

HARBEC, Inc. Continues to Light the Way toward Sustainable Manufacturing

Ontario, NY based HARBEC, Inc. completes an Eco-Economic lighting efficiency retrofit, implementing more than 1,000 LED bulbs

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Less than eight years after having completed a facility-wide lighting efficiency project, HARBEC, Inc. (www.HARBEC.com) announces that it has recently completed a new lighting efficiency project. In 2007 HARBEC conducted a major lighting upgrade replacing the majority of the fixtures, ballasts, and lamps with higher efficiency products. At the time HARBEC achieved a 48% reduction in lighting energy use.

But with significant cost and performance advancements in lighting technologies such as LED's, HARBEC chose to reassess its lighting energy use, and determine if additional energy and cost savings could be achieved with LEDs.

With the help of Lockheed Martin's Energy Efficiency Services group, Rochester Gas and Electric (RGE), and the LED manufacturing and distribution company Lumentek Global, HARBEC pursued a lighting assessment of its 50,000 sq. ft. facility in Ontario, NY. The assessment, conducted by Lockheed Martin, identified more than 520 fixtures and tallied 1,280 lamps, representing 32 watt fluorescent lamps that could be replaced with more energy efficient 18 watt LEDs at HARBEC.

Lockheed Martin's assessment determined that HARBEC was eligible for a RGE lighting efficiency incentive. In dialog with HARBEC employees, HARBEC and Lumentek Global also unveiled that the lighting quality in certain critical areas of the facility was sufficient, but could be improved to support better color rendering, and improve the productivity of machine operators, part inspectors, and secondary operations employees.

Bob Bechtold, President of HARBEC remarked, *"Lighting quality is essential to the productivity and performance of a manufacturing facility. We wanted this lighting upgrade to achieve not just energy performance, but people performance. By asking employees their views on different light temperatures and quality we were able to select bulbs that could achieve energy, economic, and employee benefits."*

HARBEC chose to implement Lumentek Global's LED T8 Replacement, a DLC certified product. Lumentek's T8 replacement works with a ballast (Ballast Friendly) or without a ballast (Direct Wire). The advanced circuitry allows the LED tube to operate on most Instant Start, Rapid Start, and Program Rapid Start electronic and Magnetic ballasts. HARBEC chose Lumentek's "Ballast Friendly"TM LED product for its energy savings, performance, and that it is a true "Universal" replacement tube that's as easy to install as a light bulb without the concern for future ballast replacements.

The LED retrofit project had a total cost of \$32,000, of which HARBEC received a 50% RGE energy reduction grant. The LED retrofit resulted in a 45% reduction in lighting energy yielding \$22,000 in annual energy savings for HARBEC (a 1-year payback with the RGE grant).

Bob Bechtold, President of HARBEC remarked, *"The fact that we had completed a lighting efficiency project eight years ago did not deter us from re-evaluating Eco-Economic opportunities to further*

improve lighting efficiency in our manufacturing facility. Lighting technologies such as LED's have improved tremendously in performance, efficiency, and cost in the past couple years. With support from Lockheed Martin, RGE, and Lumentek Global, HARBEC continues to improve its operating efficiency and journey toward sustainable manufacturing. Our experience tells us that identifying and pursuing Eco-Economic opportunities can be achieved with the right partners, and for a significant business value."

For more information on HARBEC please contact us, info@HARBEC.com.

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ABOUT HARBEC

Founded by Bob Bechtold in 1977, HARBEC's mission is to provide tightly toleranced prototypes, tooling, machined components and quality injection molded parts in a sustainable manner with a social conscience. HARBEC provides superior customer service, satisfaction and timely delivery of custom engineered solutions. HARBEC proudly foster an atmosphere of encouragement and respect for the health and prosperity of their customers, employees, and the global community.

HARBEC provides capabilities and solutions for the consumer products, sporting goods, defense/aerospace, transportation, medical, marine, and energy industries. HARBEC has capabilities in the use of innovative materials, problem-solving, and working with R&D and commercial organizations on unique prototypes or engineering and manufacturing groups on high volume production. HARBEC has capabilities for short (1-to-100 parts) or longer run (>1M parts) production.

HARBEC is certified as an ITAR, ISO9000-2008, ISO14001, and ISO50001/SEP Company, demonstrating its use of "eco-economic" decisions and policies designed to ensure that its activities are sustainable. HARBEC has developed and implemented technical and process solutions to offset emissions, utilize waste and conserve resources. HARBEC reached its goal of "no carbon footprint" in 2013. Currently, the facility has a 250kW and 850kW wind turbines and operates a twenty-five microturbine combined heat and power plant which generates electricity and provides thermal energy to meet the heating and cooling requirements of the facility. For more information, please visit: www.HARBEC.com.

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