



Bristol-Myers Squibb Shines with 2008 NJ Clean Energy Business Leader of the Year Award

PROJECT INFORMATION

Organization

- Bristol-Myers Squibb Company, Inc.

Location

- New Brunswick, NJ

Project Contact

- Robert M. Hersh, Project Manager

Technology

- SoLoNOx Gas Turbine with Inlet Air Cooling

Total Project Cost

- \$6.5 million

NJCEP Incentives

- \$1.0 million Combined Heat & Power Program

PROJECT SAVINGS

Estimated Annual Savings

- Reduced electricity consumption by 608,700 kWh
- Decreased greenhouse gas emissions by:
 - 2,505,788 pounds CO₂
 - 114,674 pounds NO_x
 - 19,673 pounds SO_x
- \$440,000 cost savings on energy



Rather than performing a routine equipment replacement, Bristol-Myers Squibb partnered with the NJDEP to determine the best available technology for their application.

“The turbine inlet air cooling portion of this project can be readily applied to any existing cogeneration facility, enabling these facilities to increase internally generated power and avoid taxing the power grid during peak demand in the summer. The end result would be vastly improved grid capacity and reliability and greatly reduced greenhouse gas emissions.”

Robert M. Hersh,
Project Manager
Bristol-Myers Squibb Company

Background

Bristol-Myers Squibb is a leading worldwide biopharmaceutical company that manufactures medicines to combat serious diseases such as cancer, heart disease, diabetes, HIV/AIDS, rheumatoid arthritis, hepatitis B and psychiatric disorders. Bristol-Myers Squibb maintains numerous offices and research & development facilities around the globe, including five locations in New Jersey – three large-scale R&D locations in New Brunswick, Lawrenceville and Hopewell, and two office buildings in Plainsboro at Princeton Forrestal Center and West Windsor (Nassau Park).

Challenge

Decision makers at Bristol-Myers Squibb were seeking to replace an existing Solar Mars 100-14000 combustion turbine at their New Brunswick Cogeneration Facility with a larger piece of equipment. The goal was to apply the best available technology for 10 MW combustion turbine generators to increase energy efficiency, decrease greenhouse gas emissions and improve cost savings.

Project information, savings and environmental benefits were provided by the project contact.



The company's installation of a new SoLoNOx Gas Turbine resulted in an annual reduction of 608,700 kWh of electricity and decreased CO2 emissions by 2,505,788 pounds per year.



Bristol-Myers Squibb

Bristol-Myers Squibb
Company, Inc.
1 Squibb Drive
New Brunswick, NJ
08903-0191

Solution

Working hand-in-hand with the New Jersey Department of Environmental Protection and Solar Turbines, a recognized leader in the design and manufacture of gas turbine power systems, Bristol-Myers Squibb commenced a thorough research effort to determine the best available technology. Ultimately, the Solar Mars 100-15000 SoLoNOx combustion turbine, with inlet air cooling, was selected for the job. In fact, this finding established a new foundation for cogeneration applications in New Jersey.

The Bristol-Myers Squibb project would additionally include equipment relocations as well as the installation of piping, pumps, controls, steel dunnage and an inlet air cooling "chiller" downstream of an existing rooftop turbine inlet air filter to utilize chilled water from the existing spare chiller capacity located in another building.

Benefits

The positive environmental impact resulting from this equipment upgrade was astounding. Utilizing inlet air cooling during the summer months to drop the combustion air temperature from ambient to 59°F increases operating output from 8 MW to 10 MW, lowering the demand on imported power. The new turbine also improves air quality with a reduction in NOx by 114,674 pounds per year, SOx by 19,673 pounds per year and CO2 by 2,505,788 pounds per year; simultaneously saving 608,700 kWh annually due to improved system efficiency.

This project supports Bristol-Myers Squibb's ambitious sustainability goals by reducing the New Brunswick site's contribution to harmful green house gas emissions because cogeneration systems are 70% efficient as compared to typical utility supplied power that is only 46% efficient. Bristol-Myers Squibb has estimated that their annual energy cost savings resulting from this project will be \$440,000 and has shared the project details with locations worldwide to help create far-reaching energy efficiencies, reduced greenhouse gas emissions and exponential cost savings.

By striving to be a leader in green initiatives as well as an innovator in the pharmaceutical industry, Bristol-Myers Squibb was the obvious choice for New Jersey's Clean Energy Leadership Award for "Business Leader of the Year."