EnergyMatters

Summer 2005

A Kelowna Energy Management Committee Publication

Energy Management Committee:

Pilot projects promote sustainability

What a difference a decade makes.

Founded in 1995, the City of Kelowna's **Energy Management Committee** (EMC) first focused on energy efficiency in City facilities. The resulting upgrades at more than 80 City-owned buildings save almost four million kilowatt hours of electricity per year, reducing annual energy costs by about $170,000. In addition, EMC projects have reduced environmental impacts (including greenhouse gas emissions), increased property values, improved indoor air quality, and deferred energy and infrastructure upgrades.

More recently, the EMC has become increasingly aware of the importance of sustainable building in the overall scheme of environmental stewardship. To that end, the City became involved in the **Community Action Plan on Energy Efficiency** (CAEE), a unique federal/provincial effort involving Natural Resources Canada and B.C.'s Ministry of Energy, Mines and Petroleum Resources. This pilot project—introduced in Kelowna and Quesnel in 2004 and commencing in Atlin this year—is refining local building regulations, practices, and procedures to reflect potential energy efficiencies and overall sustainability. It is also researching ways to address conflicts between current practices and the development of sustainable buildings, and identifying programs that offer incentives to upgrade existing buildings.

Activated under the CAEE, the EMC's **Sustainable Building Pilot Project** is a partnership with FortisBC and Terasen Gas aimed at making sustainable building the standard practice in Kelowna.

Sustainable building is an emerging response to over-consumption within the building industry. As defined by the City of Seattle, it "merges sound, environmentally responsible practices into one discipline that looks at the environmental, economic, and social effects of a building or built project as a whole." More specifically, the State of California terms a sustainable building as "a structure that is designed, built, renovated, operated, or reused in an ecological and resource-efficiency manner." And Tufts University states that sustainable buildings and surrounding landscapes "will not compromise the health of the environment or the associated health and well-being of the building's occupants, builders, the general public, or future generations."

Sustainable building—also called "green," "environmentally sound," or "high-performance" building—closely considers the relationships between natural and built environments and human and environmental health. Resulting approaches are based on a wide range of factors, including: land-use context (site selection), land impacts (site planning), building materials, energy and water-use efficiency, waste minimization, pollution prevention, reinforcement of natural systems, and integration of design, building, and maintenance practices.

Mayor Walter Gray sees Kelowna taking a leading role over the next decade. "We have much at stake in the Okanagan Valley be it water and energy resources, air quality or waste management. With our rapid growth and development we would be irresponsible if we didn't jump onboard and push the sustainability cause. We need to be guardians of the future and sustainability should become top of mind for everyone. Local government needs to work closely with business interests to see this succeed."

(Continues on last page)

Kelowna Mayor Walter Gray and Icon Kelowna's Robert Hager peruse a model of the sustainable building project planned for Brandt's Creek Crossing near Kelowna's waterfront. Icon has partnered with the City of Kelowna's Energy Management Committee and FortisBC/POWERSENSE to design a sustainable development that will provide environmental, economic, and health benefits. Wherever possible, the development is made from environmentally friendly materials—such as rubber wood or bamboo hardwood floors and dual-flush, low-flow toilets—and promotes energy efficiency during construction and occupancy.

City Successes

The City of Kelowna is one of 41 Canadian communities partnering with the federal government to promote the **One-Tonne Challenge** (www.i-go.ca). Intended to help each of us cut greenhouse gas emissions by 20 percent, or one tonne, annually, the challenge will save money, natural resources, and the environment.

For its part, the City recently purchased a hybrid Honda which runs on gas and electricity, and will soon buy a high-efficiency diesel Smart Car. And Kelowna Regional Transit is adding three hybrid diesel electric buses to its fleet this fall—the first of their kind in Canada.

The City will also participate in Fleet Challenge BC, a six-month test of biodiesel fuel in one of its front-end loaders. This will make Kelowna the first municipality in the Interior to use non-toxic and biodegradable fuel made from vegetable oils, recycled cooking oil, or animal fats.

Transportation demand supervisor Jerry Dombowsky in the City's new hybrid Honda.

