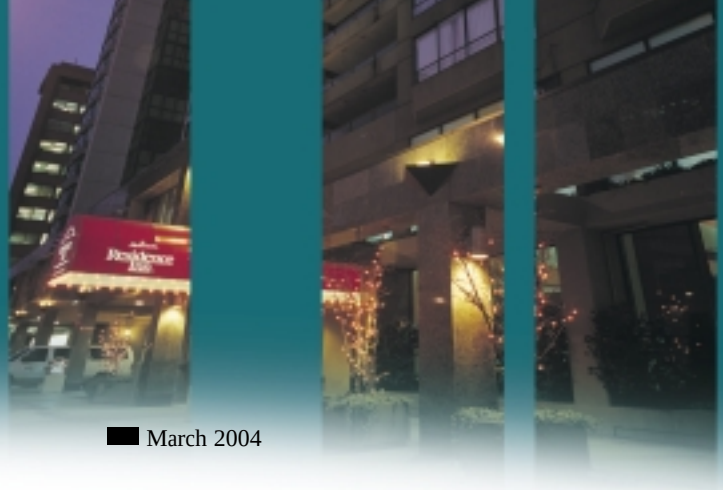


Energy Innovators Initiative

Energy Innovators Case Study

March 2004

CHIP HOSPITALITY: WELCOMING ENERGY EFFICIENCY

Pieter Vannierop
Director of Design and Construction
CHIP Hospitality

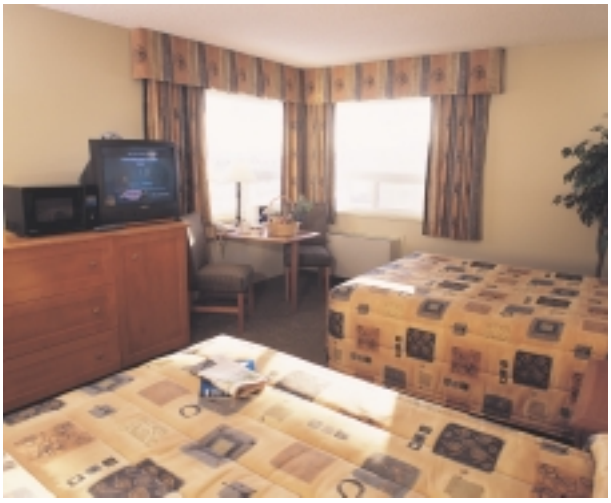
Hotels reducing energy use and costs

Guests who snuggle under the sheets at a CHIP Hospitality hotel can sleep soundly, knowing that they've checked into a hotel that is becoming more energy efficient and is reducing greenhouse gas (GHG) emissions.

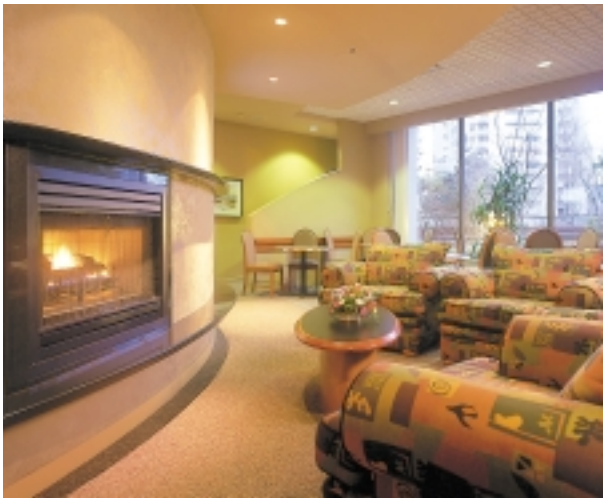
At the 32 hotels it owns or manages across Canada, CHIP Hospitality is cutting energy use by over 10 percent through a variety of retrofits to lighting, to heating, ventilating and air conditioning (HVAC) and even to soft drink machines.

In 1999, to help achieve its energy reduction target, CHIP Hospitality joined the Energy Innovators Initiative (EII) of Natural Resources Canada's (NRCan's) Office of Energy Efficiency. The EII encourages Canadian businesses and

Residence Inn by Marriott – Vancouver



The Quality Hotel & Conference Centre – Fort McMurray



Residence Inn by Marriott

public institutions to reduce costs and GHG emissions that contribute to climate change by becoming more energy efficient. More than 1200 registered Energy Innovators have made commitments that will contribute to Canada's GHG emissions reduction target while saving money and energy.

