



PACIFIC NATURAL FOODS COOKS UP A RECIPE FOR SAVINGS

AN ON-GOING COMMITMENT TO ENERGY EFFICIENCY SLICES ENERGY COSTS BY AN ESTIMATED \$126,137 ANNUALLY

Pacific Natural Foods, a Tualatin-based producer of natural and organic food products, understands that sustainable business practices are good for the planet and the bottom line. Since 2005, Pacific Foods has approached energy efficiency with the same diligence and dedication that the industry leader displays when selecting ingredients for its award-winning soups, broths and non-dairy beverages. By implementing 20 energy improvement projects, Pacific Foods has reduced its annual energy use by 1,757,132 kilowatt hours—the equivalent of removing 117 cars from the road for a year.

Pacific Foods' first energy projects involved replacing metal halide lighting with energy-efficient T5 and T8 fluorescents, which save nearly \$46,000 annually and helped kick start the company's energy-efficiency efforts.

Today, Pacific Foods' energy management program has grown to include a formal energy policy that gives preference to energy-efficient equipment and a dedicated, cross-functional, energy management team that sets the course for all company energy efforts.

After cutting lighting energy use in half, Pacific Foods moved on to more capital-intensive projects, focusing considerable attention on its compressed air system, which was undersized. An engineering study, provided at no charge by Energy Trust of Oregon, recommended installing a new, energy-efficient compressor with variable frequency drive, VFD. The project also included a new compressed air dryer and a new 1,060-gallon receiver, as well as modifying piping to reduce pressure drop, relocating the existing compressor and receiver, and installing a sequencer that analyzes load and selects which equipment to run for optimal efficiency.

PROJECT-AT-A-GLANCE

- 600,000 square feet of production and warehouse in 13 buildings
- 350 employees

Project benefits

- Lower operating and energy costs
- Increased production capacity
- Reduced noise
- Improved lighting levels
- Easier maintenance and sanitation
- Longer equipment life
- Opportunity for improved safety
- Reduced carbon footprint

Projects

- 200-hp compressor with VFD
- New compressed air dryer
- Compressed air sequencing controls
- Compressed air blowers, fan motors and air knives
- Compressed air leak detection and repair, with operator training
- Cooling tower fans and VFD
- Refrigeration control system
- Plate-and-frame heat exchanger expansion
- Conversion of metal halide lighting to T5 fluorescent and high-performance T8 fluorescent
- Conversion of T12 fluorescent lighting to high-performance T8 fluorescent
- Lighting occupancy sensors

Financial analysis

- \$520,909 in project costs
- \$173,891 in cash incentives from Energy Trust
- \$126,137 estimated annual energy cost savings

Estimated annual savings

- 1,757,132 annual kilowatt hours
- 668 tons of carbon dioxide

Pacific Foods continued to work with Energy Trust on additional compressed air improvements, including installation of two centrifugal blowers, two blower motors and eight air knives that are used in product packaging. When Energy Trust began offering an operations and maintenance initiative to repair compressed air leaks, Pacific Foods jumped at the chance to identify more energy waste. “Energy Trust helped us find and fix hundreds of compressed air leaks,” said Rory Schmick, sustainability manager, Pacific Foods. “We purchased a leak detector and now conduct our own leak detection audits every six months.” The estimated annual energy savings from all of Pacific Foods’ compressed air projects total more than 683,900 kWh.

When it was time to upgrade the refrigeration system in one of Pacific Foods’ buildings, Energy Trust arranged for Cascade Energy, an Energy Trust Program Delivery Contractor, to conduct site visits and prepare an engineering analysis of options. Cascade Energy recommended a control system that provides tighter control of compressor suction and discharge pressure and also stages the system’s two compressors to avoid both running at part load. Separately, Cascade Energy suggested expanding the heat exchanger used for cooling chicken broth so some of the cooling load could be transferred to the facility’s cooling tower—an improvement that also allows Pacific Foods to increase broth production.

Although Pacific Foods has already reduced energy costs by an estimated \$126,137 annually, the company keeps looking for more ways to fulfill its commitment to sustainability and energy efficiency. “We held an energy fair and invited employees to share their ideas on how to trim more energy waste,” said Schmick. “We received 60 suggestions. There are always more opportunities out there.”



To learn more, visit www.energytrust.org or call **1.866.368.7878**.



Those first projects offered an excellent return on investment due to high energy savings coupled with cash incentives from Energy Trust. They paid for themselves in 1.4 years, capturing the attention of management and employees and creating instant visibility for our energy management program.

Rory Schmick
sustainability manager
Pacific Foods

