

Custom Coating Company Improves Performance With Energy Efficiency Project

Upgrades eliminate 4 million pounds of carbon emissions annually



Customer Profile

B.L. Downey Company has been a leader in the powder coating and E-coating industry since 1956. 15 miles west of downtown Chicago and based in Broadview, Illinois, the company has unique processes that allow fabricated metal products to be cleaned, pretreated, masked and E-coated and/or powder coated using a large variety of coatings. This offers a more robust, cost-effective, and environmentally friendly alternative to liquid paint for components used in industries throughout the world, including agricultural, automotive, manufacturing, military, transportation, medical, and others.

Maintaining consistent product quality while maximizing efficiency is crucial. The 320,000 square foot facility has a variety of ovens equipped to handle metal parts of any size or shape—from large parts measuring up to 50 feet, to tens of thousands of small parts. Working with Constellation, the company upgraded its equipment, adding automated oven controls to improve the quality, consistency and efficiency of its production while reducing energy usage. The project significantly reduced B.L. Downey Company's electricity and natural gas usage—eliminating 4 million pounds of carbon emissions from its footprint each year.

The Challenge

B.L. Downey Company's custom coating processes demand a uniform temperature curve as each part moves through the ovens. Because its existing ovens and exhaust blowers were operated by manual controls, they were more prone to temperature variations and wasted energy. Upgrading the equipment ensured B.L. Downey Company could continue to deliver quality coated parts at a competitive price.

The lighting within the plant also presented a challenge. Although B.L. Downey Company had made substantial lighting upgrades in 2008, it needed additional renovations to improve visibility for employees both inside and outside the plant. The company lacked the upfront capital investment these improvements required. A flexible solution was needed that would allow them to pay for the project over time, and the company needed to move quickly to meet a deadline for a substantial rebate available through Nicor Gas.

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The Solution

Constellation already had a longstanding relationship with B.L. Downey Company as a supplier of natural gas and advisor on procurement and energy management strategies.

Working with Constellation, B.L. Downey Company implemented an Efficiency Made Easy (EME) project, allowing it to make approximately \$1 million in upgrades—with no upfront capital investment.

After Constellation's assessment of the company's needs and recommended upgrades, B.L. Downey Company signed an EME contract in March 2014. Constellation worked closely with the company and contractors to ensure the project would be completed in time to meet the May deadline for the Nicor rebate.

The project was built into an electricity contract with Constellation. With Efficiency Made Easy, B.L. Downey Company could begin realizing energy savings as soon as the project was completed—and pay for the project over a five-year period with the savings it achieved.

The EME program allowed B.L. Downey Company to minimize disruptions while offering peace of mind with warranty coverage on the entire installation.

The Results

Through the Efficiency Made Easy program, B.L. Downey Company has achieved significant reductions in its energy usage. This has in turn helped the company keep its operational costs under control, minimizing the need to pass higher costs onto its customers.

In addition, the lighting upgrades enhanced visibility, resulting in a safer work environment for employees. The previous lighting had used T12 fluorescent bulbs that are now discontinued due to their shorter lifespan and reliance on outdated, inefficient technology. B.L. Downey Company is now a T12-free lighting facility that meets federal efficiency standards. The upgraded lighting has also improved safety and morale among employees.



Highlights

- Total Project Cost: \$1 million
- Reduction in Electric Usage: 10 percent (approximately 500,000 kilowatts per year)
- Reduction in Natural Gas Usage: 360,600 therms
- Total Reduction in Carbon Footprint: 4 million pounds per year, equivalent to taking 382 cars off the road each year or eliminating 93 garbage trucks filled with waste

Technical Highlights

- Installation of new automated temperature controls in facility ovens
- Replacement of combustion air blowers, motors and exhaust fans with more efficient blowers using less natural gas and including automated controls
- Installation of piping to recapture heat from blowers and direct it back to the ovens
- Installation of occupancy sensors in offices and common areas
- Upgrade of more than 400 lights, including low-bay lighting inside plant to improve visibility and energy efficiency
- Replacement of nearly 50 fluorescent lighting fixtures and 20 exit signs
- Addition of motion sensors in offices and common areas
- Upgrade of exterior lighting to improve visibility in parking lot

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