Because vehicles from 1993 and earlier can produce up to 30 times more pollution than later models, **Cash for Clunkers** rewards residents who trade in older vehicles for "clean air incentives." A vehicle that meets program criteria can be traded for a two-year transit pass (worth $927); up to $750 toward a new fuel-efficient vehicle; up to $500 toward an electric scooter, bike or moped; up to $350 toward a bicycle; or up to $250 toward footwear, bicycle parts and accessories, or running accessories. Anyone donating a vehicle will also receive a free tow and a $50 tax receipt. Contact cdavis@kelowna.ca.

The City operates 79 intersection and pedestrian-activated trafflic signals, all of which are equipped with light-emitting diode (LED) lamps that reduce energy use by up to 90 percent. LEDs are less prone to mechanical failure and can last up to ten times longer than conventional incandescent lamps. The City recently introduced five solar-powered LEDs; another five will be installed soon. This will further reduce energy use and operating costs.

City traffic technologist Fred Wollin (right), and traffic signals technicians Bruce Bunce (left) and Brian Whittle (in bucket) are responsible for ensuring LEDs are clean and performing optimally.

POWERSENSE home a model of efficiency

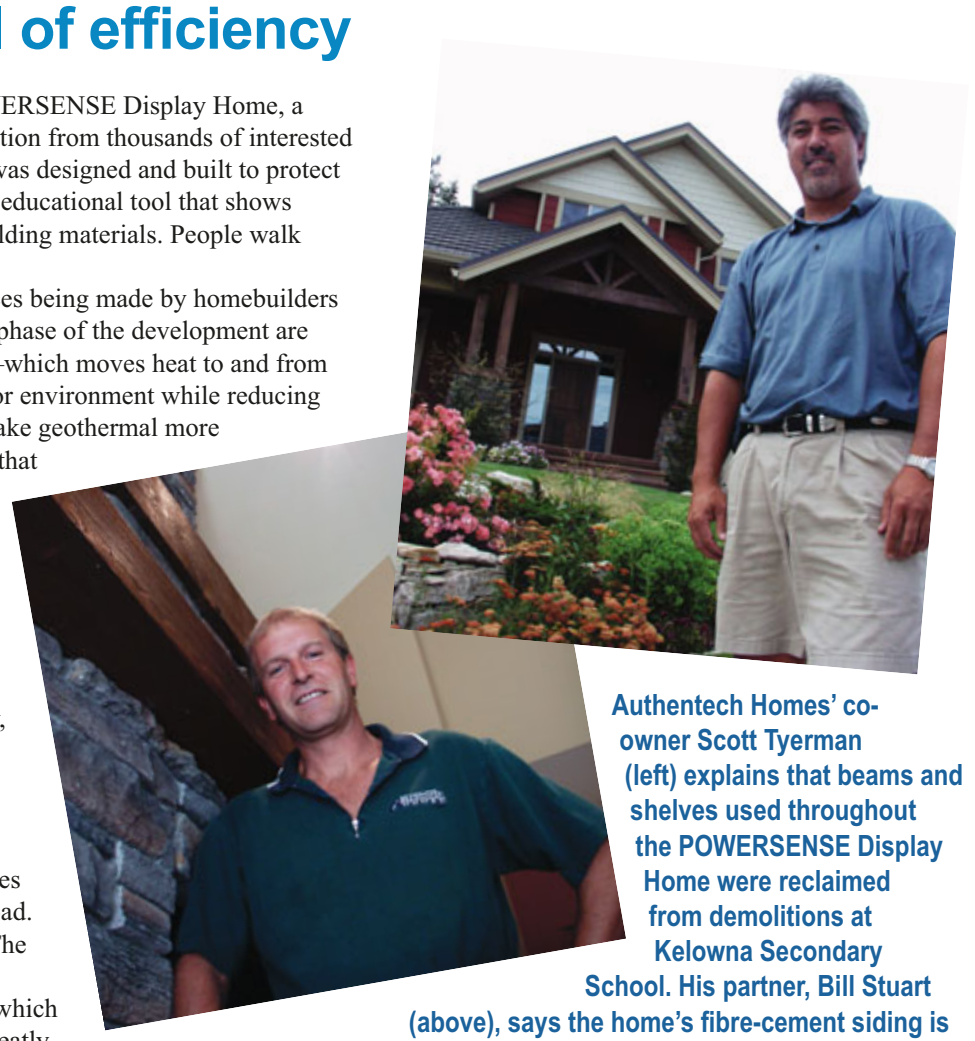
The Wilden hillside development in Glenmore Highlands features the POWERSENSE Display Home, a joint effort between FortisBC and Authentech Homes, that's attracting attention from thousands of interested visitors. Authentech's co-owner Bill Stuart says the display home—which was designed and built to protect the environment, save energy costs, and ensure occupants' comfort—"is an educational tool that shows people what's available in energy efficiency technology and sustainable building materials. People walk away with ideas for their own homes, and that's great."

