

# ENERGY EFFICIENT BUILDINGS STRATEGY: MORE ACTION, LESS ENERGY



BRITISH  
COLUMBIA

The Best Place on Earth



# TABLE OF CONTENTS

## **INTRODUCTION**

## **HIGHLIGHTS**

### **1 | LIVESMART BC: EFFICIENCY INCENTIVE PROGRAM**

### **2 | HOMES**

### **3 | COMMUNITIES**

### **4 | COMMERCIAL & INSTITUTIONAL BUILDINGS**

### **5 | GOVERNMENT**

## **CONCLUSION**





# INTRODUCTION

The **Energy Efficient Buildings Strategy: More Action, Less Energy** sets new targets that support the goals of the BC Energy Plan: A Vision for Clean Energy Leadership to maximize efficiency and minimize environmental impact. The more energy we conserve, the fewer new sources of supply our province will need in the future. Now is the time for action, innovation and personal commitment.

This strategy supports government's goal to reduce greenhouse gas emissions by 33 per cent from 2007 levels by 2020 as well as electricity self-sufficiency by 2016.

More than four million British Columbians use 315 million square metres of floor space. The amount of energy we use has grown with our population. But we can reduce our energy use by making new homes energy efficient from the start, incorporating renewable energy systems and conservation features into existing buildings, and lowering operating costs through careful planning and design.

The **Energy Efficient Buildings Strategy** involves each of us in taking action on climate change in our homes, workplaces and communities. It delivers education, resources and diverse options for increasing energy efficiency. Some are long-term investments, and others are as simple and low- or no-cost as changing a light bulb or turning down your thermostat at night.

By enhancing the design, construction and performance of our homes, businesses and communities, we will contribute to meeting our greenhouse gas emissions goals.



The **Energy Efficient Buildings Strategy** builds on the success of government's 2005 strategy and the BC Energy Plan, and moves forward with new targets and stronger partnerships. This strategy sets out our action plan over the next three years and will achieve significant energy efficiency gains and greenhouse gas reductions. Our focus on energy efficiency and conservation are stimulating a new economy with new jobs for a highly trained workforce and benefits for future generations.

The **Energy Efficient Buildings Strategy** puts practical tools in our hands to achieve electricity self-sufficiency by 2016. It provides concrete benefits to individuals, businesses, institutions and communities that are innovative, creative and solution-driven. Energy efficient buildings offer considerable savings – both in the amount of energy used and to our pocketbooks. Transforming where we live will pay dividends for years to come and provide a sustainable legacy for our children and grandchildren.



**Honourable Gordon Campbell**  
Premier of British Columbia

**Honourable Richard Neufeld**  
Minister of Energy, Mines and  
Petroleum Resources

**Honourable Ida Chong**  
Minister of Community Services

**Honourable Barry Penner**  
Minister of Environment

**Honourable Rich Coleman**  
Minister of Forests and Range and  
Minister Responsible for Housing

# HIGHLIGHTS

## A STRONG COMMITMENT TO ENERGY EFFICIENCY AND CONSERVATION

The **Energy Efficient Buildings Strategy** will be a catalyst for positive, personal change at home.

- ▶ \$60 million LiveSmart BC: Efficiency Incentive Program to help B.C. families reduce their carbon footprint through energy efficiency upgrades to homes and businesses.
- ▶ \$1 million to construct energy self-sufficient homes using renewable and waste energy sources.

The **Energy Efficient Buildings Strategy** creates new ways for communities and First Nations to respond to the challenges of growth that supports regional economic development and innovative energy solutions. This strategy sets the most aggressive energy efficiency targets in Canada.

- ▶ \$20 million for clean energy projects in remote communities to reduce environmental impacts and energy costs.

*Left: Manulife Place in Vancouver,  
Go Green certified*

### DID YOU KNOW

- ▶ *A microwave uses more energy to keep the digital clock running than to heat food.*

- ▶ \$500,000 to expand the Community Action on Energy and Emissions Program to provide local governments and First Nations grants to take action to support government's greenhouse gas and energy efficiency targets.

The **Energy Efficient Buildings Strategy** sets targets for commercial, industrial and government buildings. Energy efficiency, conservation and renewable sources are the keys to our future success.

- ▶ \$75 million in capital funding to retrofit existing provincial public sector buildings.
- ▶ \$5 million to expand the use of solar energy systems throughout B.C.
- ▶ \$2 million for industry training, super-efficient gas water heaters and a province-wide energy conservation potential study and implementation plan.

Through this strategy, British Columbia will improve the energy and emission performance of new homes and buildings and upgrade existing ones to reduce energy demand. We will continue to build on this for years to come.

### PST Exemptions

- ▶ Materials and equipment that prevent heat loss.
- ▶ Insulation and draft proofing materials.
- ▶ Energy Star® heat pumps, boilers and oil-fired furnaces.
- ▶ Prescribed solar, wind and micro-hydro power equipment.
- ▶ Energy efficient, gas-fired water heaters with an energy factor of 0.80 or greater.
- ▶ Energy Star® fridges, freezers and clothes washers.

