

# Casella



## - *Climate Leaders*

Casella is the only solid waste company in North America to be part of EPA's Climate Leaders Program.



## - *Landfill Methane Outreach*

Earlier this year, Casella was named 2008 Industry Partner of the Year by the USEPA's Landfill Methane Outreach Program.

## - *Public Private Partnership*

Casella operates numerous resource management assets for municipalities across the Eastern US





Manufacturing

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BMW  
Manufacturing Co.

Spartanburg  
South Carolina



- ***BMW Project – Greer, SC***









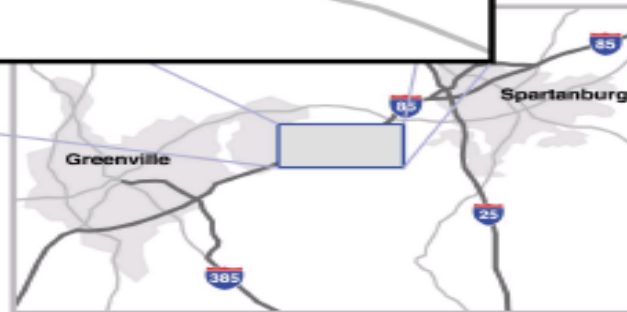
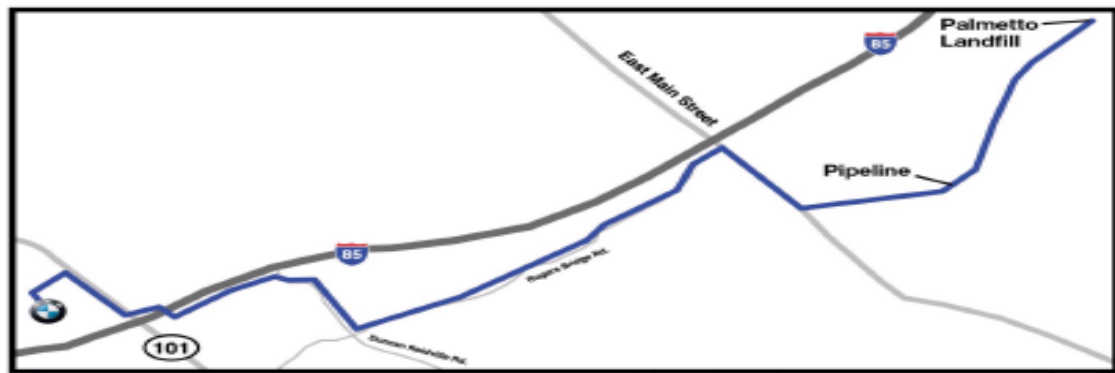


Image U.S. Geological Survey

2005 Google

Imagery Date: May 2005

34°55'15.55" N 82°09'00.96" W

Eye alt 13.10 km





# BMW Case Study



# BMW Case Study



**The State.com**  
SOUTH CAROLINA'S HOME PAGE

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Monday, Jul 27, 2009

Posted on Thu, Jun. 11, 2009

## **BMW expands its landfill methane gas project**

By Jenny Munro  
The Greenville News

In addition to its \$750 million expansion project, BMW Manufacturing Co. is completing a \$12 million expansion of its landfill methane gas system.

The new system, nearing completion, will include two new high-efficient gas turbine generators that will replace four existing turbines. The new turbines are capable of meeting nearly 30 percent of the plants current electricity demand with the same amount of methane gas.

Through the use of electrical and hot water generation, more than 60 percent of the plant's total energy demand is provided by methane gas produced at Palmetto Landfill and piped 9.5 miles to the plant.