Interest in sustainable building is growing, as is evidenced by the choices being made by homebuilders and buyers alike. "For example," says Stuart, "about half the homes in this phase of the development are going with geothermal energy." A geothermal heating and cooling system—which moves heat to and from pipes in the earth—efficiently and cost-effectively heats and cools the indoor environment while reducing energy costs by as much as 65 percent. In a unique approach designed to make geothermal more affordable, the project developer—Gerhard Blenk—created a power utility that will install and lease the systems back to homeowners for a monthly fee.

Other POWERSENSE Display Home energy efficiency measures include: **low-E windows**, which have a transparent coating that blocks ultra-violet rays and provides outstanding thermal insulation; **compact fluorescent lights**, used in the interior and exterior, which last up to ten times longer than incandescent lights and save more than 70 percent on energy costs; and an interactive **Smart Meter** displayed on the kitchen island that shows how much it costs to operate the home on an hourly, daily, and monthly basis.

Federally-rated **ENERGY STAR® appliances** are the most energy efficient products on the market. The display home's **front-load clothes washer** uses 50 percent less energy and up to 50 percent less water and detergent than standard models. The **dishwasher** has a sensor that determines the length of the wash cycle and the amount of hot water needed for each load. The **refrigerator** uses about 27 percent less energy than standard models. The direct-vent **gas fireplace** has an EnerGuide efficiency rating of 61 percent.

Resource conservation measures include **dual-flush, low-flow toilets**, which use about 80 percent less water than traditional models. A **recycle centre**, neatly concealed by kitchen cabinets, comes in different shapes, colours, and sizes. The flowerbeds— which feature mostly **indigenous, drought-tolerant plants**—are fed by **drip irrigation** with **rain sensors**.



Authentech Homes' co-owner Scott Tyerman (left) explains that beams and shelves used throughout the POWERSENSE Display Home were reclaimed from demolitions at Kelowna Secondary School. His partner, Bill Stuart (above), says the home's fibre-cement siding is environmentally friendly because it requires so little maintenance over its 50-year lifespan.

More comfort, lower bills... it makes sense...

POWERSENSE™

In 1989, West Kootenay Power developed the POWERSENSE program to help customers reduce their power bills by using less energy. In turn, this reduction in energy use enabled the utility to cut back on expensive power purchases and to defer costly power infrastructure upgrades. Fifteen years later, POWERSENSE is one of Canada's longest running and most successful energy efficiency programs. Customer participation is significant:

- 16,000 residential program participants;
- 90,000 compact fluorescent light bulbs purchased;
- 6,800 students trained in environmental and conservation techniques;
- 15,000 water-saver kits installed resulting in annual savings of 16 million litres;
- 2,100 high-efficiency heat pump installations;
- 1,300 new POWERSENSE homes;
- more than 350 large projects with business, industry, and the public sector, each saving at least 100,000 kilowatt hours; and
- cumulative energy savings of more than 200 million kilowatt hours.

What does all this mean? Over the past 15 years, POWERSENSE and its partners and customers have saved enough energy to meet the annual energy needs of more than 17,000 households and save customers $10 million annually. To help you enjoy the benefits of reduced energy use, POWERSENSE recommends the following home heating tips:

Install an Energy-efficient Furnace

You can save up to 25 percent of your home heating costs and reduce greenhouse gas emissions. Depending on the efficiency of your old furnace, payback time on your investment should be about seven years.

Keep Your Furnace Well Maintained

Keep your furnace well maintained and change or clean furnace filters every couple of months. Dirty air filters block airflow and can damage the heat exchanger.

