

DOCKETED

Docket Number:	21-IEPR-06
Project Title:	Building Decarbonization and Energy Efficiency
TN #:	237958
Document Title:	Presentation - British Columbia's Clean Buildings Strategy
Description:	S1.2B Nat Gosman, British Columbia Ministry of Energy
Filer:	Raquel Kravitz
Organization:	California Energy Commission
Submitter Role:	Commission Staff
Submission Date:	5/24/2021 3:24:29 PM
Docketed Date:	5/24/2021



British Columbia's Clean Buildings Strategy

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B.C. Ministry of Energy, Mines and Low Carbon Innovation

CEC Building Decarbonization - Energy Efficiency Workshop

May 25, 2021



B.C.'s Climate Action Compared to Other Jurisdictions

		British Columbia	Alberta	California	Ontario	Québec
Carbon pricing system	Carbon tax or cap and trade system	✓	✓	✓	✓	✓
Clean electrical grid	Greater than 90% from renewable sources	✓				✓
ZEV standard	Requires increased sales of zero-emission vehicles	✓		✓		✓
Low carbon fuel standard	Requires a decrease in the carbon intensity of fuels	✓		✓		



CLIMATE CHANGE ACCOUNTABILITY ACT

[SBC 2007] CHAPTER 42

BC greenhouse gas emissions — target levels

2 (1) The following targets are established for the purpose of reducing BC greenhouse gas emissions:

(a) [Repealed 2018-32-2.]

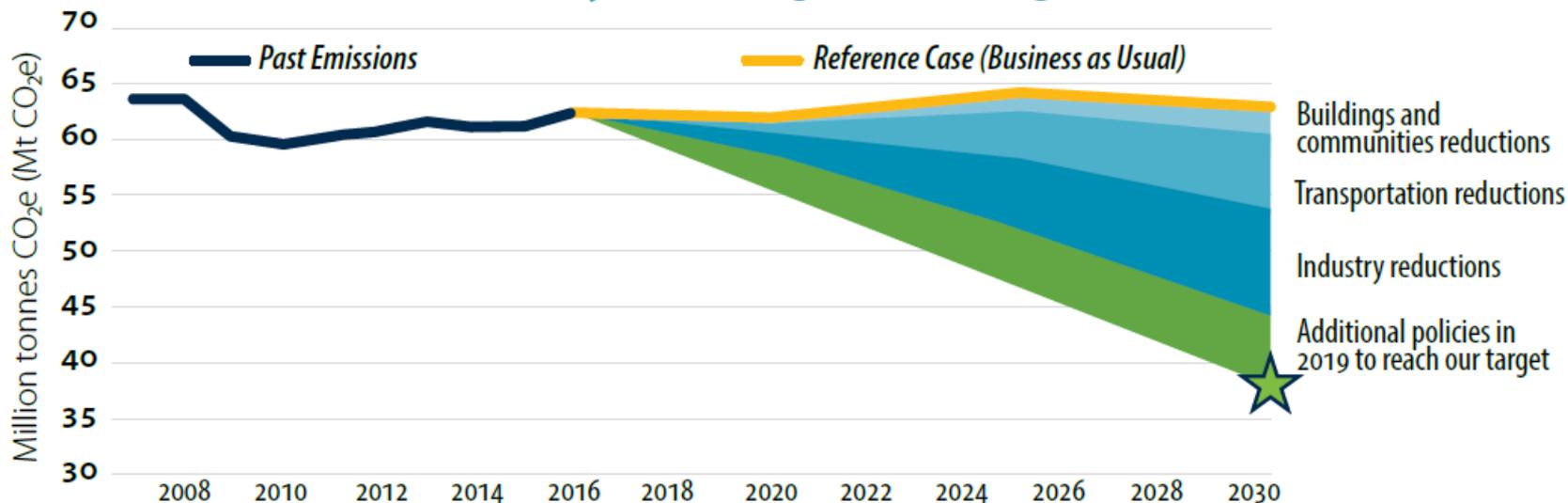
(a.1) by 2030 and for each subsequent calendar year, BC greenhouse gas emissions will be at least 40% less than the level of those emissions in 2007;

(a.2) by 2040 and for each subsequent calendar year, BC greenhouse gas emissions will be at least 60% less than the level of those emissions in 2007;

(b) by 2050 and for each subsequent calendar year, BC greenhouse gas emissions will be at least 80% less than the level of those emissions in 2007.