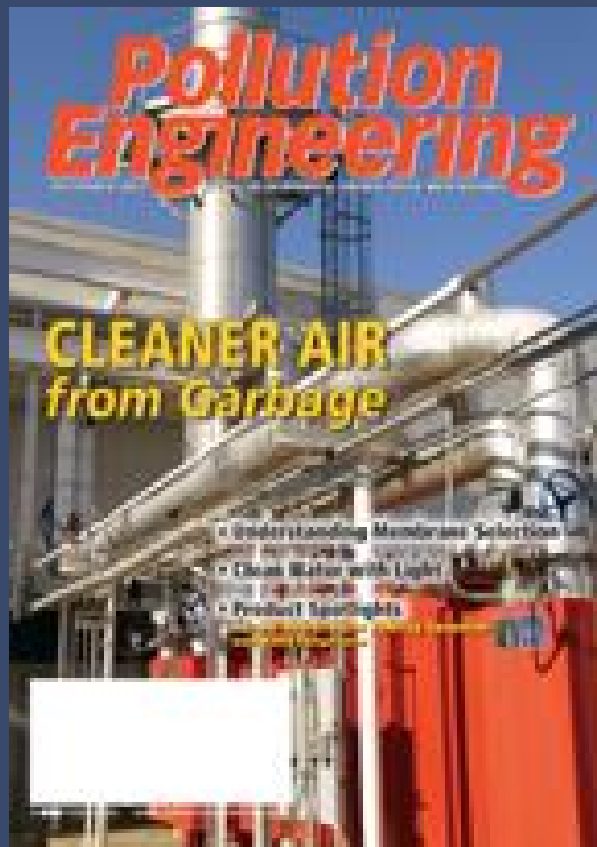
"BMW's landfill gas program has been a tremendous initiative for the plant," said Josef Kerscher, president of BMW Manufacturing. "Using methane gas to power our plant is one example of our focus on environmentally friendly production processes."

The project includes adding larger turbines and heat recovery boilers. It also includes the integration of a new treatment system to remove siloxanes from the methane gas. The compounds, commonly found in landfill gas, is potentially destructive to gas turbines.

Plans are to retain two of the four original turbines to serve as a back-up for the new system.



# BMW Case Study



## Green Car Congress

*Energy, Technologies, Issues and Policies for Sustainable Mobility*

### BMW Manufacturing Powers Paint Shop with Landfill Gas

5 May 2006

BMW Manufacturing Co. will use recycled methane gas generated by the Palmetto Landfill near Spartanburg, SC, to provide energy to its paint shop.

BMW is working with long-standing partner Durr Systems of Plymouth, Mich., to modify and upgrade equipment so landfill gas (LFG) can be used to fuel the paint shop. Durr Systems specializes in developing and implementing energy performance projects in industrial facilities and is a partner in the Environmental Protection Agency's (EPA) Landfill Methane Outreach Program.

BMW now is the first automotive paint shop to integrate the use of landfill gas in its process equipment. General Motors, with seven LFG projects underway, is the largest direct, corporate user of landfill gas (LFG) as a replacement for natural gas in the United States. ([Earlier post.](#))





# Personal Development Experience



- ***Grand Central Landfill – Pen Argyle, PA***  
10 MW power plant (owned by 3 townships)
- ***Omaha Public Power District – Omaha, NE***  
4.8 MW power plant, expanded in 2006
- ***Elk River Municipal Utilities – Elk River, MN***  
10 MW power plant, expanded in 2006
- ***Chicopee, MA Power Plant***
- ***Granby, MA Power Plant***





# Casella



## - *Hyland Landfill – Angelica, NY*

4.8 MW power plant and partnership with Village of Angelica

## - *Clinton Co. Landfill – Morrisonville, NY*

4.8 MW power plant

## - *Pine Tree Landfill – Hamden, ME*

3.2 MW power plant

## - *LFG Partnership Projects*

- Ontario Co. Landfill (Seneca, NY) – 5.6 MW plant in addition to LFG pipeline to office complex
- Coventry Landfill (Coventry, VT) – 8 MW



# Casella



## - Steuben County Landfill – Bath, NY

Casella is currently developing and will operate a 3.2 MW LFGTE facility for the Steuben Rural Electric Cooperative.

With Casella's assistance, the Coop has:

- Executed a 25 year gas purchase and land lease agreement with Steuben County
  - Obtained a \$1M USDA grant
  - Obtained \$4.8M CREB allocation (2008)
  - Obtained a final Title V air permit
  - Purchased major equipment
- Anticipated in service date 2/15/10
  - Very competitive bidding process



Steuben Rural Electric  
Cooperative, Inc.