Install a Ceiling Fan

Change the direction of the fan to push warm air down in winter. This especially benefits houses with electric baseboards or high cathedral ceilings. If you need a fan with lights, choose one with compact fluorescent lights to further reduce electricity use and heat buildup in summer.

Install Storm Windows

If you have single-paned windows, adding storm windows will provide another layer of protection. Windows can account for up to 25 percent of your house's total heat loss.

Keep Heat Out/in

Keep blinds, curtains, and windows closed during the day in summer and open during the day in winter. This can save up to five percent on home heating and also helps keep your home cooler.

Shop for ENERGY STAR® Products

Look for the ENERGY STAR® label on household appliances and windows and sliding glass doors.

Lower Your Thermostat

For every 1°C (2°F) you lower your thermostat, you save two percent on your heating bill. A reduction of 3°C (5°F) at night and when you are away during the day provides optimal savings.

Replace Exterior Doors

Replace exterior doors in poor repair with insulated core doors or add storm doors.

Seal and Insulate Warm Air-ducts

Aluminum duct tape can easily seal leaks and reduce duct air leakage by up to 25 percent. Insulation can also reduce heat loss from unheated areas, such as basements or crawl spaces.

Shut Off the Pilot Light

Shut off the pilot light of your natural gas fireplace or wall heater during summer months. If you don't know how to relight the pilot light, ask your heating contractor to show you during your next servicing.

Upgrade Insulation

Upgrade the insulation in your walls, basement, and attic. Insulating your basement walls and attic can reduce your energy bill by as much as 30 percent.

Use Caulking and Weather-stripping to Seal Air Leaks

Use caulking and weather-stripping to protect against drafts and leaks around windows, doors, baseboards, and attic hatches. This could reduce your heating costs by up to 20 percent. At the same time, seal electrical outlets and switches on outside walls with foam gaskets. On inside walls, use childproof plugs or combination cover plates.

EMC Expands Mandate

When it was founded in 1995, the City of Kelowna Energy Management Committee's mandate was to:

- promote energy efficiency by providing City managers with information on rebates and operating cost-reduction opportunities;
- prepare action plans and budget submissions for those opportunities that demonstrate real cost savings and reduced operating costs;
- use energy rebates to help fund facility audits; and
- ensure all opportunities undertaken are consistent with rebate opportunities and result in value-for-money for both the City of Kelowna and FortisBC/POWERSENSE.

The committee's focus has since broadened to include sustainable building within City facilities and the community at large.

EMC members, from back left, include: Martin Johansen, City civic properties technician; Kelly Hewson, FortisBC/ POWERSENSE; Fred Wollin, City traffic technician; Rod Carle (front left), City electrical manager and EMC coordinator; and Don Degen, City water and drainage manager and EMC chair. Missing from the photo are Jim Waugh, City civic properties manager; Mark Watt, City environment and solid waste manager; and Corey Davis, City environmental technician.