**This strategy will help achieve British Columbia's goal of reducing greenhouse gas emissions by 33 per cent by 2020 and supports the following energy efficiency targets:**

#### **Homes**

- ▶ Reduce average energy demand per home by 20 per cent by 2020.

#### **Communities**

- ▶ Complete energy conservation plans for all B.C. communities.

#### **Commercial & Institutional Buildings**

- ▶ Reduce the energy demand at work by nine per cent per square metre by 2020.

#### **Government**

- ▶ Make public sector buildings carbon neutral by 2010.

## **REDUCING OUR GREENHOUSE GAS EMISSIONS**

This strategy will help British Columbians put less greenhouse gas into the environment and more money in their pockets. Our net energy savings over and above the cost of building upgrades and new equipment will be \$1.9 billion for homes and \$1.5 billion for commercial and institutional buildings by 2020.

- ▶ \$23 million per year of PST exemptions for energy conservation equipment.
- ▶ Set energy efficiency targets with utilities.
- ▶ Implement the BC Green Building Code with the highest energy efficiency standards in Canada.
- ▶ Ensure all new provincial government buildings meet LEED® Gold or equivalent green standards.
- ▶ Increase consumer knowledge so British Columbians can make responsible choices.
- ▶ Expand partnerships with communities.

#### **DID YOU KNOW**

- ▶ *In 2007 highly efficient residential gas furnaces accounted for 50 per cent of all new furnaces purchased in B.C.*



## BUILDING ON SUCCESS

The 2005 Energy Efficient Buildings: A Plan for BC included targets for the energy performance of new buildings after the year 2010 and for an overall reduction of energy use for existing buildings. The following achievements have been made to date:

- ▶ \$100 million investment by over 25 partner organizations.
- ▶ More than 45,000 energy assessments completed for existing homes.
- ▶ At least 37 builders committed to the EnerGuide 80 standard.
- ▶ New training courses from over 10 educational institutions, such as Douglas College's Building Environmental Systems Program.
- ▶ Utilities such as BC Hydro, Terasen Gas, FortisBC and Pacific Northern Gas supported the installation of thousands of Energy Star® windows, furnaces and boilers.
- ▶ Partnerships with 41 local governments and 12 First Nations communities.
- ▶ New energy efficiency regulations under the *Energy Efficiency Act* and BC Building Code – with energy demand reductions of up to 27 per cent for new homes and 18 per cent for new commercial and institutional buildings, compared to the 1997 Model National Energy Code for Buildings.



# 1 LIVESMART BC: EFFICIENCY INCENTIVE PROGRAM

## MORE INCENTIVES, LESS ENERGY

Through the LiveSmart BC: Efficiency Incentive Program, British Columbian homeowners, low income households and small businesses can contact a certified energy advisor to perform an energy evaluation. This \$60-million program creates a single access point for provincial, utility and federal incentives by highlighting the best opportunities for energy savings and reducing greenhouse gas emissions.

*In all parts of B.C., homeowners are eligible for rebates and incentives for energy efficiency upgrades. The rebates and incentives are organized into two zones, based on the amount of energy needed to heat our homes each year.*

*For example in the Interior and Rural zone, a purchase of an efficient gas furnace gets you a rebate of up to \$1,130. In the South Coastal zone, the rebate is up to \$770.*