"Reducing energy operating costs by performing economically feasible retrofits and upgrades helps reduce greenhouse gas emissions," says Pieter Vannierop, Director of Design and Construction for the hotel management company. "Through upgrades, we also improved the operating performance of our properties to create value for our investors."

As a subsidiary of CHIP REIT (Canadian Hotel Income Properties Real Estate Investment Trust), CHIP Hospitality uses management strategies, upgrades, repositioning and franchising to improve the operating performance of the properties in its portfolio to create value for investors and owners.

Since joining the EII, CHIP Hospitality has invested over $3.5 million on new equipment and conservation programs. It expects to recoup about $3.9 million in energy-cost savings by the end of 2003. Total energy consumption – including electricity, natural gas, propane, oil and steam – dropped 7 percent at its hotels between 1999 and 2002. Over the same period, total annual GHG emissions dropped 7.9 percent, from 57 065 tonnes to 52 578 tonnes. By the end of 2003, energy consumption and GHG emissions were both projected to drop by over 10 percent.

Individual solutions for individual hotels

With hotels from Vancouver to St. John's, CHIP Hospitality has tailored its energy efficiency plans to hotels that have a variety of styles, locations and ages. The company has franchise agreements with other hotels including Best Western Hotels and Inns, Crowne Plaza® Hotels & Resorts, Delta Hotels, Holiday Inn Hotels & Resorts, Radisson Hotel, Ramada® Canada, Residence Inn® by Marriott®, Sheraton Hotel, and Quality® by Choice Hotels International, Inc.

"Across the country, there is no one formula that suits all," says Mr. Vannierop.

Energy audits were conducted at all its hotels to find potential energy savings. Environmental committees were also set up in all hotels to investigate the best ways to become more energy efficient. To trigger ideas, the committees used a checklist set out by the Hotel Association of Canada's Green Leaf ™ Program, an environmental rating system for hotels.

Twenty-nine hotels have since achieved a "three" Green Leaf ™ rating for excellence, while three hotels have a "four" Green Leaf ™ rating, which means they have shown "national industry leadership in environmental performance for both hotel management and facilities." CHIP Hospitality is the first hotel chain in Canada to have all its hotel properties receive this eco-friendly certification.

"The Green Leaf ™ Program provides an excellent tool to communicate with the associates and make them aware of all the components that improve the environment," Mr. Vannierop says. "It stimulates environmental awareness, which enables the associates to come up with solutions related to their particular property."

Having individual environmental committees lead the way not only promotes customized solutions, it also helps involve associates in efforts to become more energy efficient – whether it's the building engineer monitoring HVAC systems or individual cleaning staff closing curtains in the rooms.

Environmental stewardship has become part of the corporate culture at CHIP Hospitality. Employees at all levels, from the front line to the boardroom, are involved in providing quality service while making sure the company's commitment to the environment is not just about buzzwords.