Best Western warms up to solar power

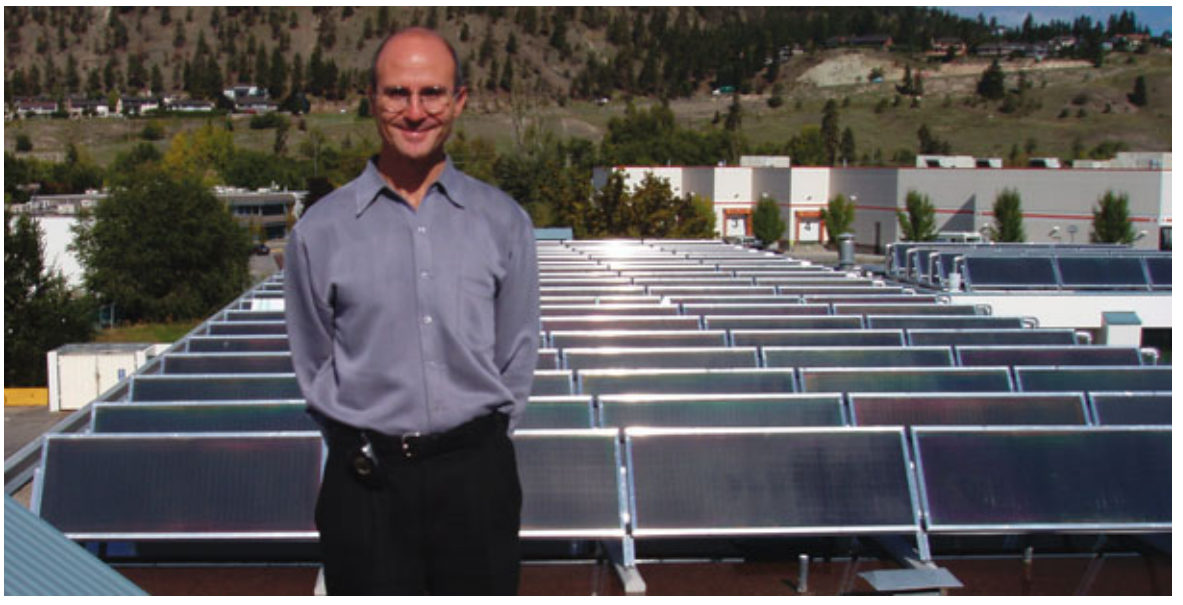
Kelowna's Best Western Inn is reaping the many rewards of installing a solar/thermal heating and cooling system that was the first of its kind in Canada. Built in 2001, the innovative system saves $45,000 a year in energy costs, prevents the emission of 90 tonnes of greenhouse gases annually, and provides an endless supply of hot water during busy summer months. The system is also easy to maintain and, with a 40-year warranty on the solar panels, guarantees longevity.

"Interestingly, the PR is also good," says owner Greg Salloum. "We've had some environmentally savvy guests who like what we're doing, and a few who stay here because of it."

Born and raised in Kelowna, Salloum is no stranger to the Okanagan sun. So, in 1999, when it was time to upgrade the hotel's heating and cooling system, he researched the prospect of harnessing that solar power to provide a clean, abundant, and affordable supply of energy. Initial investigations revealed that the technology was available, that it would work in Kelowna, and that it would provide about half the hotel's energy needs. Further research indicated that the two-phase project would cost $350,000, and have a payback time of five-and-a-half years.

With the help of a $54,000 federal grant, Salloum proceeded with phase one—installation of 102 hot water solar panels on the hotel's roof and a heat pump/heat exchanger. This provides most of the heat and hot water year-round for the hotel's 145 rooms, two hot tubs, 90,000-litre pool, and laundry, and air conditioning during the hot summer months.

Currently under construction, phase two will see the addition of a 50-tonne heat pump to take hot water from the solar panels and produce hot and cold water. And a heat exchanger will use waste heat from the hotel's laundry dryer vents to boost the hot water temperature for the laundry washers.



Kelowna Best Western owner Greg Salloum installed hot water solar panels four years ago to help reduce energy costs and impacts to the environment. This year, he's upgrading that system to benefit further from the power of the Okanagan sun. But solar heating is only one component of the hotel's energy reduction program. In 1990, Salloum introduced what was likely the first bluebox program in a B.C. hotel. In 1993, he spent $100,000 replacing the hotel's interior and exterior incandescent bulbs with compact fluorescents, an expense he recovered in less than three years through reduced energy costs.

'Vertical subdivision' works for builders and buyers

"It made perfect sense," recalls Starline Enterprises' Bill Vantgeloof when he first heard the term 'vertical subdivision' in the early '90s. Back then, vertical subdivision—or individually metered suites in high-rise buildings—was a new concept at Terasen Gas. Vantgeloof was the first to adopt it, and Starline is now a prominent user of Terasen Gas' vertical subdivision technology—most recently at Kelowna's Mission Creek Towers.

Vertical subdivision works for a variety of reasons. For developers, it offers reduced installation costs, increased security, and improved marketability. Residents enjoy a comfortable environment and lower strata fees. And because residents have complete control over how much gas they consume—and pay for—they often use less. That saves money and the environment.

