



NYSERDA

An On-site Energy Manager proves beneficial for 3M

Case Study

Company Name:
3M Company

Industry:
Plastics & Rubber Products

Location:
Tonawanda, NY

Overview

3M Company in Tonawanda is a 19-acre manufacturing site that produces cellulose sponge in laminate, non-laminate, and whole block cellulose form. It's the world's largest sponge-making facility.

Improving On-Site Efficiency

3M—at a corporate and local site level—has collaborated with NYSERDA, and its utility partners on multiple clean energy initiatives.

From October 2020 through October 2022, the 3M Company Tonawanda site participated in the NYSERDA On-Site Energy Manager (OsEM) program to maintain and continuously improve energy efficiency.

As a first step, 3M Company Tonawanda hired an OsEM. It identified a current employee, a senior engineering supervisor, and moved that employee into a resident energy project engineer position. The position was within the Corporate Energy Group which provides technical and implementation support of projects with the site's Energy Team.

Manufacturing a Plan

Goals of 5% in electric energy savings and 1.5% in fossil fuel energy savings were established.

Then, a total of 18 projects were identified. Projects had varied costs and levels of complexity, from changes in setpoints to reductions in process complexity to capital investments in replacement of utility equipment. Several projects identified were in the existing project pipeline through previous participation in NYSERDA's Strategic Energy Management Program.

Additional projects, changes, and improvements were identified by the OsEM while working with cross-functional site Energy and Engineering teams and were funded through multiple utility incentive programs.

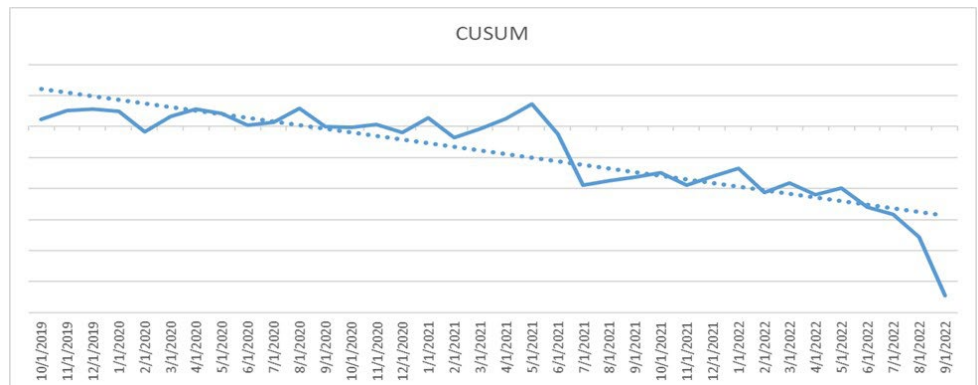
Progress Towards Energy Reduction Goals				
Energy Type	% Of Goal Installed	% Of Goal In Process	% Of Goal In Development	% Of Goal Identified
Electric (kWh)	27%	25%	56%	108%
Fossil Fuel (MMBtu)	556%	-	-	556%

Results

Overall improvement of total energy consumption of 2.2%, normalized with a dependent variable of total energy and independent variables of heating degree days and monthly output over the 24 months of the OsEM program are shown in the cumulative sum (CUSUM) graph.

The overall energy use comparing the baseline to post engagement period was placed in a regression model to normalize for both heating degree days and production output. Overall improvement of total energy consumption is 2.2% over the 24 months of the OsEM program, as shown in the CUSUM graph.

In the initial phase of the OsEM program, 27% of the electric goal was installed and by the end of 2022, an additional 25% of the electric goal will be installed. The installation of a variable speed air compressor and additional electric efficiency projects are in development for a total of 108% of the goal identified. All projects identified for fossil fuel savings (representing 556% of the fossil fuel goal) have been installed.



The NYSERDA On-site Energy Manager Program

Through the On-site Energy Manager (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.

Discover how to bring energy costs under control and maximize profitability with NYSERDA.

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