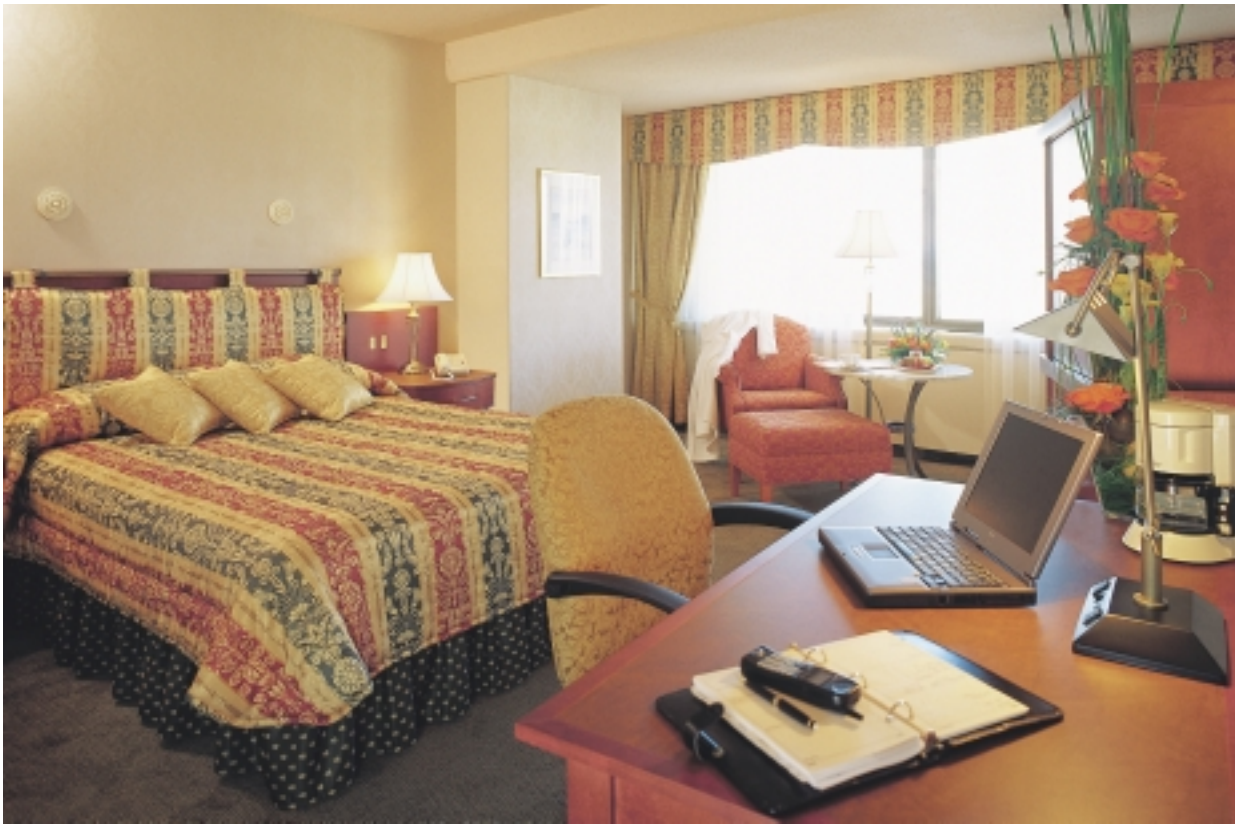
"Technical modifications are not the whole solution. You've got to have buy-in from the staff as well," says Mr. Vannierop. He stresses the importance of education and awareness to achieve this buy-in.

Associates from CHIP Hospitality have attended NRCan's Dollars to $ense workshops on energy efficiency. And through a course on energy management that the Association of Energy Engineers offered, Mr. Vannierop became a Certified Energy Manager.

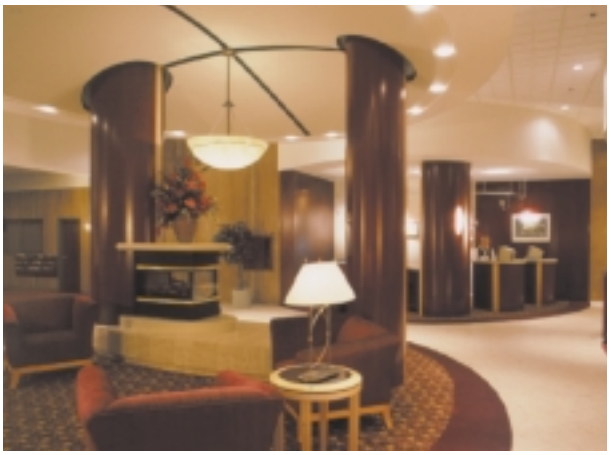
Energy investments that pay back

Lighting retrofits are one type of upgrade that has been embraced by CHIP Hospitality. The company is replacing the ballasts and lamps of all the lights that are on 24 hours a day, seven days a week, giving careful consideration to the colour of the light needed for the room in which it is being used. All incandescent lighting has been replaced with compact fluorescents. In particular, in spaces where dimmers are needed, incandescents were replaced with energy-saving Genura 23-watt lights from the General Electric Company. As other lights burn out, the hotels are replacing them with these energy-saving lights.

By making these upgrades and turning off unnecessary lights, CHIP Hospitality's hotels are saving about 1 million kilowatt hours annually, or about 10 percent of total electrical use. That works out to savings of $600,000



A Delta Hotels guest room



Delta Edmonton South Hotel & Conference Centre

a year. The lighting retrofits cost $750,000 for a payback period of 15 months.