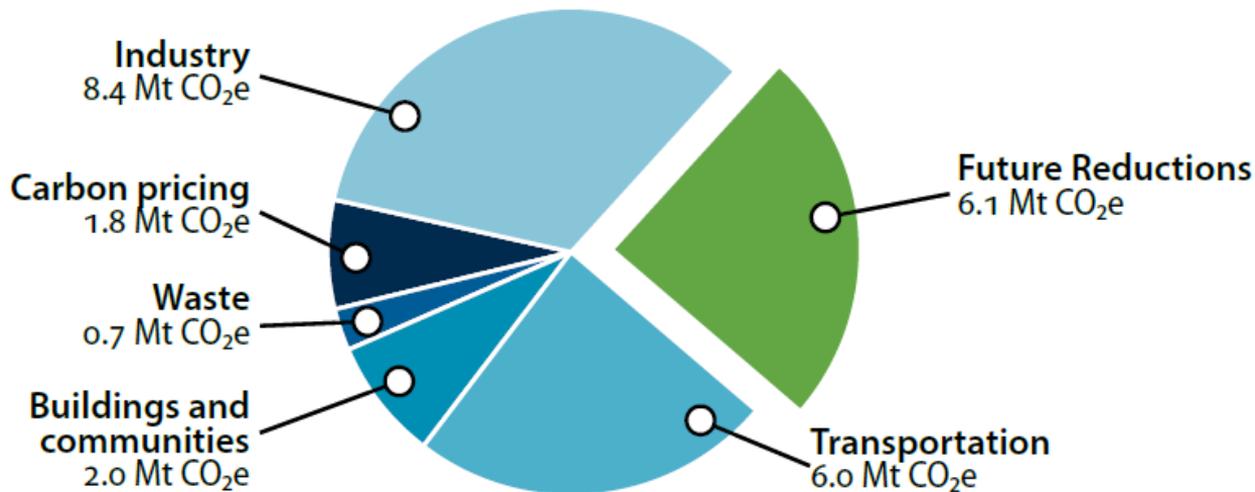


Pathway to meeting our climate goals





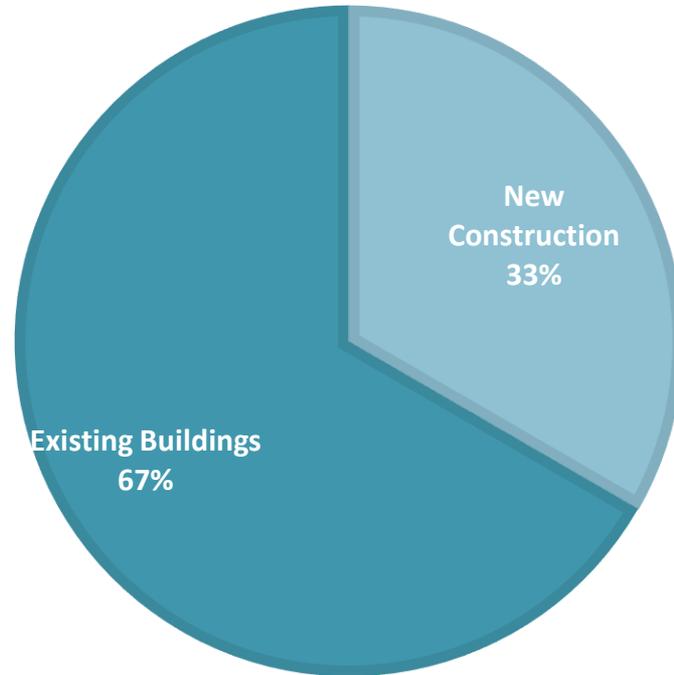
Reductions to achieve 2030 target



Building Sector Focus



■ New Construction ■ Existing Buildings



Building Sector Pathways



Energy Efficiency

Electrification

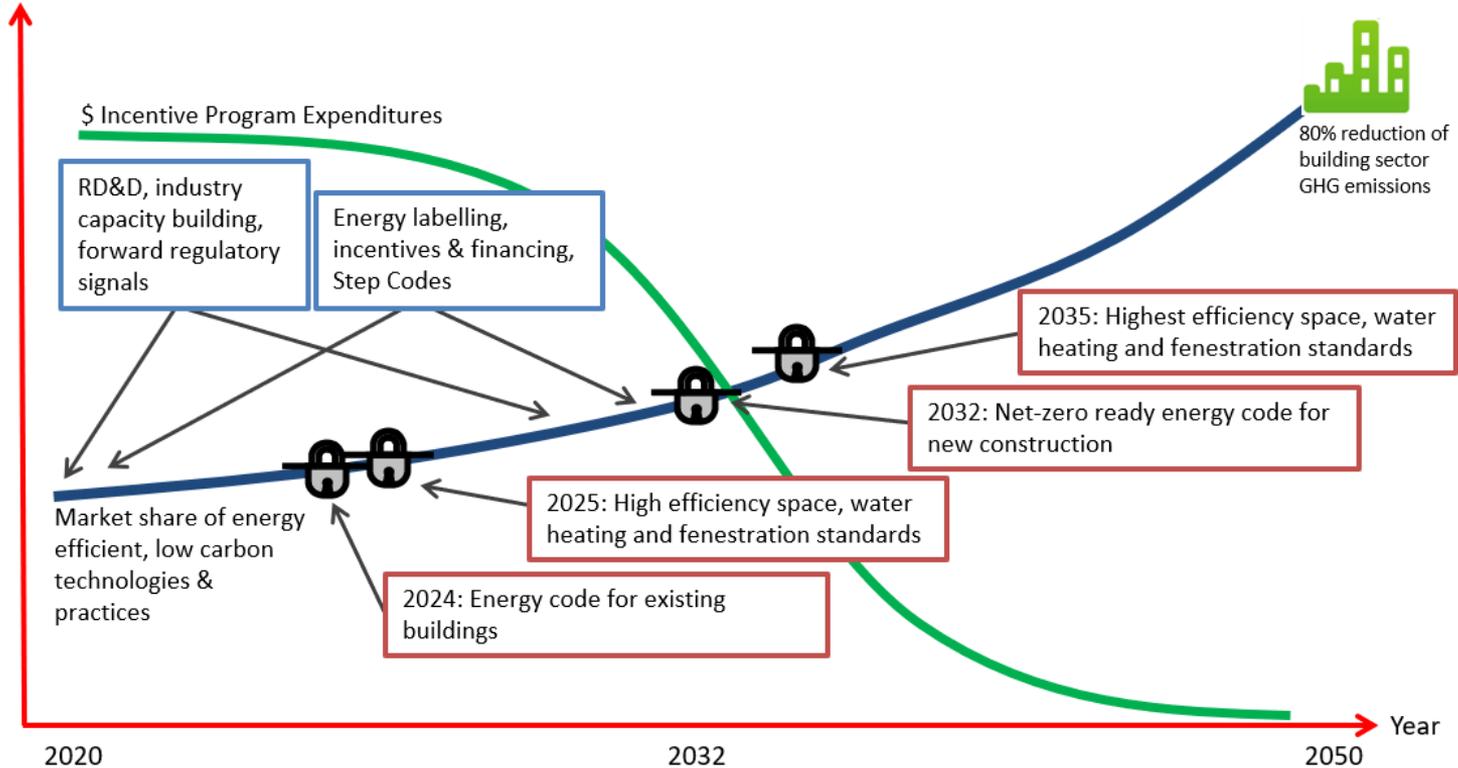
Renewable Gas



Five streams of market transformation:

- 1) **Research, development and demonstration** of BC-made low carbon building solutions
- 2) **Energy information tools** to help British Columbians identify retrofit opportunities and inform investment decisions
- 3) **Financial incentives** to drive adoption of low carbon heating systems and energy efficiency improvements
- 4) **Industry training** to ensure market readiness
- 5) Progressively more stringent **energy efficiency codes and standards**

Clean Buildings Strategy - MT





Goal snapshot

Where we live and work

By 2030, emissions from buildings dropped by 40%.

- By 2032, new buildings will be 80% more efficient than a home built today (highest tier of B.C. energy step code)
 - By 2030, 70,000 homes and 10 million m² of commercial buildings will be retrofitted to use clean electricity in space heating
 - 60% of homes and 40% of commercial buildings will be heated with clean electricity