Natural gas service for the development begins on the outside of the buildings. Gas pipes are extended from a meter and adjoining pressure regulator station to the base of both residential towers. Running across the complex's parkade ceiling, the gas pipes eventually rise vertically, connecting to meter manifold assemblies within closets located on alternate floors. From the closets, state-of-the-art electronic gas meters measure each suite's gas consumption. From the meters, copper tubing carries natural gas into the suites, fuelling dual-function domestic hot water tanks which supply both space and water heating. Fireplaces are also fired with natural gas.

For more information on vertical subdivision call Terasen Gas at 1-888-868-4522 or visit www.terasengas.com.

Terasen Gas

During construction of phase one of Mission Creek Towers (right), Terasen Gas worked with Starline Enterprises to customize a 'vertical subdivision' that meters each of the 118 units individually. The second tower will also feature Terasen's vertical subdivision technology.

OC and UBC Build Sustainable Futures

In 2003, Okanagan University College signed an Energy Performance Contract through which Direct Energy—a leading retailer of energy and energy solutions—will be paid $2.5 million out of energy cost savings over the next nine or so years.

Initially, energy use was assessed and potential energy-saving measures were identified for the KLO and North Kelowna campuses. Work then proceeded on ten major projects that will not only save $300,000 a year in energy costs, but will reduce emissions of carbon dioxide equivalent to planting 418 acres of fruit trees or removing 166 cars from the road per year.

The biggest and most impressive undertaking is the Wastewater Heat Reclamation Project, a collaboration between OUC and the City of Kelowna. Currently, the city processes about 30 million litres of sewage daily through its wastewater treatment plant. Until recently, the cutting-edge, non-chemical process cleaned the effluent to almost drinking water quality before discharging it to Okanagan Lake. Discharged waters ranged in temperature from 24°C in summer to 10°C in winter. But now, the college—which sits next to the treatment plant—captures heat from the discharged water and circulates it through existing underground heating ducts.

"This unique geothermal system is working well," says Aidan Kiernan, UBC-Okanagan's associate vice-president of operations. "As well as paying for the energy recovery part of the project, the savings have allowed us to replace aged chillers that used CFCs and to upgrade hot water boilers for dishwashers in the culinary arts school."

There, too, are environmental and social benefits. In addition to reducing greenhouse gas emissions, this award-winning project lowers the temperature of water going into the lake, thereby reducing impacts on aquatic plants and wildlife. And facility users enjoy improved lighting, ventilation, and climate controls.

The university is now considering geothermal technology for use at the North Kelowna campus, both in existing and new buildings. One existing building, for example, sits on a major aquifer. In a closed system, heat could be extracted from the aquifer, circulated to heat the building, and then reinjected to the aquifer for reheating.

Okanagan College engineer Adrian Taylor oversees operation of the Wastewater Heat Reclamation Project.

UBC Campus to be a World-class Model of Sustainability

With UBC comes one million square feet of new teaching, research, administration, and residential facilities over the next four years. This $300-million upgrade will triple the size of existing facilities and enable student population growth from 2,900 to 8,000 over the same period.

Using products and practices supported by the LEED (Leadership in Energy and Environmental Design) program, UBC-Okanagan will be a world-class model of sustainability. (Based on well-founded scientific standards, LEED emphasizes leading-edge strategies for sustainable site development, water savings, energy efficiency, materials selection, and indoor environmental quality.) It is estimated that energy efficiency initiatives, over a 20-year period, will save $3 million in energy costs and prevent at least 38,000 tonnes of carbon dioxide from being released into the atmosphere. That's the equivalent of planting 18,000 acres of fruit trees or taking 8,000 cars off the road.

While sustainable or green building adds about ten percent to construction costs, Kiernan says "the long-term energy savings and the benefit to the environment far outweigh any additional capital costs. We must put our money where our mouth is, and set a good example for our students."

Show me the money!!!

Residential Rebates and Incentives

Today, 17 percent of all energy used in Canada goes toward heating and cooling our homes. Every time we use energy from fossil fuels such as coal, oil, and gas, we produce greenhouse gas emissions that contribute to climate change and harm our environment. Homes more than 25 years old have the potential to save an average of 35 percent of their energy use. Homes more than 50 years old can achieve even greater savings—an average of 38 percent!

Below is a list of incentives and rebates to help you start saving energy, money, and the environment!

