



Energy Efficiency Case Study

Brought to you by National Grid

Gentex Optics

About Gentex Optics

As the world's leading provider of eyeglass lenses, Gentex Optics' (a division of Essilor) number one priority has always been the customer. They have been busy improving the way people see the world for over 160 years. And they love what they do. At Essilor, they are intensely dedicated to research and innovation. They strive to create the most beautiful, comfortable and durable corrective lens designs in the world. With their tradition of excellence and technological advancement in the optical field, and with a passionate management staff of experienced professionals, Essilor is truly the work of geniuses. And they strive for perfect quality for each and every Essilor customer.

Project Summary

Having partnered in over 40 energy conservation projects since 1991, Gentex Optics, a division of Essilor, has a long and valued relationship with the Sponsors of Mass Save. So when Gentex was looking to improve their manufacturing performance and the efficiency of their injection molded polycarbonate optical lens operations, an upgrade to their process cooling requirements was necessary. During the design phase of the project, several energy conservation measures were identified and studied by the engineering staff. Recommendations included a high performance process cooling system upgrade that allows for the removal of glycol from the process cooling lines, replacing three air cooled chillers with two 250-ton high efficiency chillers, and improved cooling process controls. The Sponsors of Mass Save generously supported Gentex by providing \$450,000 in incentives as well as consultation services to help guide the engineering and design team. The diligent work of the design team has helped Gentex achieve a 73 percent reduction in electrical usage through the new process chiller equipment and an estimated annual electric savings of \$142,000 and payback of 4.5 years.

“Mass Save has been an indispensable partner in our journey to achieve our energy goals.”

Edward Chamberland,
Gentex Optics Facilities and EH&S Manager

Mass Save As a Strategic Partner

Having partnered in over forty energy conservation projects over the years, the Sponsors of Mass Save have a unique and valued partnership with Gentex Optics allowing them to implement energy conservation projects that result in the achievement of aggressive internal targets for cost competitiveness but with an environmentally friendly approach. Working side by side with their design team, the Sponsors of Mass Save recently provided consultation services as well as incentives totaling \$450,000 allowing for Gentex to save an estimated 73 percent on the electrical usage on their process chiller equipment.

Whether you are building a new manufacturing facility, upgrading old, inefficient equipment or manage a property in need of energy improvements, the Sponsors of Mass Save can help you identify cost-effective energy efficiency improvements, provide technical assistance, and offer financial incentives in addition to interest-free loans to help kick-start your company's next big project. To learn about these and other commercial and industrial energy efficiency programs available, visit MassSave.com/Business.



Two new 250-ton Magnetic Oil-free Centrifugal Chillers with variable frequency drives

Solution

Replaced three existing process chillers with energy-efficient equipment and process controls; this also eliminated the use of glycol in process cooling lines.

Total Project Cost

\$1,095,000

Mass Save Sponsor Incentives

\$450,000

Estimated Annual Energy Savings

1,166,181 kWh

Annual Cost Savings

\$142,274

Simple Payback Period

4.5 years

Return on investment

73% reduction
in electrical usage on process chiller equipment

About Mass Save:

Together, we make good happen for Massachusetts: Berkshire Gas, Cape Light Compact, Eversource, Liberty Utilities, National Grid and Unitil. As one, we form Mass Save®, with the common goal of helping residents and businesses across Massachusetts save money and energy, leading our state to a clean and energy efficient future.

WE ARE MASS SAVE®:

