

Tools for Improving Residential Energy Efficiency for Existing Homes in BC

BC Home Energy Efficiency Opportunities



- Many BC homes are like swiss cheese – full of holes! The average 20 year old home has leaks that would add up to a round **hole 16 inches across**.
- Many are paying unnecessarily high energy bills, suffering from moisture or ventilation problems, etc.
- To date, **less than 20% of BC homes have participated in provincial or federal home energy-saving retrofit programs**

Cheese lives in a fridge, but homeowners in BC shouldn't have to!

Where are We Going?

Key Objectives of the BC Energy Efficient Buildings Strategy

- Reduction of greenhouse gas emissions by 33% from 2007 levels by 2020.
- Reduction of average energy demand per home by 20% by 2020.

**ENERGY EFFICIENT
BUILDINGS STRATEGY:
MORE ACTION, LESS ENERGY**

How are We Getting There?

- **We are currently not on target!**
- If 20% energy demand by 2020 reduction was to be achieved through the existing ecoENERGY/LiveSmartBC program (in all single detached, semi-detached and row housing) BC would need over 300 certified energy advisors working full time.
- We are going to need multiple tools to get there....

To Reach Target, We Need:

- Political Leadership (federal, provincial, municipal) – Energy conservation and GHG reduction
- Robust incentives/rebates – long term stable programs
- Mandated programs (eg: Time of Sale Energy Labelling, Green Renovation Bylaw)
- Wide range of financing options – financial institutions, Property Assessed Clean Energy (PACE) bonds, Pay as You Save (PAYS)
- Increased energy costs/taxes (?)
- Expanded low income energy efficiency programs
- Fully activated private and non-profit sectors

Existing Tools for Increasing Residential Energy Efficiency

Tool 1: The Home Energy Assessment:

- Certified Energy Advisor visits home, provides customized advice, prioritized energy saving retrofit plan, and **access to incentives and rebates.**
- Typical homeowner **will reduce their home's energy bills** by 30% or more after doing lower cost upgrades such as insulation and air sealing, and **by more than 70%** by doing all the recommended upgrades.





Examples of Selected Maximum Grants

Retrofit	Grant
Gas Furnace	\$770
Air Source Heat Pump	\$1420
Gas Water Heater	\$310
Flat Roof Insulation	\$420
Basement Insulation	\$400
Air Sealing	\$250

Incentives Promote Energy Savings: Results of LiveSmart BC To Date

- 47,090 households have entered LiveSmart BC program between April 1, 2008 and Aug 31, 2010
- Average energy savings of participating homes: 46.3 GJ.
- Average CO2 savings (tonnes/yr): 2.5 tonnes per home
- Economic Impact: \$9-10M for every \$1M spent by NRCan
- Total Jobs: BC Stats economic multiplier of 10-15 jobs per \$1M spent by participants

Tool 2: Thermal Imaging

A better picture of home energy efficiency opportunities



Thermal Imaging Can Detect:

- Hidden problems with insulation



Thermal Imaging Can Detect:

- Moisture



Thermal Imaging Can Detect:

- Air Leakage



Tool 3: Programs for Low Income Households

Energy Conservation Assistance Program (ECAP)

Free home improvements worth up to \$2,000 for limited budget households that are high electric consumers.



The Energy Conservation Assistance Program is a Power Smart initiative for BC Hydro customers with higher electricity consumption who may not be able to afford to make their homes more energy efficient.

Qualified applicants can receive a free home energy evaluation and energy efficiency upgrades to help reduce their consumption and save money on their bills.

