

CASE STUDY Food Production

Low-cost changes result in substantial savings for a Northwest bakery



Founded in 1973, the Plush Pippin bakery is part of Weston Foods—a leader in the North American baking industry, producing breads, rolls, donuts, cakes, pies, bagels, tortillas, cookies, crackers, and more. The Northwest-based bakery produces more than 100,000 pies per day at its 100,000-square-foot plant in Kent, Washington.

To modernize its operations and enhance cost efficiency, the Plush Pippin bakery sought to improve the refrigeration, HVAC, compressed air, lighting, and other energy using systems throughout its facility. Through the combination of Puget Sound Energy's (PSE) Industrial System Optimization Program (ISOP) and Cascade Energy's Strategic Energy Management (SEM) program, the Plush Pippin bakery reduced its electrical usage, resulting in total savings of more than \$200,000.

The bakery accomplished these savings through low- and no-cost improvements completed during its participation in the SEM and ISOP energy-saving programs.

REDUCTION IN ELECTRICITY USAGE

25% over four years

TOTAL COST SAVINGS

\$200,000+

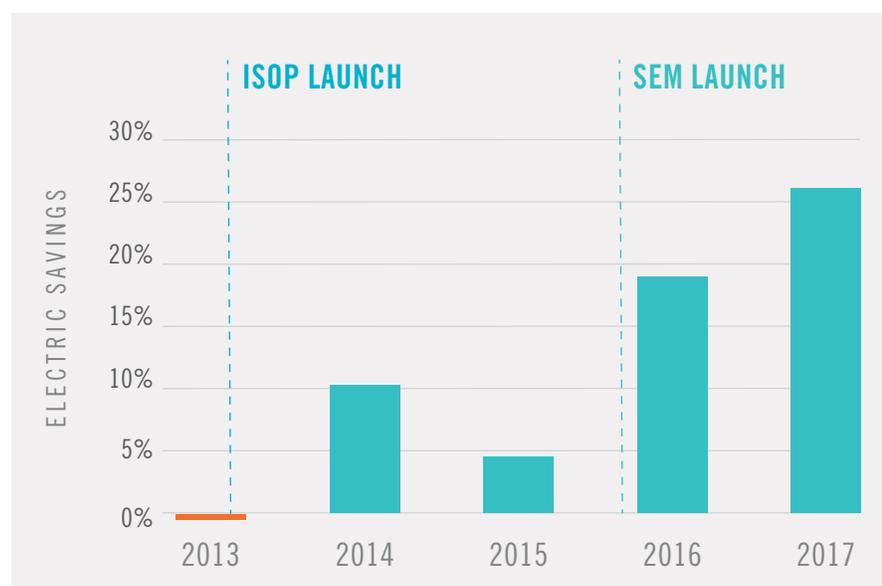
FACILITY SIZE

100,000 square feet

IMPROVED SYSTEMS

HVAC, refrigeration, compressed air, and lighting

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Reduced electricity consumption over four-year period by program:

ISOP: 10%

SEM: 15%

Industrial System Optimization Program (ISOP)

Launched in 2012, ISOP is designed to incentivize and reward industrial customers for reductions in electrical consumption through low- and no-cost energy efficiency improvements. The Plush Pippin bakery was an early ISOP adopter and enrolled in July 2013. The ISOP process includes establishing an Energy Champion and Executive Sponsor for each site. Maintenance Manager Tim Richardson is the Energy Champion at the Plush Pippin bakery. He is supported by Bakery Manager Brandon Bell, who serves as the Executive Sponsor.

Through ISOP, the Plush Pippin bakery achieved more than \$34,000 in annual electrical savings by implementing a combination of operational changes and low-cost projects totaling \$26,000. ISOP incentives reduced this cost to less than \$8,000, resulting in a payback period of less than three months.

Strategic Energy Management (SEM)

Following the success of its ISOP efforts, the Plush Pippin bakery enrolled in Cascade Energy's SEM program in early 2016. SEM drives energy savings through organizational development, training, and energy monitoring to drive low- and no-cost behavior-based energy savings. At its core, SEM involves engaging and inspiring a broad group of employees who become an onsite Energy Team, working together to identify savings opportunities across the site, and then assessing and prioritizing those opportunities.

Each SEM engagement begins with a Kaizen (or continuous improvement) event. At the Plush Pippin bakery, the event was led by the Cascade Energy SEM Coach and Technical Assistant in collaboration with the bakery's Energy Champion. The 16 participants identified 51 opportunities, equating to more than 700,000 kWh of energy savings.

In the first six months of the SEM program, the Plush Pippin bakery achieved an additional 11.6% reduction in its electrical usage and earned a \$4,500 incentive payment from PSE as a direct result of its work to implement additional recommendations from ISOP and SEM.



Tim Richardson of the Plush Pippin bakery, David Montgomery of Puget Sound Energy, and Martin Lott and Sam Skidmore of Cascade Energy formed a successful, energy-saving partnership that can serve as a model for others.

The SEM program also included access to Energy Sensei, energy management collaboration software, with an energy model of the bakery that provided rapid feedback on the site's energy usage. Tim Richardson, the bakery's Energy Champion, stated, "The software was so important. Data and results matter to our employees. Energy Sensei showed them the outcome of their energy saving efforts right away."

A winning combination

To continue the savings achieved through SEM, the onsite Energy Team—with the support of the Executive Sponsor and the Energy Champion—meets quarterly to review progress on energy performance and projects.

The combination of ISOP and SEM at the Plush Pippin bakery was a cost-effective endeavor that improved employee engagement, increased bakery uptime and productivity, and reduced electricity costs by more than 25%.

"We have seen our monthly electricity bill cut in half through these efforts."

Tim Richardson,
Maintenance Manager / Energy Champion