



Strengthening the Bottom Line with SMART ENERGY Technology and NYSERDA



Summary

In 2015, Bates Troy Healthcare Linen Services, industrial laundry, unveiled a Combined Heat and Power or CHP system to help power their cleaning facility in Binghamton, NY. The CHP uses natural gas fired V8 engines to produce electricity and water to cool the engines. The hot water coming off of the engines can then be used on site. The CHP system has allowed Bates Troy to grow immensely while better serving their customers. They also generate a net savings by reducing electricity purchased from the grid by 70%.

Background

In the early 1900's, Bates Steam Laundry merged with Troy Laundry to form Bates Troy and relocated to the former Joseph Laurer Brewing Company in Binghamton. In the mid-1940's Bates Troy was purchased by Kenneth and Arthur Kradjian. In the early 1990's, Bates Troy sold the uniform division to focus exclusively on the specific linen needs of healthcare facilities. Today Bates Troy is owned and operated by Brian Kradjian and serves health care facilities throughout the area



Contact the **Smart Energy Consortium of the Southern Tier** for referrals to regional contractors, resources and energy program information at: StierSmartEnergy@gmail.com



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Our **vision** is a collaboration of energy professionals to create job growth through smart energy deployment and development throughout the Southern Tier of New York.



Opportunity

Bates Troy saw an opportunity to meet three of their major needs:

- **Resilience** — remain operation when the grid is down
- **Economy** — major electrical and water usage and cost reductions increased profit
- **Increased Production** — on-site generation allows them to do more work for less

Upgrades

The CHP system provides electrical redundancy allowing Bates Troy to operate even if there is an outage on the electrical grid. This allows them to better serve their health care customers during extended power outages. The CHP system also allows them to greatly reduce their demand on the grid by producing cheaper electricity, which saves money on peak demand charges.

Process

Beginning in 2011, Bates Troy began to look into a backup generator to use during power outages. Because of zoning laws and other restrictions, conventional backup generators such as diesel were not viable. However, an innovative natural gas CHP system proved to be the perfect fit for their situation. It provides the reliability they need while synergizing with their energy needs to save them money. Financing the system became possible through NYSERDA, with a \$1485/kW grant for energy efficiency, cutting the project cost down by \$594,000. Additional funding was also provided by an Empire State Development Grant of \$380,000, once total employment goals are reached. Two of the employment milestones have already been met. Bates Troy has increased full-time employment from 70 employees to over 110, more than a year ahead of schedule.



The Numbers

Bates Troy originally had 430kW in peak demand, with the CHP system this has been reduced to approximately 200kW. This translates to a \$1840/month savings in their peak demand charge. The CHP system allowed for a second shift to be more profitable from not only the decrease in peak demand, but also because the more hours a CHP system runs, the more money it saves. Due to the savings of approximately \$143,000/year with an approximately \$700,000 loan, their CHP system is expected to be paid off within 5 years. Bates Troy has increased their poundage of soiled linens processed from about 15,000,000 in 2014 to about 16,000,000 pounds in 2015 and they are on their way to about 16,500,000 or more in 2016.