



Energy Innovators Initiative Energy Innovators Case Study

February 2003



HBC AND ZELLERS – DOING BUSINESS THE NATIONAL ENERGY WAY

*Fred Ware, C.E.T., Senior Manager, Energy,
Environment, Sourcing Initiatives, Store Operations,
Zellers Inc.*

Background

Established in 1670, Hudson's Bay Company (Hbc) is Canada's largest department store retailer and oldest corporation. The Company provides Canadians with the widest selection of goods and services, available through numerous retail channels. The family of stores comprises four distinct retail channels: the Bay, Zellers, Home Outfitters and Hbc.com.

Established in 1931, Zellers is the mass merchandise division of Hudson's Bay Company. Zellers' priority is to pro-

vide customers with value and price competitiveness on national and private brand merchandise. Zellers' 35 000 associates operate 319 stores in 2.5 million square metres of retail space. With an energy bill of almost \$50 million per year, energy management at Zellers is no small task. Progressive in the way they manage their resources, Hbc and Zellers recognized the need to address their rising energy bill – which not only makes good business sense, but is also good for the environment.



A Zellers store



Natural Resources
Canada

Ressources naturelles
Canada



Hbc's Commitment to Social Responsibility

Hbc believes that a company is obligated to be accountable to all of its stakeholders in all its operations and activities. Socially responsible companies consider the full scope of their impact on communities and the environment when making decisions, balancing the needs of stakeholders with the need to make a profit. Having played a founding role in the development of this nation, Hbc continues to invest in Canada's heritage by making environmentally sound operating decisions. This philosophy is entrenched in all of the family of stores.

Energy Efficiency at Zellers

At Zellers, senior management recognized both the immediate and long-term paybacks of implementing an energy efficiency program. Zellers' Engineering Department committed itself to reducing its energy consumption and related operating costs while making a positive impact on the environment. This commitment led to the development and implementation of a company-wide energy program for Zellers.

To implement this program, Zellers uses a team approach to managing energy consumption. The team has internal representation from engineering, operations, finance and design construction and external strategic allies, including its energy management consultant and its national building systems' contractors.

To further this corporate commitment, Zellers joined the Energy Innovators Initiative (EII), a program under

“At Zellers, we are supported by senior executives in implementing a sustainable corporate energy strategy. We're reducing energy consumption and related operational costs while reducing the use of non-renewable natural resources – all of which is having a positive impact on the environment by reducing greenhouse gas emissions that contribute to climate change.”

Fred Ware
Senior Manager
Energy, Environment, Sourcing Initiatives,
Store Operations
Zellers



A typical Zellers store

Natural Resources Canada's Office of Energy Efficiency, in 1999. The EII is a federal program that helps commercial businesses and public institutions become more energy efficient and save money while reducing greenhouse gases (GHGs) that contribute to climate change.

In June 2001, Zellers was presented with the Retail Council of Canada's Energy Efficiency Award which recognizes significant achievements made by Canadian retailers in the area of energy efficiency. This award is part of a series of special recognition awards. Eligible retailers include those who have joined the EII and have demonstrated their commitment to energy efficiency and reducing GHG emissions by implementing comprehensive energy efficiency retrofits.

Zellers' Energy Program

In 2001, Zellers committed to reducing its energy costs by at least 4 percent over 2000 figures. Specific objectives of the program included the following:

- Improve the shopping and working environment's lighting, comfort and air quality.
- Reduce energy-related costs by
 - Redesigning and upgrading lighting systems to provide energy-efficient, state-of-the-art illumination while maintaining lighting levels.
 - Modifying, upgrading and/or replacing heating, ventilating and air-conditioning (HVAC) systems to improve comfort and air quality while increasing energy efficiency and reducing operating and maintenance costs.



A Zellers storefront

- Upgrading energy management systems to provide improved monitoring, energy efficiency and climate and cost control.
- Improving operations and maintenance procedures.
- Reduce maintenance costs by upgrading or replacing mechanical and electrical systems.

Other components of the program include offsetting capital costs with savings, reducing GHG emissions, increasing the energy and environmental awareness of customers and staff and offering a reward program for employees to celebrate successes and improve morale.

Energy Management Strategies

To achieve these program objectives, the team established a number of strategies, including the following:

- *Procurement strategies:* getting the best purchase price of energy commodities through direct purchase and the “unbundling” of supply where available. For example, in Alberta, Zellers participated in the province’s electricity auction, bidding on electricity supply from the Power Pool of Alberta.
- *Monitoring, tracking and benchmarking:* to successfully manage energy, a reliable method of monitoring and tracking energy use is required. The accurate tracking of

energy use and costs allows Zellers to set achievable targets, prioritize projects, justify capital and program budgets, verify savings and communicate results.

- *Awareness:* Zellers launched an awareness program through a series of road shows presented to store managers in each of its 24 districts. It also produces employee newsletters, offers monthly tips and distributes its *Protecting Our Future* energy reports to all regional, district and store managers. As well, Zellers rewards energy-efficient behaviour by offering financial incentives to

Zellers developed a complete energy baseline of all its facilities in 1999. Since then, energy consumption for each facility has been tracked monthly. Each quarter, energy consumption is analysed to determine the Top 10 energy users in terms of consumption and cost per metre squared. The most energy-intensive facilities are subjected to a detailed analysis to determine the source of excessive energy use. A remedial plan is then developed and implemented.

