



Providence Child Center

This project was completed in
August of 2008

Portland, OR

Cost and Savings

Annual kWh Savings: 91,000
Annual therms Savings: 7,000
Total Yearly Cost Savings: \$12,300
Total Project Costs: \$56,000
Total Program Incentive: \$28,000
Net Owner Cost: \$28,000
Simple Payback: 2.3 yrs

Owner:

Providence Health & Services

Size:

91,000 ft²

Project Scope:

Retrofit existing controls with a Tracer Summit DDC system, energy savings.

Incentive Program:

Energy Trust of Oregon

Project Overview:

The Providence Child Care Center sought ways to reduce energy consumption and optimize its equipment operations. The 4 story, 91,000 ft² facility includes health care, office space, and food service spaces that operate 24/7. TraneOregon's Energy Solutions group determined energy conservation measures (ECMs) and enrolled Providence into the Energy Trust of Oregon (ETO) incentives program. Contracted by the ETO the Energy Solutions group supported Providence in attaining energy and cost savings by providing the Providence Child Care Center with:

- An in-depth investigation to identify savings opportunities
- Training for the building staff on implemented measures

Participation in the incentive program resulted in a 9.5% reduction in energy use with an expected annual savings of \$12,300 and an incentive of \$28,000 towards initial project costs. In addition, a 25% reduction in energy use and over \$30,000 in potential savings was identified for future implementation at the property.

Investigating Energy Saving Opportunities:

Through an in-depth analysis of the building operations, the Energy Solutions group worked closely with the building staff and found that several operational improvements to the rooftop units, air distribution system, and the DDC controls system could bring dramatic savings by:

- Eliminating unnecessary simultaneous heating and cooling
- Incorporating tighter control strategies like optimum start, supply air temperature reset, and economizer control
- Installing Variable Frequency Drives on the supply fans
- Retrofit existing zone boxes with new VAV boxes

Energy Savings Results:

A new DDC system was installed to monitor the rooftop units and incorporate energy savings opportunities like optimum start, supply air temp reset, and economizer control.