



## Utah Department of Environmental Quality

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### **Intermountain Healthcare Reduces Its Carbon Footprint Through Energy Efficiency Projects**

Given the nature of the year-round service and scope of providing healthcare, hospitals require significant amounts of energy which can result in a substantial carbon footprint. Intermountain Healthcare's (Intermountain) upper management's decision to reduce its carbon footprint through energy efficiency projects was driven by the desire to be a good community citizen not necessarily to save money. Intermountain found, though, that their reduction of 3.3 kilowatt-hours of electricity and 11.9 million lbs. of CO<sup>2</sup> resulted in substantial savings, also.

#### **Background:**

Intermountain is the largest nongovernmental employer in the State of Utah with over 30,000 employees, and 21 hospitals in Utah. Intermountain facilities range in size from 470 beds to 26 bed rural facilities.

#### **Environmental Benefits:**

Intermountain initiated its energy efficiency program by hiring Salt Lake City's ETC Group, Inc. engineering firm to conduct comprehensive energy audits at five of their facilities. Results from the energy audits were benchmarked against EPA's Energy Star and the American Society for Heating, Refrigeration and Air Conditioning Engineers (ASHRE) guidelines. Energy efficiency measures, such as optimizing central plant controls, installing equipment to improve efficiencies, and modifying or repairing existing equipment were then undertaken to meet Intermountain's goal of achieving an EPA Energy Star rating for all of its buildings. In order to qualify for the Energy Star rating, a building must score in the top 25 percent of EPA's National Energy Performance Rating System.

In order to optimize central plant controls, many Intermountain hospitals employ computer-driven building management systems that distribute heat and cooling as needed more efficiently. New variable frequency drives have been installed

on the pumps and motors that run various pieces of equipment, so the equipment runs at optimal speeds, resulting in significant reductions in power usage. Intermountain also repaired and modified Variable Air Volumes boxes that efficiently provide the proper mix of heat, cooling, and humidity that hospitals require. More energy savings were acquired by modifying the existing chilled water system to more efficiently sequence chillers, pumps and cooling towers. Further energy savings were gained by installing additional occupancy sensors to control lighting, heating and cooling.

The energy efficiency projects completed by Intermountain are examples of what can be accomplished when a company makes a decision to lessen its impacts on the environment. In order to initiate an energy efficiency program, Scott Anderson, Intermountain's Energy Manager, recommends, "Have a clear definition of what your goals are and how you want to execute those goals".

Intermountain is continuing its focus on energy efficiency measures with additional projects including optimizing central plant and boiler plant controls, managing discharge air temperature and make up air in chiller plants, retrofitting and upgrading Variable Air Volume boxes, and optimizing building management systems and air handling controls.