

Production Efficiency: YoCream International, Inc.



State-of-the-art freezer serves up energy savings

When it comes to whipping up good ideas, YoCream is in a class of its own. The 30-year-old company makes, markets and sells frozen dessert, snack, and beverage items to food service operators worldwide. YoCream started manufacturing locally in 1987 and now has over 200 distributors. This growth created the need for a larger, onsite freezer to freeze and store up to one-half-million pounds of product per day.

A \$105,265 incentive from Energy Trust of Oregon helped YoCream invest in the most energy efficient equipment available for a solution that will serve up one million kilowatt-hours in annual energy savings. Besides saving energy, the company has reduced its environmental footprint thanks to the onsite storage. Trucks no longer have to burn fuel to transport products offsite.

“WE’VE GONE TO A WHOLE NEW LEVEL WITH OUR HIGH EFFICIENCY FREEZER. IF WE WERE GOING TO BUILD A NEW FREEZER, WE WANTED IT TO BE THE MOST EFFICIENT, BEST FREEZER FOR OUR COMPANY WHILE MINIMIZING ENVIRONMENTAL IMPACTS. ENERGY TRUST INCENTIVES HELPED US DO THAT.”

*Terry Oftedal, director, operations & vendor relations
YoCream International, Inc.*

Goals

- Increase freezer capacity into the main manufacturing plant
- Reduce energy costs for refrigeration/freezing
- Improve product quality and plant operations

Strategies

Cascade Energy Engineering recommended using variable frequency drive controls, high efficiency condensers, and a heat exchanger to discharge heat for the underfloor glycol system

Project Benefits

- Consistent temperature control
- Lower operating and energy costs
- Reduced environmental impacts
- Estimated annual savings of 1,072,033 kilowatt hours

Equipment Installed

- Variable frequency drive (VFD) on new 125 hp low temperature compressor
- VFD and centralized controls on high temp compressor
- Efficiency condensing pressure control
- Evapco ATC 221B model condensers—two installed
- VFDs installed on all condenser fans
- Efficient evaporators with VFDs installed
- Heat exchanger recovers compressor heat discharge to provide heat for under floor glycol heating system

Financial Analysis

YoCream International, Inc., received financial incentives from Energy Trust, which helped make the project affordable:

- \$105,265 incentives from Energy Trust
- Applied for Oregon Business Energy Tax Credits equal to 35 percent of eligible project costs
- Less than 2-year payback after Energy Trust incentives and tax credits

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New freezer blends energy savings with smooth operations

Today, YoCream has greater capacity and operates more efficiently. The company installed a 10,600 square-foot freezer with variable frequency

drives in all compressors, condenser controls and high efficiency evaporators. Now Chief Engineer Paul Haugen can maintain the desired -10 degrees Fahrenheit and wind chill levels from his computer, at home or in the office. An underfloor heating system ensures that the cold air stays in the freezer and doesn't travel into the ground below. And fast-closing doors make sure the cold stays where intended.

Project Team

YoCream International, Inc.

Energy Trust of Oregon, Inc.

Cascade Energy Engineering (trade ally)

Pacific Power (electric utility)

Oregon Department of Energy (tax credits)

How can we help YOU?

Before you plan your next new construction project or major renovation, give us a call. Energy Trust's Production Efficiency program offers financial incentives, technical assistance and other services to help you maximize energy efficiency.

To find out how we can help you, contact us at 1-866-368-7878 or visit our website at www.energytrust.org.

Energy Trust of Oregon, Inc., is an independent nonprofit organization dedicated to energy efficiency and renewable energy development. Our mission is to change how Oregonians produce and use energy by investing in efficient technologies and renewable resources that save dollars and protect the environment. We serve Oregon customers of Portland General Electric, Pacific Power, NW Natural and Cascade Natural Gas.

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