Energuide Audit
EnerGuide for Houses (EGH) was created by the federal government to help homeowners get independent, expert advice about their homes' energy efficiency. So far, more than 130,000 homeowners have used EGH to help identify energy problems and plan efficiency retrofits. Natural Resources Canada data shows that if these homeowners undertook all recommended upgrades, they would reduce greenhouse gas emissions by almost 4.6 tonnes per year, per house.

An EGH evaluation, conducted by an EnerGuide advisor, involves a test for air leakage, a comprehensive walk-through tour, and computer modeling. The resulting report provides customized recommendations for renovations such as upgrades to heating systems and insulation, and a standardized EGH energy efficiency rating. The cost of pre-retrofit EGH assessments has been reduced from $150 to $100; and post-retrofit assessments have been reduced from $75 to $50 until October 31, 2005. If you have electric heat and are served by FortisBC, they will offset the cost by $50.

Residents who have undergone Energuide audits are eligible for grants to improve their homes' energy efficiency. The average grant is $650. Call 1-888-599-4999 for more information.

CMHC Refund
Canada Mortgage and Housing Corporation (CMHC) offers a ten percent refund (worth $741 on a $240,000 home) on its mortgage loan insurance premium for homeowners who borrow money to build or buy an energy-efficient home or renovate an existing one. Homeowners also have the flexibility of extending the repay periods of their mortgages from 25 years to a maximum of 35 years. To qualify for this refund, the homes' energy efficiency must be rated using the EnerGuide for Houses rating system or be R-2000 certified and meet certain minimum requirements. Call your lender or 1-800-668-2642 for more information.

ENERGY STAR® Incentives
When purchasing appliances, always look for the ENERGY STAR® logo. ENERGY STAR® products save you money while increasing the comfort of your home. ENERGY STAR® refrigerators, for example, use 15 percent less energy than the federal standard, and 40 less energy than conventional models sold in 2001. ENERGY STAR® dishwashers use less hot water than standard models, and reduce overall energy use by up to half. ENERGY STAR® clothes washers use up to 50 percent less water than standard models, and reduce overall energy use by up to half.

ENERGY STAR® qualified furnaces, boilers, and heat pumps purchased until April 1, 2007 are exempt from PST, along with insulation, draft-roofing materials, renewable energy and double-glazed windows. For more information and/or a list of qualified products call the Consumer Taxation Branch at 1-877-388-4440 or visit www.rev.gov.bc.ca/ctb.

Through its Residential New Construction Heating Program, Terasen Gas pays builders and developers $500 for installation of an ENERGY STAR® qualified natural gas furnace and any natural gas hot water tank in a new, individually metered residential home. For more information call Brent Hunt at 250-868-4522 or visit www.terasengas.com.

ASHP Rebates and Loans
If you are an electric heat customer, you can save up to 40 percent on your annual energy costs by installing an air source heat pump (ASHP). FortisBC's POWERSENSE program invites you to take advantage of one of the following ASHP offers:

- cash rebate of $250 or more;
- $5,000 loan at 4.9 percent for ten years (on approved credit); and
- a loan of up to $10,000 with first year interest rates at 4.5 percent (OAC).

In addition, get cash-back rebates or extended warranties from participating manufacturers Carrier, Frigidaire, Lennox, and York. Visit your ASHP dealer or call 1-877-392-2200 more information.

"See" the Savings
Install high-performance windows with a low-emissivity ("Low E") coating and receive a rebate of $1.50 per square foot of window from FortisBC's POWERSENSE program. You can recoup the cost of installing energy-efficient windows in as little as 2.5 years. For more information call 1-800-363-3330 or visit fortisbc.com/powersense.

Commercial and Industrial Rebates and Incentives

Federal Energy Efficiency Programs

Energy Innovators Initiative (EII)
Through advice, funding, and training, the EII helps commercial businesses and public institutions improve the energy efficiency of existing buildings. Eligible members can apply for funding of up to $250,000 for planning and implementing building retrofits. For more information contact National Resources Canada at 1-613-995-0947 or visit http://oee.nrcan.gc.ca/corporate/incentives.cfm.