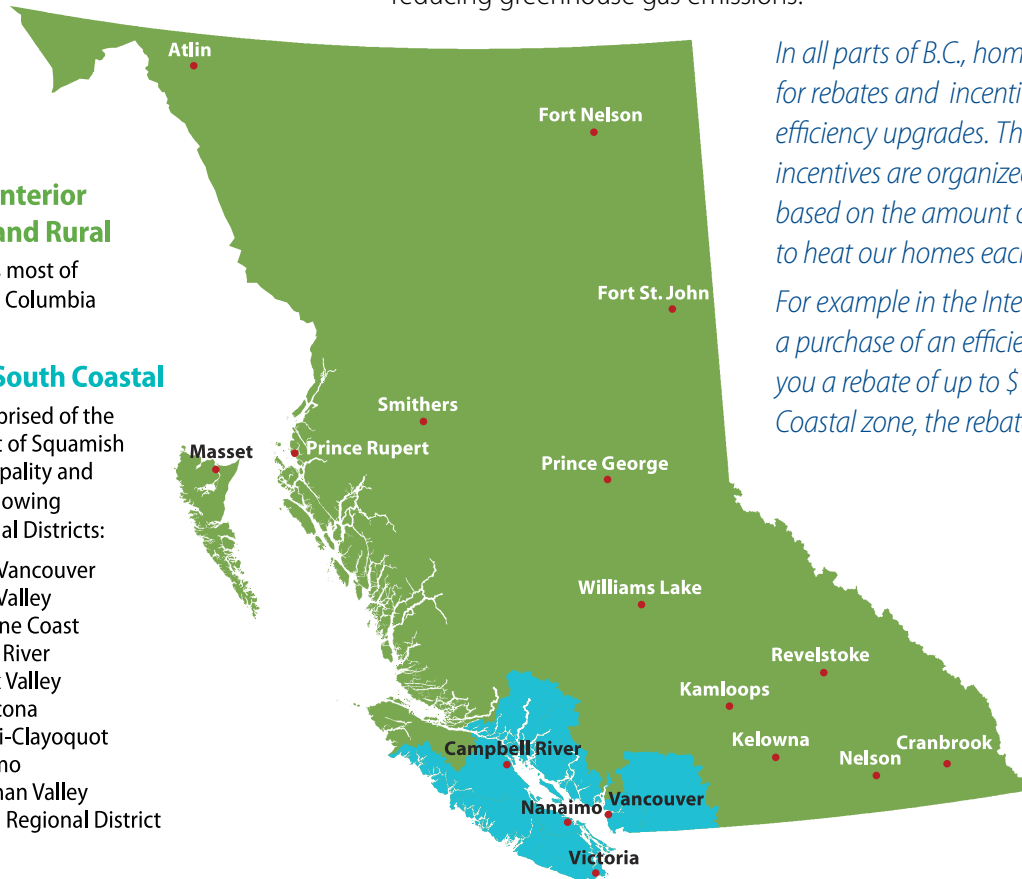
### Interior and Rural

covers most of British Columbia

### South Coastal

is comprised of the District of Squamish Municipality and the following Regional Districts:

Metro Vancouver  
Fraser Valley  
Sunshine Coast  
Powell River  
Comox Valley  
Strathcona  
Alberni-Clayoquot  
Nanaimo  
Cowichan Valley  
Capital Regional District



## EASY STEPS TO SAVE ENERGY AND MONEY

1. Visit **www.gov.bc.ca/empr** or call **1-866-430-8765** to arrange to have an energy advisor assess your home.

Your energy assessment will include:

- ▶ A walk-through and measurement of the building envelope, heating and hot-water heating systems, including windows, doors, ventilation and insulation.
- ▶ A test to identify and quantify overall air leakage.

You will receive a customized report by mail, which will:

- ▶ Give your home's EnerGuide energy efficiency rating.
- ▶ Recommend energy upgrades and improvements.

The energy assessment will cost up to \$150 plus taxes and travel costs. Up to \$150 of this fee may be refunded (not including taxes and travel costs) once you have made upgrades to your home and have had a follow-up energy assessment.

2. Choose which energy efficiency upgrades are right for you. Make improvements within 18 months of your energy assessment to be eligible for rebates and incentives.

Provincial and federal incentives are available for upgrades to space heating, water heating, insulation, windows and doors, air tightness and draft proofing, and distributed power generation.

In addition to receiving rebates and incentives for making any of the recommended improvements, if you increase your home's overall EnerGuide rating, you will receive a bonus incentive.

3. Save energy and money in a more energy efficient home. To qualify for rebates and incentives, arrange to have a follow-up energy assessment completed. The energy assessment will cost up to \$150 plus taxes and travel costs, which is not refundable.

The energy advisor will:

- ▶ Register the improvements.
- ▶ Give your home's EnerGuide energy efficiency rating.
- ▶ Complete the paperwork for B.C. and federal incentives on your behalf.

Within three months, you will receive two cheques in the mail:

- ▶ LiveSmart BC - your cheque will include incentives and the rebate for your initial energy assessment.
- ▶ Federal government incentive program.



Insulation and Heat Recovery Vents in  
Kitamaat Village

**BECOME A LIVESMART CHAMPION**

If you increase your home’s overall EnerGuide rating to meet Gold or Silver standards, you will receive an extra bonus in addition to the incentives you receive for each efficiency upgrade.

Your energy advisor will determine your home’s EnerGuide rating in the energy assessments done before and after energy efficiency upgrades are made. The EnerGuide rating is a standard measure of your home’s energy performance.

If you increase your home’s overall EnerGuide rating by 40 points to achieve a rating of 60 or more, you will receive a LiveSmart Gold bonus of:

- ▶ \$1,000 in Interior and Rural and
- ▶ \$700 in South Coastal.

If you increase your home’s overall EnerGuide rating by 20 points to achieve a rating of 50 or more, you will receive a LiveSmart Silver bonus of:

- ▶ \$500 in Interior and Rural and
- ▶ \$400 in South Coastal.

**ELIGIBLE IMPROVEMENTS / RETROFITS FOR SINGLE FAMILY HOMES**

**BE A LIVESMART CHAMPION:**

*Go for the Gold or Silver and receive an extra bonus for increasing your home’s overall EnerGuide rating*

Increase your home’s overall EnerGuide rating by:	Interior and Rural	South Coastal
40 points to achieve a rating of 60 or more and receive a LiveSmart Gold bonus of	\$1,000	\$700
20 points to achieve a rating of 50 or more and receive a LiveSmart Silver bonus of	\$500	\$400



## YOU CHANGE... YOU SAVE.

Small changes in our daily lives can add up to big energy savings and reduce greenhouse gas emissions.

- ▶ Unplug electronics you are not using or use a power bar to easily turn off your devices to reduce electricity usage.
- ▶ Fix any drafts around windows and doors to minimize heat loss.
- ▶ Set your fridge between two and five degrees Celsius to safely store food without wasting energy.
- ▶ Turn your thermostat down when you are going out or going to bed.

## YOU CHOOSE... YOU SAVE.

Energy efficient products offer just as much style, comfort and functionality as other products and have the added benefits of lowering your energy bills as well as helping the environment.

- ▶ Install compact fluorescent bulbs and dimmable bulbs.
- ▶ Choose low-flow showerheads and kitchen faucets to reduce use of water and energy.
- ▶ Opt for Energy Star® appliances with economy settings and timers when you purchase a fridge, washer, freezer and dishwasher.
- ▶ Install motion-sensitive lighting or daylight-activated dimming to save energy in the workplace.

## YOU INVEST... YOU SAVE.

Our biggest energy uses are where we can make the biggest efficiency gains and where investing our dollars makes sense.

- ▶ A natural gas combination space and water heating system can have energy savings of up to 60 per cent.
- ▶ New furnaces that are 95 per cent efficient with variable speed blower motors can be installed in existing homes with forced-air heating.
- ▶ Geoexchange heating and cooling systems use the natural, renewable energy from the ground to heat and cool buildings.
- ▶ Solar collectors that pre-heat water going to your hot water tank can provide about one-third of your annual hot water needs.



*Choose which energy efficiency upgrades are right for you. Make improvements within 18 months of your LiveSmart BC energy assessment to be eligible for rebates and incentives.*

# 2 HOMES



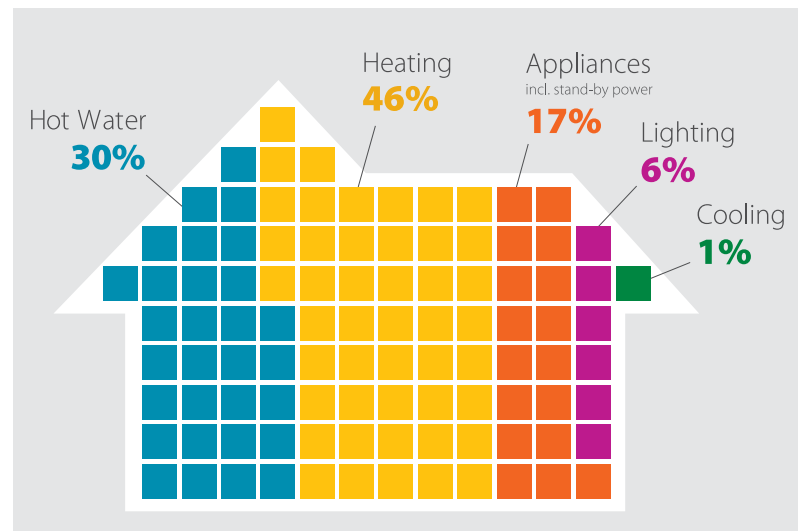
*Kitchen in EnerGuide 80 home*

## MORE COMFORT, LESS ENERGY

With 1.7 million existing homes and 35,000 new homes being built every year, residences use approximately 13 per cent of all the energy consumed in the province. Our residential footprint is increasing every year. Strong action and targets will ensure we grow smarter as we grow bigger.

The greening of the BC Building Code will put British Columbia at the forefront of environmental leadership with the highest energy efficiency standards in Canada. Smart meters will be installed in every residential unit to help you monitor and manage your electricity consumption. This means lower heating costs and less impact on the environment.

## How We Use Energy in Our Homes



## SolarBC

Government is supporting the SolarBC project with \$5 million in funding to demonstrate the province's leadership in sustainable environmental management. Sign up for the LiveSmart BC: Efficiency Incentive Program to access funding. This project supports the Province's long-term target of 100,000 Solar Roofs for communities, First Nations and low-income households by installing solar thermal and photovoltaic technologies in buildings.

### HOW TO: INSTALL SOLAR PANELS ON YOUR HOME

- ▶ Visit the LiveSmart BC: Efficiency Incentive Program website at **[www.gov.bc.ca/empr](http://www.gov.bc.ca/empr)** or call **1-866-430-8765** to find out more about all the solar energy incentives available.
- ▶ Choose a business listed in your phone book under Solar Energy or Equipment to complete the installation.
- ▶ Solar thermal technologies generate heat from the sun. They can meet one-third of your annual hot water needs by pre-heating the water that goes into your water heater.
- ▶ Photovoltaic collectors generate electricity from the sun.
- ▶ BC Hydro's Net Metering program allows you to sell any extra electricity that you don't use back to the utility, reducing your bill or eliminating your electricity costs altogether.



*Net metering photovoltaic solar array in Anmore*



*BC Hydro has picked up and recycled more than 110,000 inefficient refrigerators.*



*Above: Fireplace in home with an EnerGuide Rating System rating of 80*

## Standby Power

The growing number of appliances contributes to a phenomenon known as standby or vampire power. Today's average home contains more than 20 appliances, including computers, stereos and other equipment. Even in standby mode, appliances use 10 per cent of the electricity in our homes.

If we reduce standby losses to one watt or less, a total of 70 megawatts of electricity will be saved, enough to supply the electricity needs of 58,000 homes.

