



Lydall is realizing energy savings with On-Site Energy Manager

Case Study

Company Name:
Lydall, Inc.

Location:

- Fulton, NY
- Hoosick Falls, NY
- Beaver Falls, NY

Business Type:
Materials Manufacturing

Overview

Lydall Performance Materials has three Upstate New York plants located in Fulton, Beaver Falls, and Hoosick Falls. The three plants, each constructed more than 100 years ago, make up a combined 650,000 sq. ft. of manufacturing space. Within the plants, gasket material is produced using paper-mill style processes. Equipment used in these processes include paper-making machines, converting machines, and a wastewater treatment plant. The supporting mechanical equipment includes several energy intensive systems, such as steam boiler plants, compressed air systems, and process water pumps.

To reduce energy use, Lydall participated in the New York State Energy Research and Development Authority's (NYSERDA) On-site Energy Manager (OsEM) program. The ANTARES Group Inc. — a consulting firm dedicated to energy solutions — was brought in to perform OsEM duties over the course of two years.

Plan

ANTARES employed a team of two senior engineers — one in the OsEM role, the other as support, and each with a long history in the energy industry — to accomplish Lydall's energy goals. The goals were to reduce annual energy use at each plant by 5% for two years and promote continuous improvement thereafter. The engineers identified energy-saving opportunities, worked with management to implement projects, and calculated realized long-term savings.



“Working with NYSERDA has provided Lydall Performance Materials with the consistent resources and support we required to help us identify energy savings opportunities that also met each projects financial objectives. Continuing to reduce our overall energy footprint, exploring alternative energy resources, and doing our part to be proactive stewards toward improving our environment requires OsEM program. Lydall is looking forward to a continued partnership with NYSERDA and the ANTARES Group Inc. for both new and current process energy reduction project support and cost savings for the future.”

— Mike Nosky, Plant Manager

Results

A total of 25 energy conservation measures were identified by the ANTARES team for the three plants. Of these, approximately 10 have been implemented, including compressed air leak repairs, eliminating dryers, recovering waste energy to heat process water, pipe insulation, and the installation of a new steam boiler at the Fulton plant. Total savings realized are 1,432 MWh of electricity and 64,582 MMBtu of thermal energy. Installed projects reduced energy use by 17%, saving \$360,000 annually. With implementation costs of \$1.6 million, the projects have an average simple payback of 4.5 years prior to incentives. ANTARES also helped Lydall switch electric utility supply contracts, which further saved more than \$200,000 annually.

Continuous Improvement

ANTARES developed a baseline for energy efficiency within the plants using data from 2017 and 2018. Energy savings metrics for 2019 were calculated using this baseline, which is normalized to account for production and heating degree days. Lydall continues to measure energy usage data and compare it to the baseline to prove monthly and annual energy savings.

The NYSERDA On-Site Energy Manager Program

Through the OsEM Pilot Program, NYSERDA cost-shares up to 75% of the cost to hire an OsEM. OsEMs work with companies to develop and implement successful energy and productivity projects. Projects may include operation and maintenance improvements, behavioral changes, energy efficiency upgrades, process improvements, throughput and scrap reduction improvements, and cost management.

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