Target Corporation is an upscale discount retailer with approximately 1,600 stores and 32 distribution centers in the United States – over 250 million square feet. About 100 new stores are opened each year and about 50 are remodeled. Target uses commissioning and retrocommissioning to optimize the relationship between energy, maintenance and repair expenses, and occupant comfort. Energy efficiency is also an important step in achieving the company’s environmental goals of using resources responsibly and proactively managing its carbon footprint.

About 80% of the energy consumption across all Target properties is from HVAC, lighting, and refrigeration systems. Therefore, the company has long seen the benefit of optimizing building performance in order to increase energy efficiency and reduce utility bills. While the primary goal is to reduce the costs of operating its stores – energy use, equipment repair, and operations and maintenance – the company is also concerned with system reliability, indoor air quality, and occupant comfort.

Paul Ham is Manager of Target’s Commissioning Group, and is also a LEED® Accredited Professional. Since joining Target in 2006, he has helped the company develop a commissioning program focused on identifying common energy savings opportunities and implementing them across a large number of stores. Due to the small scale and simplicity of Target’s systems, individual findings generate relatively small incremental savings on a per store basis. The true value to Target is realized when findings are cost-effectively identified and addressed across the company’s portfolio. With approximately 40,000 packaged rooftop units, for example, Target has found that small savings at each location add up quickly. As such,
scalability is a critical component of the company’s overall commissioning program.

**Challenges and Solutions**

One challenge Target has faced is maximizing and maintaining the benefits of retrocommissioning. Both the number of stores and the geographical dispersion around the entire country make it impractical to have in-person monitoring of building operations. To reduce the labor requirement of its operations and maintenance programs and to capture and sustain the financial benefits of the program, Target is working with industry partners to develop a robust automated commissioning tool.

Because the building systems are straightforward and fairly consistent across the company’s portfolio, the opportunities for energy savings are driven by complex operations processes over the long-term rather than by occasional physical changes to buildings or systems. This makes capturing retrocommissioning savings difficult and long-term vendor relationships crucial.

According to Ham, “For our programs to be successful, we have to develop a team of partners who are committed to sharing the costs of developing a long-term relationship with Target. In order to bring value to our operation, our partners must first understand our complex business processes and strategies. Over time, those individuals will gain an understanding of how we do business and how we operate our stores. It has taken longer than I would have thought for the value of our commissioning deliverables to fall in line with the first cost of the service.”

**Unexpected Benefits**

The program has revealed some unexpected benefits, like the ability to spot-check the work of Target’s maintenance and repair contractors. The company has about 100 contractors who service its refrigeration and HVAC systems. Paul Ham has found that retrocommissioning investigation reports often reveal maintenance issues that have not been resolved as described in the reports from service calls or annual maintenance visits. As a result, Target hopes to improve the quality of work performed by its contractors.

Target has also used the data gathered in retrocommissioning investigations to improve its preventative maintenance (PM) program and building design process. By reviewing the data from about 150 stores that have been retrocommissioned so far, Target has identified the most common problems that occur in its facilities. This information is used to fine-tune both the PM program and Target’s overall asset management strategy, allowing the company to focus time and resources on measures that prevent the most common problems.

As Ham explains, “Retrocommissioning helps you better understand the designs and processes that work and don’t work. We feed that knowledge back into the design process so when we build new stores, we are continuously improving.”

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**FOR MORE INFORMATION**

California Commissioning Collaborative (CCC)
www.cacx.org

The CCC is a non-profit organization made up of government, utility and building services organizations and professionals committed to improving the performance of buildings and their systems. Visit the website for helpful resources including:

- Commissioning Guides
- Case Studies
- Tools and Templates
- Industry News