

SHOWCASE PROJECT: HAVERTYS' EASTERN DISTRIBUTION CENTER

SOLUTION OVERVIEW

In 2002, Havertys consolidated two regional warehouses into a new Eastern Distribution Center (EDC) in Braselton, Georgia. The distribution center is an 810,000-square-foot tilt-panel high-bay racking facility that employs 210 people and operates 153 hours each week. The function of the facility is to store incoming furniture and ship to one of four home delivery centers, and/or assemble and prep for shipment to multiple market drop sites and then from there to customer homes in the southeastern United States.

The EDC is Havertys' largest single distribution center facility, and also the company's largest single user of energy in its entire building portfolio.

In 2010, Havertys launched the HVTerra program which helps the company implement sustainable practices in both existing and new stores throughout its portfolio. After achieving significant energy reduction in its stores from LED lighting and HVAC retrofits, Havertys turned its attention towards its distribution centers for additional energy efficiency and sustainability opportunities.

SECTOR TYPE

Commercial

LOCATION

Braselton, Georgia

PROJECT SIZE

810,000 Square Feet

FINANCIAL OVERVIEW

Project Costs: \$600,000 (Year-End 2018); \$200,000 (Q1 2019)

SOLUTIONS

In 2011, with increased visibility from the energy data and reporting at the launch of its HVTerra program, the Havertys EDC team made overall operational HVAC and efficiency improvements and behavioral changes in efforts to reduce consumption with little or no cost. The increased awareness and sense of responsibility allowed the EDC team to optimize equipment, shift performance, and make operational process improvements. Additionally, the team replaced dated battery-operated equipment with more efficient equipment with fewer batteries. These changes led to a decrease in consumption over time, as well as an opportunity to look into capital improvements to adopt further energy conservation measures. The operational efficiencies implemented from 2011 to 2015 have

helped to offset increases in consumption and rate costs and represent a 10% energy reduction.

Havertys achieved significant energy savings at the Eastern Distribution Center through three major lighting upgrade projects. In August 2015, the existing metal halide lighting in the bulk storage area was replaced with more energy-efficient LED high-bay fixtures. In January 2016, additional lighting improvements were made which included the replacement of existing high-pressure sodium high-bay rack and aisle lighting with LED fixtures. These energy efficiency projects and other operational changes at EDC have collectively improved EUI by nearly 30% since 2011 (compared to year-end 2018). In spring 2019, the fluorescent lighting in the prep area and recycle areas of the facility were replaced with LED at a project cost of \$200,000, which is expected to achieve an additional 15% improvement in EUI from the 2014-2015 baseline.

While electrical consumption has dropped nearly 30% since LED has been introduced, electric rates have also risen by about 7%. Overall, the annual electrical cost has been reduced about \$170,000 which has absorbed much of the increase in electrical energy rates. Gas consumption increased during this period due to the reduced heat gain by the new LED lighting fixtures (about \$12,000 annually), leaving a net savings annually of \$158,000. The return on investment for the LED projects overall is 3.5 years based on the avoided cost when factoring in the rising energy prices.

Lighting Improvements at the Eastern Distribution Center

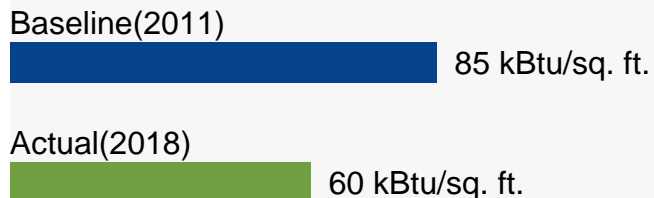
Savings Measure	Project Cost	Implementation Date	ROI	O&M
Operational Efficiency Changes	Low Cost/ No Cost	2011 - 2015	Offset 7% increase in energy costs	10% EUI
LED Lighting Upgrade - Bulk Storage	\$351,800	August 2015	3.5 years	30% cost reduction
LED Lighting Upgrade - Rack and Aisle	\$248,200	January 2016		
LED Lighting Upgrade - Prep and Recycle	\$200,000	April 2019	2.7 years	15% expected reduction

OTHER BENEFITS

The LED upgrades have been well received by the distribution center associates and management. Both groups feel that LEDs provide higher quality lighting, along with the benefit of increased safety and visibility (as well as less energy consumption). Maintenance savings from the LED bulb life and reduced material and labor costs provide positive impact to both safety and facility operational cost, and have not been included in the ROI expressed above.

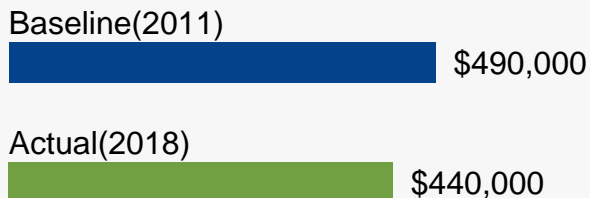
*Avoided Cost: \$158,000 (see Solutions section above)

Annual Energy Use



Energy Savings
29%

Annual Energy Cost



Cost Savings
\$50,000*



Havertys Eastern Distribution Center in Braselton, GA (front)



Havertys Eastern Distribution Center in Braselton, GA (overhead)