

# INDUSTRIAL ENERGY SOLUTIONS

## ENERGY EFFICIENCY CASE STUDY:

Brook + Whittle  
Guilford, CT



### Background

Brook + Whittle is a leading North American manufacturer of premium prime label solutions with highly differentiated capabilities, entrusted by some of the most well-known brands. The company provides pressure sensitive labels, shrink sleeves, flexible packaging, and heat transfer labels with a focus on delivering value to customers through sustainable packaging, complex decoration, digitalization, and industry leading lead-times. Brook + Whittle operates fifteen production facilities across the US.

### Goal

Traditional label printing leverages technologies that use UV lights and high-wattage mercury vapor lamps to color labels, which is an energy-intensive process. Brook + Whittle sought to reduce their carbon footprint and become more energy efficient in their processes, and worked with Titan Energy, an energy consulting firm, to plan energy efficiency upgrades. Titan Energy found opportunities to improve the sustainability of the printing company, reduce printing costs, and reduce energy usage at the Guilford, CT location.

**CO2 savings:**  
4,755 tons

**Net annual:**  
1,873,201 kWh savings

**Total electric savings:**  
22,526,977 lifetime kWh savings

### Outcome

By upgrading exhaust fans, converting mercury vapor lamps to LED, and upgrading the printing line on three presses, Brook + Whittle was able to reduce their CO2 emissions by 4,755 tons, SO2 emissions by 5,531 pounds, and their NOX emissions by 6,519 pounds. In addition, the printing line's energy use was reduced by over 50% with the new LED printing system. Not only was the energy demand reduced, but the lamp life increased from 2,500 hours to 25,000 hours – a 10,000% increase, meaning they only need to replace the bulbs once every four years instead of three times per year, saving in material and maintenance costs.

These reductions were possible because the new LED lamps that were installed have a lower wattage than the UV and mercury vapor lamps and are less energy intensive. Additionally, the new lamps give off less heat, so the facility has reduced chilled water requirements and exhaust fans to keep the printing line running properly, which reduces the energy usage further. The old mercury vapor lamps also needed to remain in "stand-by" mode in between production runs but the new LEDs are either on or off, which saves additional kWh.

These improvements resulted in direct benefits to Brook + Whittle's employees and customers. With savings from this project, Brook + Whittle has been able to reinvest funds into other facility improvements such as adding four new printing presses in their Connecticut plants, creating over 30 new jobs. LED UV printing technology increased production pace, cutting project turnaround times in half while maintaining consistent quality. Customers receive high-quality products at a faster rate and Brook + Whittle is able to take on more customers. **"Not only has this work reduced our carbon footprint, it has also enabled us to increase our business," Daryl Northcott, Executive Vice President at Brook + Whittle said. "Thanks to Eversource and Titan Energy, the process was simple and the results were great."**

*The information in this case study is an accurate representation of this customer's experience at the time of publication. Results, including cost savings, from heat pump installation and/or other energy efficiency measures can vary based on each individual customer's situation.*

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