



MANUFACTURER RETOOLS ENERGY COSTS

**LED LIGHTING UPGRADE ESTIMATED TO SAVE NEARLY
\$45,000 ANNUALLY**

Employees at Stanley Hydraulics, a Milwaukie, Ore., manufacturer, spend a lot of time thinking about energy. A division of worldwide giant Stanley Black & Decker, the company serves industries making the switch from older pneumatic tools to cleaner, more efficient hydraulic technology. With 120 employees working three shifts, the 115,000-square-foot plant consumes a significant amount of energy.

Stanley's corporate headquarters asks each division to reduce energy waste and water use by 5 percent annually. Bernadette Donald, the Milwaukie plant's energy champion and environmental, health and safety manager, is responsible for meeting that goal.

"We have guidelines to help us reach our target, but our eyes were opened when we discovered Energy Trust of Oregon's Strategic Energy Management program," she explained. "We've changed our approach from reaching our objective through a 'Hail Mary' pass to thinking about what we can actively do throughout the year to achieve this goal."

Bernadette was already tracking the plant's energy waste and water data normalized to cost of goods sold, but wasn't getting accurate information about the drivers of why and when it uses more electricity and natural gas. Through the SEM program, Bernadette now better understands what it costs to turn on the lights and machines, and uses this information to find ways to reduce energy consumption.

PROJECT-AT-A-GLANCE

- LED lighting upgrade

Project benefits

- Meet corporate energy reduction goals
- Improve energy efficiency
- Maintain bright light levels for work areas
- Reduce labor, maintenance and repair costs

Financial analysis

- \$211,747 in project costs
- \$115,623 in cash incentives from Energy Trust of Oregon
- \$45,131 estimated annual energy cost savings

Estimated annual savings

- 708,473 kilowatt hours

Stanley Hydraulics has worked with Energy Trust to implement several energy-efficiency projects including investing in a new air compressor and training employees to find and fix air leaks. Recently, Stanley completed a major upgrade to high-bay LED lighting technology throughout the plant, which has already reduced energy use and is estimated to reduce the plant's lighting costs by 77 percent in the first year.

One roadblock encountered by Bernadette in tackling the lighting project is that the company operates in leased facilities.

"Energy is a high priority at the corporate level but our finance folks were skeptical of investing in a building that we don't own, even though we've been in this location since the 1960s," she said. "We were able to demonstrate that the lighting investment could cut our energy bill in half right away. And that didn't include the savings from reduced labor, maintenance and equipment costs. Thankfully, the numbers made an impact and they could see that it would pay for itself very quickly. We were able to negotiate with our building owner and move the project forward."

The facilities team wanted to shift to LED lighting for its energy-saving features and long life, but the team was concerned that the newer technology was out of their price range. As LEDs came down in cost and product options improved, the time was right to do a full upgrade to the new technology. They replaced 716 metal halide and T8 lamps with 394 interior LEDs. Occupancy controls were added throughout the plant.

"Employees love it," she observed. "The light is bright and we've engineered out the human component. Occupancy sensors dim the lights when they aren't needed, but come back on to full brightness quickly once they detect activity. It was worth the investment."



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We have a better understanding of the factors that influence energy use and we're using that knowledge to make lasting change throughout the company.



**Bernadette Donald,
energy champion,
environmental, health & safety manager
Stanley Hydraulics**