

# STORIES BEHIND THE BATTLE



## High Construction Company Building 105

High Construction Company  
Mechanicsburg, Pa.

### RECOGNITION:

#5 overall winner  
20% energy use reduction

### SAVINGS:

35.3% energy savings  
\$32,960 estimated cost savings  
221 MtCO<sub>2</sub>e greenhouse gas emissions  
prevented

### BUILDING STATS:

Type: Office  
Ending EUI: 253 kBtu/gpd

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“Quantify the value of energy reduction opportunities and the cost to implement changes. Value can be monetary, but it may also include safety, maintenance, or publicity.”

### Improving efficiency and aesthetics

By retrofitting 20-year-old lamps, the team not only improved energy efficiency, but also the aesthetic appeal of the building. The tenants were happy with the new look and the improvement in light quality! This simple change also resulted in a 60-percent reduction in lighting energy use. Because the new, more efficient lighting wasn't putting off as much heat, the reduction in lighting also reduced the load on the cooling system in the summer. On top of this, the team used strategic placing of occupancy sensors to automatically turn off lights!

### Replace and reduce

The energy team also retrofitted the outdated HVAC system. The project included replacing rooftop units and the building automation system, and adding variable air volume zones. The lower plug loads and the 60-percent reduction in lighting energy allowed the rooftop units to be right-sized. The new building automation system reduced the use of electric reheat coils in the variable air volume boxes by increasing the use of gas preheat in the new rooftop units. These projects resulted in approximately a 35-percent reduction in energy use!