For additional programs: visit www.affordablewarmth.ca

Tool 4: Additional Incentives and Rebates for Energy Saving Upgrades

Retrofit Loan Financing

The screenshot shows the RBC Royal Bank website interface. At the top, there's the RBC logo and navigation links for 'RBC.com', 'Français', '新移民專頁', 'Contact Us', 'Site Map', and 'Sign In'. A search bar is also present. Below the navigation bar, there are tabs for 'Banking', 'Investing', 'Wealth Management', 'Insurance', and 'Advice & Tools'. The main content area is divided into several sections:

- Vancity** (top left, red background) with sub-tabs for 'mymoney', 'mybusiness', and 'mycommunity', and further sub-tabs for 'banking', 'Visa', 'mortgages & renos', and 'loans'.
- Sign-in** section with 'Online Services' dropdown.
- RBC Royal Bank Mortgage Centre** sidebar with links: 'Choosing the Right Mortgage', 'View All Mortgages', 'Mortgage Calculators', 'View Rates', 'Managing Your Mortgage', 'Protecting Your Home', and 'Customer Service'.
- Your Guide To...** sidebar with links: 'Finding Your Home', 'Buying a Home', 'Renovating a Home' (with sub-links: 'Choosing the Right Financing Option', 'Home Equity Loans', 'Unsecured Home Improvement Loans', 'Credit Cards'), 'Grow an Energy Efficient Home' (with sub-links: 'Additional Resources', 'How to Apply'), 'Selling a Home', and 'An Energy Efficient Home'.
- Bright Ideas home financing** main section:
 - Section: **Bright Ideas home financing**
 - Section: **Increasing your comfort and your savings**
 - Text: 'Making energy-saving renovations to your home under the bright idea with many benefits. The program offers you way...'
 - List of benefits:
 - create a more comfortable home environment
 - cut energy costs by 35% on average for an older home
 - improve your home's re-sale value with an energy efficient home that is more energy efficient
 - fight climate change and protect our environment
 - Red button: **apply now**
 - Section: **Bright Ideas home renovation loan: financing yo...**
 - Text: 'We salute your smart choice to make your home more ene... renovation financing with a Bright Ideas home renovation lo...'
 - Text: 'This personal loan is at prime+1 rate¹ for up to ten years. 1 compared to a conventional loan. You can borrow as little s... Then pay it back with regular monthly payments.'
- Grow an Energy Efficient Home** main section:
 - Section: **Grow an Energy Efficient Home**
 - Text: 'And save money with the RBC Energy Saver™ Mortgage or RBC Energy Saver™ Loan.'
 - Image: A couple looking at a document.
 - Text: 'Whether you want to save money, reduce your home's impact on the environment or simply upgrade your home, an eco-renovation and the right RBC® financing solution can help you accomplish it.'
 - Section: **Get the Audit – Make a Plan**
 - Text: 'The first step to a smart eco-renovation is the home energy audit. A licensed professional can conduct a home audit and tell you what actions you need to take to improve your home's energy efficiency.'
 - Text: 'For more information about the energy audit process, benefits and scheduling an appointment with a qualified energy advisor, visit [My Energy Audit](#).'
 - Text: 'You can also find out more about home energy audits using the resource below:'
 - Link: [Home Energy Audits](#) (444 KB PDF)
- Jump To** sidebar:
 - Section: **Jump To**
 - Link: [Grow an Energy Efficient Home](#)
 - Link: [Eco Renovation Tips](#)
 - Section: **Learn More**
 - Link: [Making a Difference at Home](#)
 - Link: [Canada Mortgage and Housing Corporation](#)
 - Link: [Your Guide to Growing an Energy Efficient Home](#) (1.45 MB PDF)
 - Link: [Home Energy Audits](#) (444 KB PDF)

Utility Incentives



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Switch 'n' Shrink
Switch to a natural
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Upgrade your water
heater and save

Give your furnace
some TLC

LiveSmart BC: Efficiency
Incentive Program

Switch 'n' Shrink
for \$1000

Utility Incentives cont'd



Fridge Buy-Back Program

BC Hydro will pick up your old fridge, recycle it and give you \$30 for it.



Lighting Specials

Power Smart specials on fixtures and bulbs.



Home Electronics

Buy ENERGY STAR labelled televisions and save at least 50% compared to standard TVs.