Commercial Building Incentive Program (CBIP)
A financial incentive of up to $60,000 will be awarded to building owners whose designs meet CBIP requirements. Program requirements are based on two documents: the Model National Energy Code for Buildings (MNECB) and the CBIP Technical Guide. An eligible building design must demonstrate a reduction in energy use by at least 25 percent when compared to the requirements of the MNECB. For more information contact National Resources Canada at 1-613-995-0947 or visit http://oee.nrcan.gc.ca/corporate/incentives.cfm.

Industrial Energy Innovators (IEI)
IEI members have access to tools and services such as training programs, seminars, and planning documents to help them become more energy efficient. Companies must sign up to become IEI members. For more information contact National Resources Canada at 1-613-995-0947 or visit http://oee.nrcan.gc.ca/corporate/incentives.cfm.

Industrial Building Incentive Program (IBIP)
The Office of Energy Efficiency (OEE) encourages the design and construction of new, energy-efficient industrial facilities. The IBIP is a demonstration initiative, with funding of up to $80,000 for eligible organizations based on process and building savings. Organizations must first join the Industrial Energy Innovators. For more information contact National Resources Canada at 1-613-995-0947 or visit http://oee.nrcan.gc.ca/corporate/incentives.cfm.

Industrial Energy Audit Incentive
This incentive is designed to help defray the cost of hiring a professional energy auditor to conduct an on-site audit at an industrial facility. Funding is available for up to 50 percent of the cost of an energy audit, to a maximum of $5,000. This is an exclusive service for companies that are registered as Industrial Energy Innovators. For more information contact National Resources Canada at 1-613-995-0947 or visit http://oee.nrcan.gc.ca/corporate/incentives.cfm.

Renewable Energy Deployment Incentive (REDI)
Business and industry clients are eligible for up to a 25 percent rebate when they install qualifying solar air, solar water and biomass combustion systems. Solar air heating is very popular for pre-heating certification and make-up air in warehouses and industrial facilities. If you have available wood waste, consider a biomass combustion system. Industries with high hot water demand are excellent candidates for solar water heating. For more information contact National Resources Canada at 1-613-995-0947 or visit http://oee.nrcan.gc.ca/corporate/incentives.cfm.

Provincial Energy Efficiency Programs

FortisBC New Building and Process Design
This program is to upgrade equipment and technologies to more energy efficient levels in new or existing commercial, institutional, and industrial buildings. This program combines all applicable technologies to help customers make their buildings more energy efficiency. Rebates are available up to $0.05 per annual kilowatt hour saved. For more information contact Kelly Hewson at 250-717-0809 or Kelly.Hewson@FortisBC.com.

Terasen Gas Efficient Boiler Program
Terasen Gas will assist building owners, developers, consulting engineers, or contractors to select efficient boiler configurations for new construction and retrofit projects. The program includes financial incentives for installing or upgrading to condensing or near-condensing boilers. For more information call toll free at 1-888-477-0777 or visit www.terasengas.com.

Sustainability

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Through the Sustainable Building Pilot Project, the EMC is working with developers, contractors, engineers, planners, and utility companies to determine how the City can enable, promote, and enforce sustainable building in Kelowna. During Phase 1 of the two-phase project, the EMC hosted a stakeholder workshop to conceive a preliminary vision/definition of sustainable building. At a follow-up workshop, participants will refine the vision/definition and recommend actions for the City and the development community.

"It's all up for discussion" says Mayor Gray, "energy and water efficiency, air quality, thermal comfort, lighting, waste management, even siting requirements. What practices and procedures should be changed? What design elements heighten environmental performance?"

Phase 2 will invite participation from building-owner, operations-management, and tenant communities in a design exercise. It also involves a partnership with FortisBC and Icon Kelowna in the construction of a sustainable development project.

A key project deliverable—the *Sustainable Building Primer*—will outline sustainability opportunities and issues for new mixed-use development projects. As well as being a single source of information about sustainable buildings, and a directory for funding and incentive programs, the primer will allow other communities across the country to use Kelowna's test case to refine their codes and practices.

Feedback from these projects indicates that the City must send an expanded "green message" to the community, and that it must do so now. In response, council recently resolved to: provide lean, green government; promote active transportation; encourage environmental practices; and create healthy urban centres.

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