### DID YOU KNOW

- *More than 70 per cent of B.C.'s homes use an average of seven compact fluorescent lights, the highest per capita market share in North America.*





## Net Zero Homes

The Province will provide \$1 million to assist constructing net zero homes and buildings. Net zero homes use super efficient design to minimize the need for energy, combined with clean energy supplies on-site or in the community. Homes using solar photovoltaic, water and wind turbines supply as much electricity to the grid as they take, for a net zero total. Heating and cooling technologies such as geexchange, other heat pumps, district heating, wood stoves and waste energy generation also help to reduce the need for purchased energy.

## Smart Meters

BC Hydro and FortisBC plan to install smart meters for approximately 1.8 million residential and commercial customers by 2012. The new meters will take accurate readings at regular intervals throughout the day and then automatically collect and transmit the information.

Through this innovative communication and feedback, utilities can design innovative rate structures and customers will be able to see exactly how much electricity they consume and will be encouraged to use energy more efficiently.

## NEW ACTIONS:

- ▶ \$60 million LiveSmart BC: Efficiency Incentive Program for assessing and retrofitting homes and low-income households.
- ▶ \$5 million for SolarBC project.
- ▶ \$1 million to construct net zero energy homes.
- ▶ New residential rate structures to promote conservation.
- ▶ Set targets to reduce average energy demand per home by 20 per cent by 2020.
- ▶ Implement the BC Building Code with the highest efficiency standards in Canada.
- ▶ Target an EnerGuide 80 rating for all new homes by 2010.
- ▶ Pursue policies for energy labelling of houses at time of transfer or sale.
- ▶ BC Hydro and FortisBC will install digitally operated smart meters for their customers.

# 3 COMMUNITIES



*Saanich Commonwealth Place,  
energy efficient retrofits*

## **MORE VIBRANT, LESS ENERGY**

Community leadership in energy efficiency and conservation is necessary to meet our province's future energy needs and achieve electricity self-sufficiency. The Province continues to collaborate with communities in British Columbia to ensure they thrive as vibrant, productive places to live, play and raise families. By creating new opportunities, government will continue to support B.C. communities in leading the way in energy efficiency.

### **Green City Awards**

The Green City Awards were created to encourage physical activity, energy conservation and environmental benefits in communities. These awards recognize local government practices that have directly resulted in greener, healthier communities. They challenge local governments to increase urban densities, encourage efficient construction practices and create healthy neighbourhoods.

### **Community Action on Energy and Emissions**

Additional funding of \$500,000 will expand the Community Action on Energy and Emissions Program. Fifty-three local governments and First Nations currently participate and are building vibrant, healthy communities by reducing greenhouse gas emissions and making energy efficiency improvements. Each year, more communities will be invited to join the program by endorsing energy efficiency goals and policies.

### Remote Community Clean Energy Program

Through an additional \$20 million, the Province is increasing remote communities' participation in clean alternative energy and energy efficiency solutions. The program includes the distribution of energy savings kits and the development of community energy plans. By expanding alternative energy use and enhancing energy efficiency solutions, the program increases the quality of life for these communities. For more information please call 1-250-952-0686.

### Green Communities

New green provincial legislation will help municipalities and regional districts create more compact, sustainable and greener communities. The Province is committed to working with local governments to find solutions to climate change and help local governments contribute to the provincial goal of reducing greenhouse gas emissions 33 per cent below current levels by 2020.

Local governments will be required to include greenhouse gas emission targets, policies and actions in their Official Community Plans and Regional Growth Strategies. They can also use development permits to promote energy and water conservation and the reduction of greenhouse gases and encourage alternative transportation options for off-street parking. Local governments can also waive or reduce Development Cost Charges for green developments.

*Solar Roof, Stone Glen Farm,  
Salt Spring Island*



### NEW ACTIONS:

- ▶ Set targets for new buildings' energy needs from community-based, clean energy sources.
- ▶ \$20 million for community energy plans, energy saving kits, energy efficiency retrofits and alternative power supplies for remote communities.
- ▶ \$500,000 to expand the Community Action on Energy and Emissions Program.
- ▶ Local governments will provide accelerated approvals and other incentives for efficient new homes and buildings.
- ▶ Complete energy conservation plans for all B.C. communities.
- ▶ Require local governments to incorporate greenhouse gas reduction targets in their official community plans and regional growth strategies.

# 4 COMMERCIAL & INSTITUTIONAL BUILDINGS



*Above: Grant Thornton Place in Vancouver, Go Green certified*

## **MORE COMPETITIVE, LESS ENERGY**

British Columbia's businesses, offices, industrial facilities, schools, colleges, universities, health care facilities, arenas and leisure centres occupy 82 million square metres of floor space that accounts for approximately 10 per cent of total energy consumed in B.C. By 2020, floor space is expected to increase to 115 million square metres – the equivalent of more than 17,000 hockey rinks.

This strategy will increase the energy efficiency of commercial and institutional buildings. Building owners, managers and occupants can use new lighting systems and controls, condensing boilers, heat recovery systems and building controls to reduce energy demand.

The greening of the BC Building Code will put British Columbia at the forefront of environmental leadership by implementing the highest energy efficiency standards in Canada.