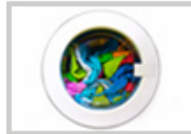
Mail-in Rebates

ENERGY STAR phones, low flush toilets, outdoor clotheslines, energy saving kits and showerheads among our current mail-in coupon offers.



Windows Offers

Check here for limited time promotions on ENERGY STAR labelled windows.



Appliance Rebates

Save on ENERGY STAR appliances. Rebates from \$25 to \$50 on select clothes washers, refrigerators, dishwashers and all ENERGY STAR

freezers.



Product Incentive Program

For businesses, Power Smart offers money-saving incentives for energy-efficiency upgrades.



e.Catalog for business

Over 8,000 energy-efficient products in one place.



Programs for businesses

Power Smart helps **commercial** and **industrial** customers with programs and incentives.



Low-income program

Low-income customers may qualify for our **Energy Saving Kit** and/or **Energy Conservation Assistance Program**.

Solar BC Incentives

- \$2,000 discount at the point of sale or a [Zero Interest Loan](#)



Join the Solar Revolution
SolarBC makes it easy for people to install solar hot water.

And many more...

- Visit www.citygreen.ca/incentives for energy efficiency incentives/rebates available across the province.



The screenshot displays the CityGreen Solutions website interface. At the top left is the CityGreen Solutions logo, featuring a house icon with a tree growing from it. The main navigation bar includes links for HOME, ABOUT US, LIVESMART BC GRANTS, SERVICES, LEARN MORE, and OTHER GRANTS. The 'OTHER GRANTS' link is highlighted, and the page title 'Grants For Homeowners' is visible. Below the navigation bar is a search bar with the text 'Search for energy efficiency grants and incentives in your community.' On the left side, there is a sidebar menu for 'LiveSmart BC Grants' with sub-links for 'Grants', 'How to Apply', and 'Book Online'. The main content area features the heading 'Energy Efficiency Incentive Programs' and a descriptive paragraph: 'A comprehensive search tool for energy efficient renovation and construction grants, rebates, subsidies, tax rebates, and other incentives available in BC.'

Tool 5: Municipal Programs

Examples:

- **Saanich offers rebates** of up to 30% off building permits for new construction or renovation projects that meet energy efficiency standards.
- **Vancouver promotes existing grant/rebate programs** through direct mail, workshops, websites, etc.



Tool 6: Low Hanging Fruit

Low Flow Fixtures: City Green and Terasen Gas will be partnering with municipalities to implement direct install and exchange programs for low flow showerheads and aerators. Contact us if you are interested.



Replacement Fixtures	Water Savings (L)	Energy Savings (KWh / GJ)	GHG Savings (Kg) Electric/Gas
Showerhead	11,293	422 / 1.52	22.3 / 75.4
Kitchen faucet aerator	12,233	682 / 1.64	36.1 / 121.9
Bathroom faucet aerator	18,350	454 / 2.45	24.0 / 81.3
Total savings per home	41,876	1,558 / 5.61	82.4 / 278.6

Tool 7: Home Energy Labelling

- Energy labelling at time of sale provides information about a home's energy efficiency to potential buyers.
- Benefits home buyers, sellers, realtors, and can help stimulate energy-saving retrofits and improve the efficiency of the province's building stock.



Sign On Today!

Support Home Energy Labelling BC

List of Supporters

Utilities

BC Hydro

Districts and Municipalities

City of Vancouver

City of Victoria

District of Sooke

Businesses and Organizations

ABC Naturally

Amerispec

Amerispec Inspection Service

Add your support at
<http://www.homeenergylabellingbc.com>

Thank you

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www.citygreen.ca

Energy efficiency is the cheapest, cleanest, fastest energy source to deploy and the most cost-effective way to reduce greenhouse gas emissions.

-American Recovery & Reinvestment Act Program Plan, a U.S. weatherization program for low-income Americans.