

## **High-Performance Building Yields Low Overhead Costs for Woodman's Food Markets' Oak Creek Store**

### **CASE STUDY**

In 2008, Woodman's Food Markets debuted its first high-performance, energy efficient store in Oak Creek, Wis. The location features the warehouse-style format similar to its 11 other locations in Wisconsin and Northern Illinois, and is home to 250 employees, including 80 full-time workers.

During the construction phase, the Janesville, Wis.-based supermarket chain paid close attention to how it could save money by reducing energy consumption in the new 236,000-square-foot facility. Overall, energy is a top operating cost for the supermarket industry after shelf stock. Every dollar saved contributes to improved profit margins and provides substantial financial savings in the long run.

By choosing energy efficient light fixtures, and partnering with Certified Refrigeration & Mechanical, Inc. of Madison, Wis. for expertise in selecting HVAC systems and refrigeration equipment, Woodman's Food Markets will save more than 1.5 million kilowatt-hours of electricity and 40,000 therms of natural gas annually. That's enough energy to power 200 Wisconsin homes for a year. The grocer will also enjoy \$150,000 in energy savings on its utility bills each year.

"We were amazed by the savings," said Clinton Woodman, vice president of Woodman's Food Markets. "These measures have lowered our maintenance and operating costs while helping save energy and improve our bottom line."

#### **ENERGY SAVINGS— LOOK FOR IT IN YOUR GROCER'S FREEZER**

With the help of Focus on Energy, Wisconsin's energy efficiency and renewable energy initiative, Woodman's Food Markets learned about energy saving technologies and received \$143,000 in financial incentives to help install them throughout the Oak Creek store. Some of the measures include:



#### **Light-Emitting Diode (LED) Lighting**

The store installed LED lighting in all of its reach-in refrigerated cases. LEDs produce light more efficiently than traditional fluorescent lighting by using a microchip that emits a directional and highly reflective light. LEDs are a visually attractive option for this application,



where product appearance is enhanced when illuminated by this clean-appearing light. LEDs also generate less heat inside the case for the refrigeration system to remove, which means less energy is wasted.

Woodman's is open 24 hours-a-day and is well-suited to use controls with LED case lighting. Unlike fluorescents, LEDs turn on instantaneously in cold conditions. Motion-sensor controls were installed to quickly turn on case lights when customers are near and turn them off during periods of inactivity. Reducing "on" time extends LED fixture life and further reduces energy use. The LEDs used have a rated life of 10 years – saving on maintenance costs – and contain no mercury, allowing for safe and easy disposal.

For more information,  
call **800.762.7077** or  
visit [focusonenergy.com](http://focusonenergy.com).

Focus provided financial incentives of \$10,000 to help make this energy-efficiency project feasible.

### Fluorescent Lighting

Woodman's also installed T5 fluorescent lighting throughout the sales floor, and occupancy-controlled T8 fluorescent fixtures in the back warehouse. The T5s last longer and provide a more attractive light than standard fluorescent or incandescent fixtures. The occupancy sensors used in conjunction with warehouse lighting turn lights down or off when an area is not in use, saving up to 50 percent on energy costs. In addition to the up-front savings, the use of fluorescent lighting will provide savings for years to come.



### Anti-Sweat Heater Controls

Refrigeration represents more than 60 percent of the electrical energy use in an average grocery store. Anti-sweat heater controls ensure that display case door heaters are used only when necessary and remain off when glass fogging or ice buildup is not an issue. This is especially useful in Wisconsin, where humidity levels are only high during the summer months, and does not create fogging/icing conditions. Focus provided an \$11,560 incentive for adding controls to the store's 289 display case doors.



### Water-Cooled Condensers

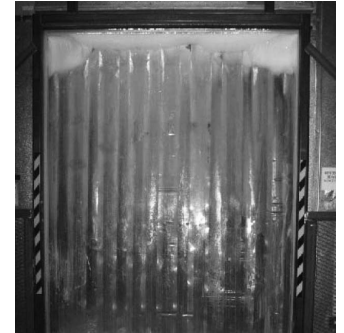
Focus provided a \$17,000 incentive for taking advantage of water-cooled condensers (versus air-cooled models). As a result of this upgrade, the store has reduced its overall compressor horsepower by 20 percent and reduced the number of refrigeration racks from 10 to 8. The water-cooled condenser will provide a more even and constant temperature, while operating at lower condensing temperatures and pressures.

### Ambient Sub-Cooling

Woodman's is using ambient sub-cooling to lower the temperature of the refrigerant that is supplying the fixtures and walk-in coolers and freezers. The colder the refrigerant is at the fixture, the more efficient the entire refrigeration system operates. The ambient sub-cooling is being utilized during the fall, winter and spring seasons and will help save 63,500 kilowatt-hours of electricity and more than \$6,350 per year.

### Cooler Strip Curtains

Woodman's installed plastic cooler strip curtains on its walk-in cooler doors in the warehouse, as well as on the sales floor in the liquor and dairy departments. This measure will keep cool air in and reduce air infiltration while allowing customers to easily access items.



### KEEPING TABS ON BIG SAVINGS

At this rate, Woodman's will save approximately \$150,000 over the course of a year, which results in a payback period of approximately 14 months to recapture the total upgrade costs.

"We're using better technologies, seeing substantial savings and helping the environment," Woodman explained. "It's a win-win for us."

### CHECK OUT FOCUS ON ENERGY FOR YOURSELF

Focus on Energy provides specialized support for businesses throughout Wisconsin. To get started saving money at your grocery store, visit [www.energysavingstool.org](http://www.energysavingstool.org). This virtual tour will help you identify opportunities that will better control costs, improve operating efficiency, and increase profitability.

Start improving your profit margin today! Focus provides grocery stores with project evaluation assistance, savings assessments, best-practice training, and energy management tools. To learn more, visit [focusonenergy.com](http://focusonenergy.com) or call **800.762.7077**.