1,400 horse power. It powers a 1 mega-watt generator which can produce line voltage of 12,500 volts. Based on statewide average consumer electrical usage, the Blackburn Co-Generation Facility produces enough power to light approximately 1900 homes annually. The electricity produced from these generators is then sold to Duke Energy on a cost per kilowatt hour basis.

Revenue produced from this project will enable the County to maintain the current solid waste tipping fee for the next ten years!

Good News for Everyone

This is truly a win-win situation for everyone. By converting this potential methane problem into a revenue producing operation, the County has solved a dilemma that had possible negative implications for both safety and the environment. The project also enables Duke Energy to purchase electricity from a currently untapped fuel source, which it would otherwise have to produce by means of fossil fuel or nuclear plants. This aids in the conservation of all natural resources, which benefits everyone!