Depending on the age of the hotel, replacing older motors on fans, pumps, chillers and HVAC systems with new ones with variable frequency drives can result in dramatic savings. Over $8,000 was spent at the Delta Québec to replace 10 motors on the ventilation system for an expected saving of 1000 kilowatt hours or $2,600 per year.

"Twenty-two of our hotel properties were built before 1980 and still have their original motors. So replacing them is easy to justify. The payback period is reasonable," says Mr. Vannierop.

Another significant energy saver has been to recover heat from the bathroom exhaust in hotels where all the bathrooms exhaust through one duct. For example, the Quality Hotel & Conference Centre in Grande Prairie, Alberta, spent close to $50,000 to hook up a heat exchanger to the washroom exhaust. It should save the hotel 2000 gigajoules, or $15,000, annually.

Challenges for the hotel business

Besides finding energy-saving opportunities in the lighting and HVAC systems, Mr. Vannierop and the CHIP Hospitality environmental committees have looked for energy efficiencies in areas that are more specific to the hotel business – such as ice machines. At the Delta Edmonton South Hotel & Conference Centre, ice machines were studied to determine when they were used most, so that a timer could be set to conserve energy when possible. This successful energy saver has been replicated at the Regina Inn Hotel & Conference Centre.

Soft drink vending machines were also updated to become more energy efficient by installing the Bayview Technology Group's VendingMiser® with motion sensors. When hooked up to a vending machine, a VendingMiser unit powers down the machine and shuts off the lights if no one is standing nearby. This energy-saving feature works well because vending machines are usually in an alcove or other out-of-the-way spot.

A VendingMiser monitors ambient room temperature while the vending machine is in standby mode and powers it up as necessary to make sure the drinks stay cold. The VendingMiser powers up the machine more often in a warm room than in a cool one. VendingMisers also "learn" the habits of building occupants and modify time-out periods accordingly.

"These Misers save 1800 kilowatt hours per machine per year, or $144 per machine or over $20,000 annually for all hotels combined. Based on the VendingMiser's price of about $200 and installation costs, the payback is approximately two years," says Mr. Vannierop.

Making sure all hotel pools are working as efficiently as possible is also a priority for CHIP Hospitality. For example, the air-handling unit at the pool in the Radisson Hotel Saskatoon was replaced at a cost of $105,746 for energy savings of about 2700 gigajoules, or $20,000, per year.

Energy recycling dehumidifiers were also considered for the hotels because they capture trapped energy from the evaporation from the pool and use it to reheat the pool water. A unit was already in place in the Quality Hotel & Conference Centre in Fort McMurray, Alberta, but it wasn't being used. It was reinstated for $784. Mr. Vannierop points to this as an example of the importance that people attach to making technology work the way it should.

"If people don't understand it, they bypass it, just like the way some people got around catalytic converters in cars when they first came out," he says.

Ensuring systems run smoothly and efficiently

Another key to making energy-efficient technology work properly is to make sure it's properly maintained.

"Better maintenance improves energy consumption," Mr. Vannierop says. For example, at the Residence Inn by

Marriott in Vancouver, the mixing valves in the four-pipe heating and cooling system were not closing fully because the springs in the pneumatic operator were failing. Because the valves did not close fully, chilled water was leaking into the hot side of the system, and hot water into the chilled side. As a result, the chiller ran all year long.

"The moment we replaced all the valves, the overall gas consumption was reduced by 27.6 percent, or 5360 gigajoules, for a total saving of $51,000 in one year for this hotel," says Mr. Vannierop. Further electrical savings came from the fact that the chiller did not run through the winter.