### **DID YOU KNOW**

Go Green Plus highrise office towers:

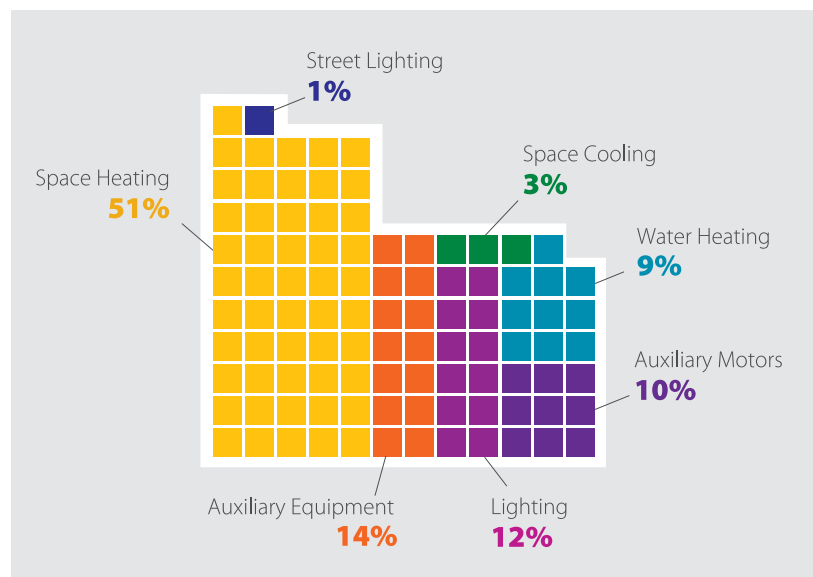
- ▶ *Use 11 per cent less energy.*
- ▶ *Use 18 per cent less water.*
- ▶ *Create 17 per cent less waste per year, along with significant recycling of paper.*



## Energy Labels for New Buildings

Leadership in Energy and Environmental Design (LEED®) is an example of a building rating system that certifies buildings that have a higher energy and environmental performance. LEED® and equivalent standards will recognize B.C. wood and take a whole-building approach to building development, recognizing the importance of collaborative and integrated design. These green buildings use energy, water, materials and land more efficiently than typical buildings. The resulting indoor spaces are healthier, more comfortable and more productive.

## How We Use Energy in Buildings



*Above: National Research Council Canada Institute for Fuel Cell Innovation, certified LEED® Gold*


*Below: BC Cancer Research Agency Centre, certified LEED®*



*Above: Grant Thornton Place, energy efficient mechanical system*

## HOW TO: ACCESS INCENTIVES FOR COMMERCIAL BUILDINGS

- ▶ Visit the LiveSmart BC: Efficiency Incentive Program website at **[www.gov.bc.ca/empr](http://www.gov.bc.ca/empr)** or call **1-866-430-8765** to find out more about a free energy assessment by BC Hydro or FortisBC for small buildings with up to \$50,000 of annual electricity consumption.
- ▶ Commercial buildings can access information and incentives through BC Hydro's Power Smart Partner or Product Incentive programs, FortisBC's PowerSense program for business and Terasen Gas' Energy Assessment and Commercial Boiler programs.
- ▶ For buildings up to 10,000 square metres of floor space, the federal ecoENERGY Retrofit Incentive Program provides support for audits and building energy improvements.



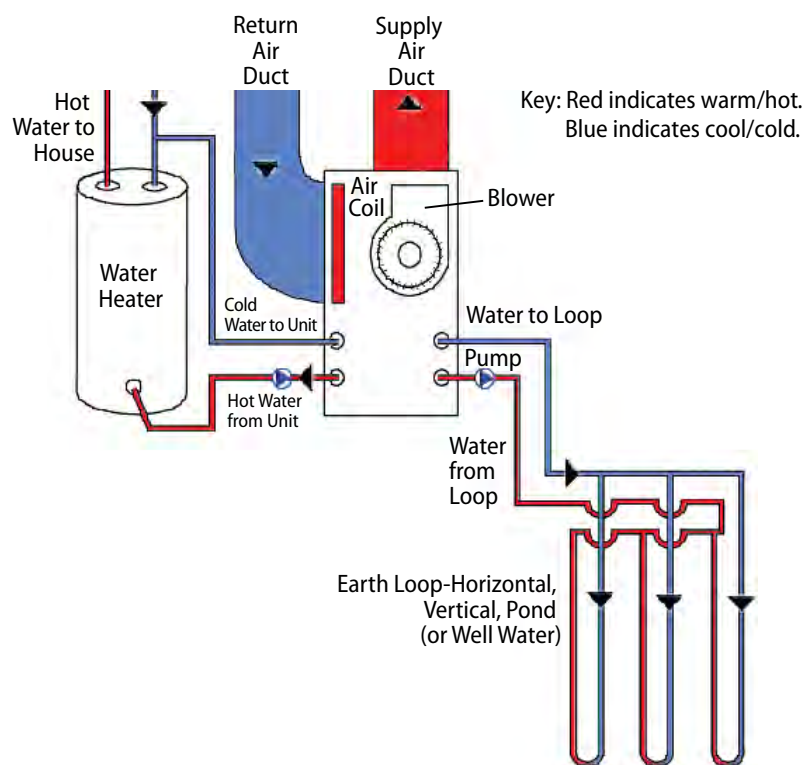
*High-efficiency windows may include multiple layers of glazing, low-emissivity (low-e) coatings, inert gas fill between glass layers and insulating spacers.*

## Go Green Plus

Go Green Plus is a national environmental certification program for commercial buildings and facilities that have attained a specific best practices standard. It requires the completion of energy audits for commercial buildings to become certified and provides tools so building owners can reduce energy consumption and operating costs, while also improving waste management.

