

Why Landfill Gas?

For years, Washington Electric Co-op relied on the Vermont Yankee nuclear power plant to supply nearly one-third of its power. But when that contract ended in 2002, the Co-op had to investigate other options to ensure it could continue to supply reliable energy to its members.

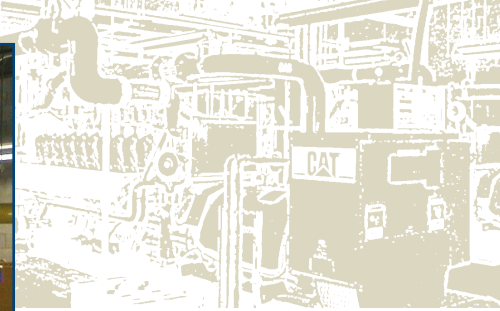


The Co-op explored a number of energy generation alternatives, including the use of landfill gas. Nearly half of the gas released from landfill waste is methane, a significant energy source. The Coventry landfill is the largest in the state, making it an ideal location for a renewable and reliable energy source that will meet the needs of the Co-op's service area for many years.

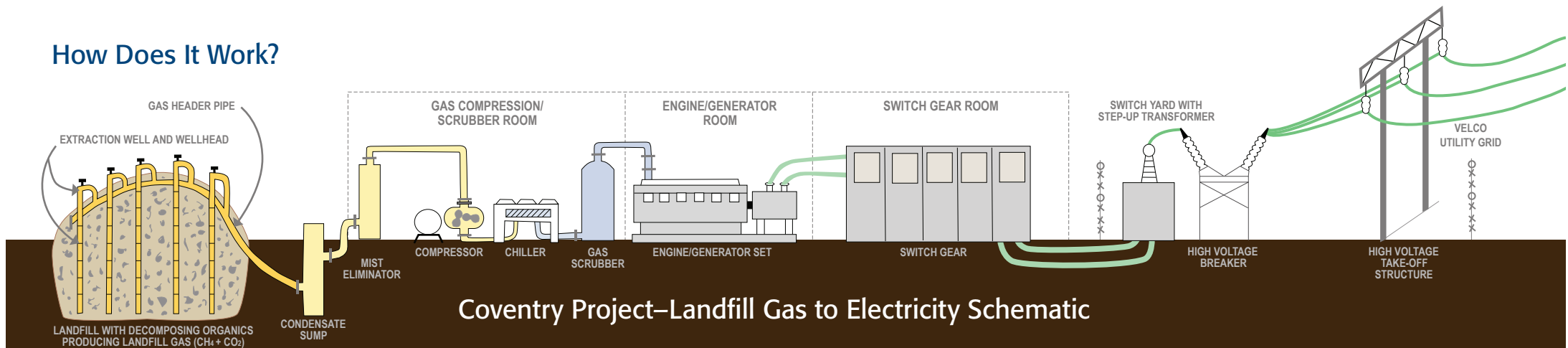


▲ Five CAT gen-sets are the heart of the system. They convert the collected methane into electricity for transmission to the VELCO grid.

The gas scrubbing system ► uses a series of cooling and filtering processes to dry the gas and remove impurities before it enters the engines.



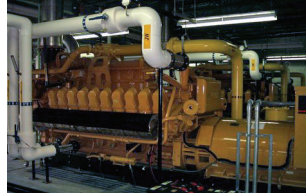
How Does It Work?



Coventry Project—Landfill Gas to Electricity Schematic

Facts of Interest

- Landfill gas is a byproduct of the natural decomposition of organic waste materials (food, paper, yard wastes, etc.)
- Landfill gas is a renewable source of energy and has roughly half the heating value of natural gas
- The plant currently supplies almost two-thirds of the Co-op's power demand
- Using landfill gas for generating energy destroys greenhouse gases that cause smog and global warming
- The greenhouse gas reduction benefit of the Co-op's plant is over 340,000 metric tons equivalent of CO₂, equal to removing the annual emissions from over 62,000 cars
- There are over 480 LFGTE projects in the U.S. producing over 12 billion kWh of electricity and 93 billion cubic feet of gas per year



Coventry Landfill brochure Stantec rev new 2009.indd 2

54 Route 106
North Springfield, VT 05150
Ph: (802) 886-2261
Fx: (802) 886-2260



Stantec

stantec.com

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LFGTE Facility Coventry Landfill



WASHINGTON ELECTRIC COOPERATIVE

LANDFILL GAS TO ENERGY PROJECT

Began Operations
July 2005

