

## Middlebury College



In 2007, Middlebury College took the bold step to reduce carbon emissions by joining nearly 700 other College & Universities and signed the American College & University Presidents' Climate Commitment (now known as the Carbon Commitment). Middlebury College set a goal to be carbon neutral by the end of 2016. The College's investment in a state of the art biomass thermal gasification plant provided a significant reduction in the college's carbon footprint.

In 2009, the plant went online and produces high-pressure steam for heating, cooling and power generation. Biotech

Energy's VP of Engineering, Brad Noviski, and VP of Innovation, John Tomasi, played key roles in success of this project. The Biotech team worked closely with the Middlebury team in the initial development of the project including preliminary financial and technical review of the project. Biotech Energy's VP of Engineering was also responsible for overall biomass system configuration from conceptual to final design and was lead project manager and project engineer.

### Plant facts

- Plant went online in January 2009
- Steam Production: 21,000-30,000 per hour @ 240 psig
- 50% reduction in in #6 fuel oil annually (1,000,000 gallons plus)
- Annual #6 fuel savings \$700,000 per year +/-
- More than 1,000,000 gallons #6 fuel oil saved each year
- Annual wood chip consumption: 25,000 tons per year +/-
- 99.5 percent efficiency of exhaust system removing particulates
- Zero net carbon emissions, based on net growth of forests in our region
- Middlebury projects that its carbon emissions will be reduced by about 12,500 tons, which represent an estimated 40 percent of the College's 2006 carbon emissions.
- Middlebury sources wood chips within a 75-mile radius from Vermont and New York, two heavily forested states where recent forest growth has exceeded forest harvests.
- Local economic impact of approximately \$1,000,000 for biomass fuel related purchases
- Electricity produced: 15-20% of the campuses need (3-5 million kilowatt-hours of electric per year)



The work performed at Middlebury College highlights some of Biotech Energy capabilities. Call us at **1-800-340-1387** or visit us at [www.Biotech-energy.com](http://www.Biotech-energy.com).