## How Geothermal Works

Geothermal energy is heat generated from the earth.



## NEW ACTIONS:

- ▶ LiveSmart BC: Efficiency Incentive Program offers free energy assessments for small commercial buildings.
- ▶ Set targets to reduce energy demand at work by a total of nine per cent per square metre by 2020.
- ▶ Implement the BC Building Code with the highest energy efficiency standards in Canada.
- ▶ Revise the Model National Energy Code for Buildings by 2012.
- ▶ Building energy labelling program, linking to utility and federal incentive programs.
- ▶ Pursue policies for energy labelling at the time of transfer or sale of commercial or institutional buildings.
- ▶ Industrial energy efficiency strategy.
- ▶ BC Hydro and FortisBC will install digitally operated smart meters for their customers.
- ▶ New rate structures will encourage energy efficiency and conservation.

# 5 GOVERNMENT

## **STRONG ACTION, LESS ENERGY**

British Columbia has set the most aggressive greenhouse gas reduction targets in North America. Policies, improved regulations and direct action will encourage and promote energy efficiency, clean energy and conservation. The Province will improve the energy efficiency of provincial public sector buildings, maintain PST exemptions on energy saving products and equipment, and encourage utilities to pursue new rate structures.

The Province is leading by example within its own operations, developing energy efficiency standards under the *Energy Efficiency Act* and the Building Code, and introducing new tax measures and other investments.

### **Green Buildings BC**

The Green Buildings BC Program provides education and health care agencies free support to improve their energy and water efficiency and reduce greenhouse gas emissions and waste. This results in savings of over \$8.8 million per year.

### **Public Sector Energy Conservation Agreement**

The Province became the largest PowerSmart partner when it signed a Public Sector Energy Conservation Agreement with BC Hydro committing to reduce its own demand by 20 per cent by 2020 – significantly decreasing the electricity consumption of more than 6,500 public sector buildings. This agreement will also cut greenhouse gas emissions and expand the use of alternative energy options, supported by funding of \$25 million per year over three years for retrofits of existing buildings. The 3,300 lights on the B.C. Legislature have been upgraded with new, high-tech bulbs that use 68 per cent less energy and last 17 times longer.

*Left: View of the Legislature with energy efficient lighting*





## Public Utility Leadership

The revised *Utilities Commission Act* supports public utilities such as BC Hydro, Terasen Gas, FortisBC and Pacific Northern Gas to pursue cost effective and competitive demand side management opportunities. Demand side management programs help customers choose energy efficient equipment and reduce consumption. These efforts will be coordinated through the BC Partnership for Energy Conservation and Efficiency, led by the Ministry of Energy, Mines and Petroleum Resources.

### DID YOU KNOW

Government has Green Teams:

- ▶ *As part of government's goal to become carbon neutral by 2010, employees across government are finding new and economically sound ways to reduce their carbon footprint.*

### NEW ACTIONS:

- ▶ Reduce government's electricity demand by 20 per cent by 2020, reduce natural gas demand and promote alternative energy options.
- ▶ \$75 million in capital funding to retrofit existing provincial public sector buildings, including measures such as higher efficiency lighting and more efficient boiler systems.
- ▶ Government will become carbon neutral by 2010 through efficiency measures combined with offsets.
- ▶ All new government buildings and facilities will meet the standards of LEED® Gold or equivalent certification, including B.C. wood products.
- ▶ Coordinate energy efficiency programs among governments, utilities and the private sector.
- ▶ Set energy efficiency targets with utilities, supported by a \$500,000 contribution to a province-wide energy conservation potential study and implementation plan.
- ▶ Develop new energy regulations and performance targets by 2012 for windows and doors, high efficiency furnaces, commercial lighting, including small buildings, general service lighting, water heating systems, motors, standby losses, residential appliances, commercial heating, ventilation and air-conditioning systems and commercial refrigeration.
- ▶ New funding to:
  - Develop a \$200,000 super efficient water heater program.
  - \$950,000 to train people to work in the energy efficiency industry.

# CONCLUSION

## **The Energy Efficient Buildings Strategy sets out the action plan for the next three years to support the achievement of long-term targets that will result in the following benefits by 2020:**

- ▶ Achieves the 33 per cent reduction goal for greenhouse gas emissions for the building sector, when combined with the BC Energy Plan commitments for clean and renewable energy and electricity self-sufficiency.
- ▶ Net energy savings of approximately \$3.4 billion over and above capital costs over 12 years.
- ▶ Annual electricity savings equivalent to the consumption of 800,000 homes.
- ▶ Annual fuel savings equivalent to the demand of 570,000 homes.
- ▶ Greenhouse gas emissions reductions from energy efficiency and conservation measures of 1.8 million tonnes per year in 2020.
- ▶ Creation of about 130,000 person years of new employment over 12 years, excluding consumer re-spending of funds saved through energy efficiency measures.

