

## CASE STUDY

 Right-Sizing  
Strategic Energy Management Programs

 Earth2o Considers the U.S. DOE's  
*Save Energy Now* LEADER Program


As a company whose mission is “to do business the right way,” Earth2o, a spring water bottling company, was interested in reducing its carbon footprint by reducing energy use. Located in the fairly remote town of Culver, Ore., Earth2o uses electricity and imports propane for most of its energy needs, making energy a sizable cost for the company.

When the opportunity to help the company run more efficiently came along, Earth2o was eager to participate. In October 2008, the company joined NEEA's ISO 50001/SEP-based Demonstration Pilot and the U.S. DOE's *Save Energy Now* LEADER program.

As part of the *Save Energy Now* LEADER program, Earth2o committed to the “stretch” goal of reducing their energy use per unit of production by 25% in 10 years, leading the bottled water industry towards increased energy efficiency. *Save Energy Now* LEADER Companies report progress on their energy use to the Department of Energy on an annual basis. This level of tracking and reporting allowed Earth2o to focus on energy in ways they hadn't considered. For Earth2o, the structure of a goal and some outside accountability was just right for the size of their company.

## » Looking at the big picture

Upon further research, Earth2o realized that neither the U.S. DOE's SEP energy management certification program or ISO's 50001 energy management standard was a good fit. Earth2o only has one site with relatively simple processes, and is small enough that the entire staff is able to meet in a single small gathering space. As a result, communicating energy use information, operating procedures, and discussing energy projects can easily and effectively be done without a lot of tracking and planning.



What's more, Earth2o found it difficult to meet the SEP program requirement of using at least three years of energy data as a baseline to compare against future improvements, because a recent move meant previous years' data was informed by a facility and equipment no longer relevant to their current operations.

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The four companies participating in the Demonstration Project collectively documented 17,000 kWh and 2,500 MMBTU's in energy savings.\*

\*These savings are self-reported and have not been validated by an independent third party.

# »» Strategic energy management systems streamline and increase energy savings efforts across a variety of industrial sites producing a broad range of products.

ISO-level systems of standardization and documentation did not make as much sense as it does for companies with more employees, several shifts, multiple sites and/or very complex processes.

## »» Energy usage awareness

However, identifying viable opportunities for energy savings was still a key focus. Earth2o minimally heats their facility and does not air condition the shop floor (which is true for many manufacturers). Almost all of their energy use is from cleaning, labeling, filling, and packaging bottles for delivery. Their recent move to a new facility allowed them to benefit from the most efficient insulation and production equipment, which left minimal opportunities to improve their space and processes. While the move meant there wasn't much "low-hanging fruit" for Earth2o, paying regular attention to their energy use in a more structured way has allowed them to optimize their operations and to quickly identify issues.

## »» Finding the right system for your company

While ISO 50001 and SEP didn't align with Earth2o's current needs, the company continues to benefit from their participation as a *Save Energy Now* LEADER through:

- Public executive commitment
- Identifying the equipment in their processes which uses the most energy
- Regularly tracking their energy use
- Determining the role weather plays in their energy costs
- Identifying free and low-cost sources of assistance, such as the Energy Trust of Oregon and the Oregon Manufacturing Extension Partnership (OMEP)

Industrial facilities choosing to implement strategic energy management have persistent and reliable energy savings, bolster the bottom line, and position themselves for sustained success in the increasingly competitive global marketplace. ■

## About NEEA's pilot program

The Northwest Energy Efficiency Alliance's (NEEA) Northwest Strategic Energy Management (SEM) Demonstration Pilot of the International Standardization Organization's (ISO) 50001 energy management standard, and the U.S. Department of Energy's (DOE) Superior Energy Performance (SEP) program is part of its commitment to transform the market for strategic energy management in the Northwest. NEEA, with the help of utility partners, conducted the pilot from October 2008-2010 with five participating companies from throughout the region. NEEA provided strategy and technology support, utility coordination efforts, and included NEEA field advisors to work with participating companies to embed energy management into industrial business plans — from leadership to operational levels — to support long-term energy savings.



### »» Pilot Benefits

- Implementation of energy-saving efforts at each of the participant companies
- Persistent and reliable energy savings
- Statistically validated energy savings

### »» Pilot Challenges

- Started at the height of the recession
- Many companies were not in a financial or staff resources position to participate
- All companies experienced major business changes during the pilot timeframe
- Many utilities and company "facilities maintenance" groups were not familiar with ISO-style management systems

### »» Best Practices for Energy Reduction

- Executive, public commitment to the U.S. DOE's *Save Energy Now* LEADER program
- Goal of 5% energy intensity reduction over the past 3 years, plus 25% more future energy intensity reduction over 10 years
- Data tracking and analysis
- Describing and documenting processes
- Energy training
- Auditing and corrective action
- Management reviews

# »» THE JURY IS IN

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