

## **Saving Energy ... Protecting the Environment**

### **Shaw's: An energy conservation leader in the supermarket industry**



The supermarket business is an extremely energy intensive industry due mostly to refrigeration systems, air conditioning, lighting, heating and food preparation. Energy is expensive, so conservation is important. Next to labor, electricity is our largest operating cost. The estimated annual electric bill for the supermarket industry is now over \$12 billion. Shaw's and Star Markets annual bills total almost \$35 million. Even though we may not operate 24-hours per day, many of our systems work 'around-the-clock' to keep food cold, stores lighted for business (and overnight stocking) and air conditioned or heated for proper ventilation. The same is true for our 4 distribution centers, which are 24-hour/7-day operations.

Due to the significant expense and demand on depleting energy resources, Shaw's has been committed to energy and resource management for many years. Our company has realized that reducing energy not only reduces pollution but also directly benefits the bottom line. The company has also developed a strong focus on minimizing waste and pollution in all areas of our operation. According to Kathy Loftus, Manager of Energy and Regulatory Affairs, Shaw's has been a leader with respect to efficient energy management and has been sought after to present our successes at local and national conferences. We have also received many awards including Maine's Earth Day 2000 Clean Energy Award. The federal government's Environmental Protection Agency (EPA) has informed Shaw's that it operates at well below the national energy consumption index and has chosen Shaw's as runner up Energy Star Buildings and Green Lights Partner of the Year for 1998 and in the winners circle in 1999.

### **2001 ENERGY STAR Awards**

On March 20, 2001, ENERGY STAR will recognize corporate and governmental trendsetters for their exemplary leadership in voluntarily reducing unnecessary energy use and preventing pollution.

This year, Shaw's representatives will travel to Washington, D.C. to accept the EPA's Energy Star Building's Retail Partner of the Year Award for 2001. Receiving this national award is quite an honor. We are very fortunate to have such a dedicated team of professionals working diligently to make our company energy efficient in all areas of the business.

### **What exactly are we doing?**

Shaw's has a comprehensive environmental policy that guides the company in all areas of the business. This policy establishes the company's goal to "maintain the highest standards of environmental management in all areas of our business and to constantly improve on the standards. Shaw's also expects all of its suppliers to reflect these standards in their businesses." This comprehensive policy distinguishes us from many other businesses - even those with a strong focus on reducing energy use.

Shaw's is committed to environmental quality in all of its operations. One example of this environmental commitment is the phase out of ozone depleting refrigerants in our stores.

### **Other energy conservation and environmental programs**

While Shaw's has many energy and environmental programs in place, three in particular are interesting to note. They are computerized energy management, lighting retrofits and fuel efficiency of Shaw's fleet of trucks.

## **Computerized Energy Management**

In 1997, Shaw's began to work with a refrigeration leak detection system provider to develop an energy sub-metering and monitoring program using the same communication and reporting systems that led to a successful refrigerant leakage reduction program. Before this system, the only way to detect energy waste was to see an increasing trend when reviewing monthly bills. It was also difficult to isolate where the problems and inefficiencies were because the Energy Department was only able to review what is called a "whole house" bill.

Today, using state-of-the-art equipment, information from up to 16 of the stores' main electrical circuits and energy systems is downloaded to the monitoring company. The company provides Shaw's with "exception reports" that show when energy usage is higher than expected. Shaw's now has a tool that saves time, energy and maintenance costs. With this system, our people can quickly diagnose the problem, correct it remotely by computer, have a member of store management take care of it, or send a maintenance person to the store with a description of the problem.

## **Fuel Efficiency in the Shaw's Truck Fleet**

Our trucks travel the highways and bi-ways of New England almost everyday of the year, so it is important that our truck fleet runs as fuel efficiently as possible. Over the past four years, Shaw's has implemented a fleet modernization program. Specifications have been changed to include more efficient engines, aerodynamic designs, electronic speed controls and fuel mileage. The company estimates an increase in efficiency of approximately one-half mile per gallon. Because approximately 20 new trucks are purchased each year, the fleet annually enjoys an overall increase of about two tenths of a mile per gallon increase in efficiency.



Although this might not sound like much of an improvement, the savings adds up when you consider that the number of miles driven by Shaw's trucks is approaching 17 million miles per year. Shaw's also has a tire recapping program and, although not mandated to, has replaced or converted 95% of its refrigerated trailers with newer units that use more "environmentally-friendly" refrigerants.

## **Lighting Retrofits**

Retrofitting lighting systems began at Shaw's in 1991 when some backroom and perimeter lighting systems were converted through utility incentive programs. In those days, metal halide fixtures were used to light the sales area, because it was thought that they were the most efficient source of light for that use. Since 1996, the company has designed and retrofitted the more expensive and efficient continuous rows of 1 X 4 uniform fluorescent light fixtures with T- 8 lamps and electronic ballasts. Also, now that ballasts have been improved to work well in the cold, we have installed these lights in refrigerated areas as well. In addition to the lighting savings, the change has reduced refrigeration loads by reducing the amount of heat generated by the new case lighting. On average, each store retrofitted saves between 125,000 and 300,000-kilowatt hours per year.

In the distribution centers, Shaw's has installed state of the art lighting systems, including "hi/lo dimming" systems that automatically dim lights when aisles are not occupied.

## **Other Energy Efficiency Initiatives**

- Shaw's uses variable speed drive technology on compressor, condenser and HVAC systems.
- Premium efficiency motors were specified in cases as well as for HVAC fan motors and refrigeration compressor/condenser motors.
- We utilize heat recovery technology that allows us to take waste heat from the refrigeration systems and use it to make "free" hot water.
- Half of the sales area light fixtures and most refrigerated case lights and back room lights are off overnight when the stores are closed.
- We relax temperature setpoints to save energy, and we ensure controls are working correctly by periodically reviewing system schedules and setpoints.

We've also been recognized by our customers and our suppliers for our assistance during summer capacity shortages by reducing lighting levels.

## **The Future...**

Shaw's has been working with architects and engineers to further improve our store designs. These changes may lead to incorporating such items as daylighting technology, more sophisticated air conditioning controls, solar powered condenser systems and more sustainable construction practices into our buildings.

As far as the truck fleet is concerned, travel patterns are constantly being reviewed, and the recent implementation of network optimization will further reduce the number of miles traveled by our fleet.