The **Energy Efficient Buildings Strategy** deals with the causes and implications of climate change. It cues us to reduce our daily energy needs and shift to a culture of conservation. It puts tools into the hands of residents to make new choices for new savings. This strategy plans and prepares for B.C.'s future by improving the designs and performance of the buildings in which we live, work and play right now.

We are required by law to reduce our greenhouse gas emissions by 33 per cent by 2020. This strategy, along with LiveSmart BC incentives, will help us all achieve that goal.

British Columbia communities are renowned for inventive design. We know how to build smarter, faster and smaller. We know how to increase densities, reduce construction costs and create new benefits for our environment. We know how to improve air quality, reduce energy consumption and make our landscapes and buildings healthy places to live, work and learn.

We are building for tomorrow, today.

## YOUR LINKS TO ENERGY EFFICIENCY

### For more information on the LiveSmart BC: Efficiency Incentive Program:

[www.gov.bc.ca/empr](http://www.gov.bc.ca/empr)

1-866-430-8765

### To contact a certified energy advisor:

**Amerispec of Canada** [www.amerispec.ca/ecoenergy](http://www.amerispec.ca/ecoenergy)

**City Green Solutions** [www.citygreen.ca](http://www.citygreen.ca)

**Energy Wise Solutions** [www.energywisesolutions.ca](http://www.energywisesolutions.ca)

**Home Performance** [www.homeperformance.com](http://www.homeperformance.com)

**The House Whisperers** [www.thehousewhisperers.ca](http://www.thehousewhisperers.ca)

**Sage Energy Solutions** [www.sageenergysolutions.com](http://www.sageenergysolutions.com)

**Verdatech** [www.energyexperts.ca](http://www.energyexperts.ca)

**Mr. Home Inspector** [www.mrhomeinspectorltd.com](http://www.mrhomeinspectorltd.com)

**Yukon Housing Association** [www.housing.yk.ca](http://www.housing.yk.ca)

**Carrier Chilcotin Tribal Council** (First Nation housing only) [www.carrierchilcotin.org](http://www.carrierchilcotin.org)

### Our Partners:

**BC Hydro PowerSmart** [www.bchydro.com/powersmart](http://www.bchydro.com/powersmart)

**Canada Green Building Council** [www.cagbc.org](http://www.cagbc.org)

**Canadian Home Builders' Association of British Columbia** [www.builtgreencanada.ca](http://www.builtgreencanada.ca)

**Canada Mortgage and Housing Corporation**  
[www.cmhc.ca](http://www.cmhc.ca)

**Community Action on Energy and Emissions**  
[www.caee.ca](http://www.caee.ca)

**Community Energy Association**  
[www.communityenergy.bc.ca](http://www.communityenergy.bc.ca)

**Douglas College Building Environment Systems**  
[www.douglas.bc.ca](http://www.douglas.bc.ca)

**Energy Star** [www.oeenrcan.gc.ca/energystar](http://www.oeenrcan.gc.ca/energystar)

**FortisBC PowerSense** [www.fortisbc.com](http://www.fortisbc.com)

**Green Buildings BC** [www.greenbuildingsbc.com](http://www.greenbuildingsbc.com)

**Green Buildings Foundation**  
[www.greenbuildingsfoundation.org](http://www.greenbuildingsfoundation.org)

**Geo-Exchange BC** [www.geoexchangebc.ca](http://www.geoexchangebc.ca)

**Homeowner Protection Office** [www.hpo.ca](http://www.hpo.ca)

**Lighthouse Sustainable Building Centre**  
[www.sustainablebuildingcentre.com](http://www.sustainablebuildingcentre.com)

**EcoEnergy Retrofit Homes (Natural Resources Canada)** [www.ecoaction.gc.ca](http://www.ecoaction.gc.ca)

**Pacific Northern Gas** [www.png.ca](http://www.png.ca)

**PST Exemptions** [www.sbr.gov.bc.ca/individuals](http://www.sbr.gov.bc.ca/individuals)

**Terasen Gas** [www.terasengas.com](http://www.terasengas.com)

**Thermal Energy Comfort Association**  
[www.teca.ca](http://www.teca.ca)



**For more information on the  
Energy Efficient Buildings Strategy, contact:**

**Ministry of Energy, Mines and Petroleum Resources  
1810 Blanshard Street, PO Box 9318 Stn Prov Govt  
Victoria, BC V8W 9N3**

**Tel: 1-866-430-8765 [www.energyplan.gov.bc.ca/efficiency](http://www.energyplan.gov.bc.ca/efficiency)**

2007



The Ministry of Energy, Mines and Petroleum Resources and BC Hydro received Natural Resources Canada's 2007 Energy Star® Collaborative Initiative of the Year award for work on market transformation for windows. The Ministry collaborated on this initiative with City Green Solutions, First Nations, FortisBC, Homeworks Services, local governments, the Ministry of Finance and the Window and Door Manufacturers Association of British Columbia. Award winners are selected from organizations that participate in Energy Star®, a voluntary program introduced in Canada in 2001 to reduce air pollution through increased energy efficiency.



Printed on 100% post-consumer recycled stock.