



# PRODUCE WHOLESALER KEEPS IT FRESH WITH ENERGY EFFICIENCY

**REFRIGERATION CONTROL UPGRADES AT UNITED SALAD  
DELIVER A COOL \$25,111 IN ESTIMATED ANNUAL ENERGY SAVINGS**

With 136,000 square feet of cold storage, United Salad Co. is always looking for ways to trim refrigeration energy costs. When the company's refrigeration equipment supplier mentioned that new controls could cut refrigeration energy use by at least 15 percent, United Salad immediately was interested. The wholesale produce distributor turned to Energy Trust of Oregon, which had worked with the company on previous energy projects, for help determining if the product was right for them. The result is a sophisticated new system that controls 30 of the facility's rooftop-mounted Freon condensing systems, trimming refrigeration energy by 21 percent, for an estimated savings of 518,822 kilowatt hours per year.

Using sensors and nodes located throughout the plant, the new controls cycle evaporator fans based on demand for cooling, rather than having them run continuously. The controls also regulate the frequency and length of defrosts—initiating defrost only after detecting frost buildup and terminating defrost as soon as sensors detect that frost has been removed.

“ The new refrigeration controls also offer tighter temperature control, which reduces the risk of spoilage and lost revenue.

Barry Corno, director of operations and distribution  
United Salad Co.

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## PROJECT-AT-A-GLANCE

- 136,000-square-foot food processing and cold storage facility
- 120 employees

## Project benefits

- Lower operating and energy costs
- Tighter control of refrigeration temperatures
- Improved maintenance and faster troubleshooting
- Data monitoring and recording
- Opportunity for higher foodservice safety certification
- Reduced environmental impacts

## Equipment

- New refrigeration controls for 30 rooftop Freon condensing units
- Data monitoring and recording on a web interface

## Financial analysis

- \$116,305 total project cost
- \$58,152 in cash incentives from Energy Trust
- \$25,111 estimated annual energy cost savings

## Estimated annual savings

- 518,822 kWh
- 197 tons of carbon dioxide

“We’re very happy with the new system,” said Barry Corno, director of operations and distribution, United Salad. “The controls offer excellent energy savings and other benefits as well. We can control temperatures to within a tolerance level of 1.5° F., which ensures our fruits and vegetables are even fresher. The system’s data monitoring and recording capability help us identify problems early on and also provides a written record of temperatures so we can achieve the highest possible certification in food safety compliance.”

United Salad moved forward with the project after Energy Trust arranged for Cascade Energy, one of its Program Delivery Contractors, to visit the facility and prepare a detailed engineering report at no charge. Energy Trust also offered a cash incentive of \$58,152, which lowered the payback time on the \$116,305 project to only 2.3 years.

“The technical analysis and cash incentive from Energy Trust made a big difference,” said Corno. “We’d worked with Energy Trust before when we installed energy-efficient lighting in our parking lot. They are very helpful.”



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#### EARLIER PROJECTS

##### New air compressor with variable frequency drive

- \$21,188 total project cost
- \$12,227 cash incentive from Energy Trust
- \$3,339 estimated annual energy cost savings
- 68,999 estimated annual kWh savings

##### Energy-efficient lighting upgrade

- \$33,579 total project cost
- \$7,823 cash incentive from Energy Trust
- \$9,115 estimated annual energy cost savings
- 188,330 estimated annual kWh savings