In addition, Zellers produces exceptions reports that record instances when energy management systems are overridden. This allows Zellers to monitor how effectively its programs are operating.

district store associates who achieve the highest year-over-year improvement on energy efficiency.

- *Operating and maintenance procedures:* A comprehensive operating and maintenance manual has been developed and is used by all store managers and operational staff. The manual addresses all areas of effective energy management within Zellers' facilities.
- *Design standards for new construction:* Zellers has upgraded the design of its new stores to optimize energy efficiency. Its new design standard is to exceed the energy performance requirements of the *Model National Energy Code for Buildings* by 25 percent. With assistance from Enbridge Consumers Gas' Design Advisory Program and NRCan's Commercial Building Incentive Program, Zellers achieved this objective at its new store in Simcoe, Ontario. This design will not only set the standard for new construction but will also be used as a target for future retrofits and renovations.
- *Fleet management:* Zellers has set rigid standards for its fleet and any contracted fleet vehicles. These standards are for maximum engine efficiencies and operating and maintenance procedures designed to minimize energy use and reduce operation costs. For example, Hbc has removed all of its 18-wheelers from the highway between Toronto and Montréal, in favour of rail

transport. This also results in improved road safety and fewer exhaust fumes.

- *Energy efficiency capital improvements:* Zellers has embarked on an aggressive set of measures to reduce its energy consumption through technical retrofits. A description of one of Zellers' retrofit projects is described in the following.

Retrofit Project

In 1999, Zellers embarked on a retrofit project comprising a pilot project in 10 representative stores across the country, followed by a replication project in an additional 50 stores. Measures included changes to the lighting systems, use of demand controls, installation of high-efficiency motors and changes to the HVAC plants.

Initially, these energy efficiency measures represented 17 percent of Zellers' total floor area. In reality, Zellers' replication project was expanded to include over 130 stores, or 925 177 square metres – almost 40 percent of the company's total floor area. With pilot and replication measures costing a total of about \$5 million, the company is saving over \$1.5 million annually in energy costs. In terms of actual energy, Zellers reduced its energy consumption by over 100 000 gigajoules per year – enough to keep a 60-watt light bulb lit continuously for 34 000 years – and reduced its annual GHG emissions by approximately 5000 tonnes. Additional project information is provided in Table 1.

Table 1. Summary Results (2001)

	Project	Replication	Total
Area (m ²)	89 387	925 177	1 014 564
Annual energy savings (\$)	\$181,427	\$1,339,779	\$1,521,206
Annual energy savings (GJ)	16 128	84 876	101 004
Project cost/ investment	\$1,090,200	\$3,375,724	\$4,465,924
Payback period	6 years	2.5 years	2.9 years

An independent audit of the project stated that Zellers' retrofit project was an unqualified success. Zellers exceeded the original scope of the project and was said to have embraced energy management in both spirit and practice in all its stores – setting the standard for GHG reduction in the Canadian retail sector.

According to Fred Ware, the NRCan incentive gave senior management the motivation to look into the savings available from energy management and to launch an energy program that reduced the firm's emissions by more than 5000 tonnes in 2001.

Funded in part by the EII, most of the financing for Zellers' retrofit program came from Hbc. Financing was provided on the basis of the projected energy savings and Zellers having to pay back the loan out of the savings resulting from the project. Hbc effectively established its own in-house "performance contracting" program for energy efficiency projects. This innovative approach, another example of corporate commitment, has been instrumental to the success of Zellers' energy program.



Electronics section

Future Plans

Energy reductions are expected to increase beyond 2002, with Zellers committing to undergo energy retrofits of all 319 stores across Canada at a rate of 10 facilities per year.

Additional road shows have also been planned to help maintain awareness and enthusiasm for the program at the local level. Moreover, Zellers will maintain an on-going effort through its Top 10 analysis and exceptions reporting. Attention will focus on stores where landlords pay the utility bills, to ensure that Zellers is being invoiced appropriately and that corporate operating standards for energy efficiency are being followed.

For More Information

Energy Innovators Initiative
Office of Energy Efficiency
Natural Resources Canada
580 Booth Street, 18th Floor
Ottawa ON K1A 0E4
Tel.: (613) 992-3245
Fax: (613) 947-4121
E-mail: info.services@nrcan.gc.ca
Web site: oee.nrcan.gc.ca/eii

Zellers



Fred Ware, C.E.T.
Senior Manager
Energy, Environment, Sourcing Initiatives,
Store Operations
Zellers Inc.
8925 Torbram Road
Brampton ON L6T 4G1
Tel.: (905) 792-4437
Fax: (905) 792-6432
E-mail: fred.ware@hbc.com
Web site: hbc.com/zellers

Leading Canadians to Energy Efficiency at Home, at Work and on the Road

The Office of Energy Efficiency of Natural Resources Canada
strengthens and expands Canada's commitment to energy efficiency
in order to help address the challenges of climate change.

© Her Majesty the Queen in Right of Canada, 2003

Inventory No. M92-261/2003E

Cat. No. 0-662-33392-6

*(Aussi disponible en français sous le titre : HBC et Zellers –
L'Efficacité énergétique dans le détail)*



Recycled paper

Canada 