Guest comfort

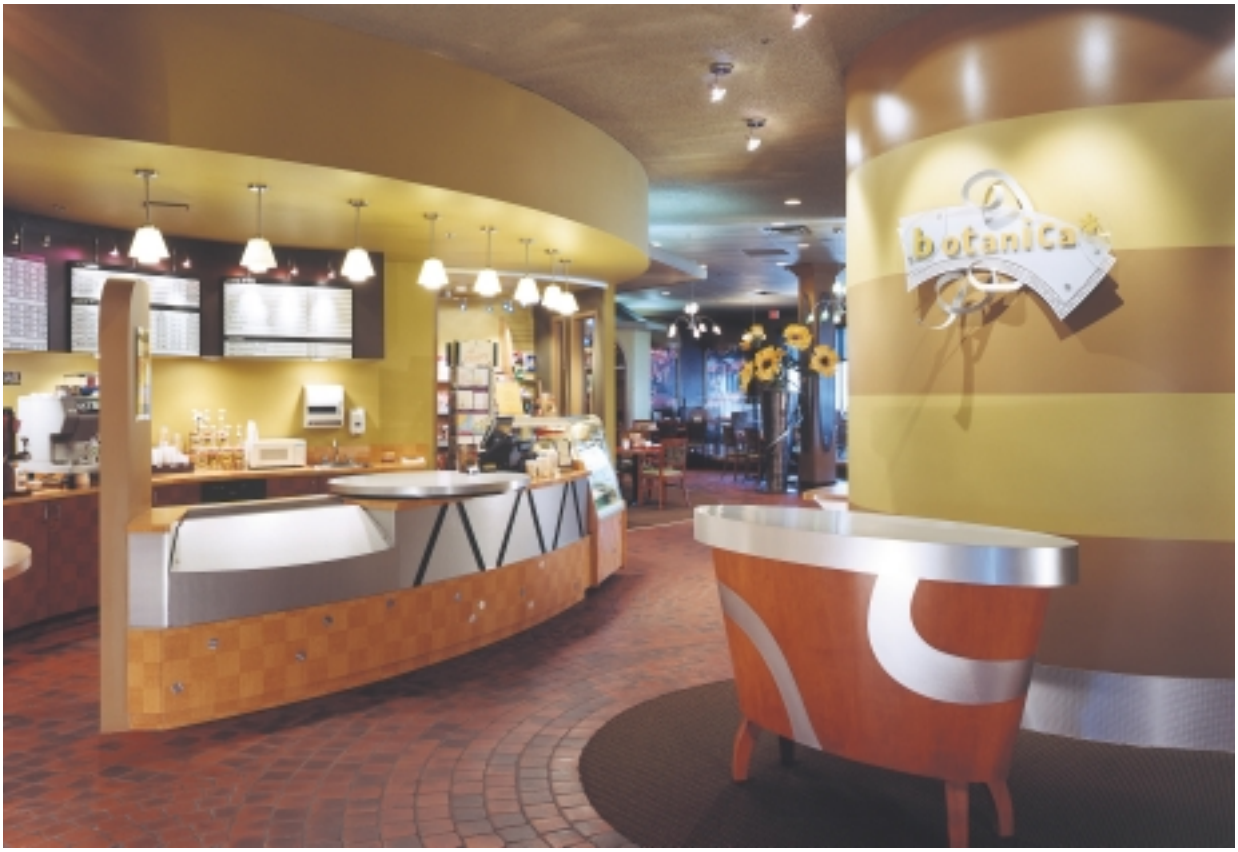
Hotel guests are encouraged to follow some simple steps to help save energy as well.

"Our hotels can be compared to small villages with hundreds of people living and working together under one roof. Our vision is to empower each employee and each guest to make ecologically responsible choices to help us reduce our overall impact on the environment," says Tony Cary-Barnard, co-chair of CHIP Hospitality's environment committee.

Guests are asked to re-use towels and not have their sheets changed if they stay more than one night to reduce the number of towels and sheets a hotel has to wash. This reduces not only the amount of water used, but also the amount of water that needs to be heated. Stickers also ask guests to turn off lights and adjust the heating and air conditioning when rooms are vacant.

"It can seem awkward at first; but after a while, it becomes the norm," Mr. Vannierop says. "You save energy by pennies."

In fact, penny by penny and hotel by hotel, CHIP Hospitality has become one of the industry leaders in energy efficiency, without sacrificing guest comfort.



Regina Inn Hotel & Conference Centre

For more information

Energy Innovators Initiative
Office of Energy Efficiency
Natural Resources Canada
580 Booth Street, 18th Floor
Ottawa ON K1A 0E4
Tel.: 1 877 360-5500 (toll-free)
TTY : 613-996-4397 (Teletype for the hearing-impaired)
Fax: (613) 947-4121
E-mail: info.services@nrcan.gc.ca
Web site: oee.nrcan.gc.ca/eii

Pieter Vannierop
Director of Design and Construction
CHIP Hospitality
Suite 1600 – 1030 West Georgia Street
Vancouver BC V6E 2Y3
Tel.: (604) 646-2447
Fax: (604) 684-8803
E-mail: pvannierop@chipreit.com
Web site: www.chipreit.com

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