 - Public buildings will lead the way, reducing emissions by 50% by 2030
 - Overall, emissions from buildings will drop by 40%
-

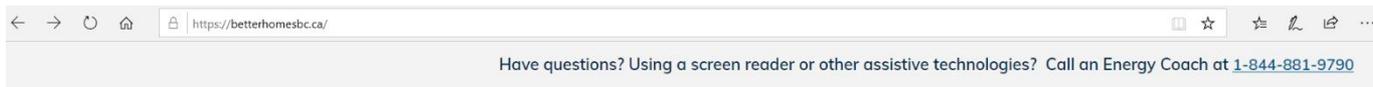


Building Innovation Fund

- Funding for projects that advance innovation in building designs, construction practices, systems, materials and products.
- Focus on projects that reduce emissions from building operations and/or have low embodied carbon, have potential to scale and be cost competitive.
- Funding streams for research, commercialization & demonstration projects
- Example projects:
 - Prefabricated Passive House building assemblies for northern climate
 - Deep carbon retrofit demonstration in social housing
 - Retrofit decision assistance tool for commercial building owners
 - High performance HRV manufacturing facility
 - Mass timber robotic finishing line
 - Reclaimed lumber facility expansion



Better Homes – Energy Coach and Decision Assistance Platform



Rebate Search Tool

About Us

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Better Homes helps British Columbians find rebates that save energy and lower greenhouse gas emissions.



Not sure where to start? Follow our step-by-step guide



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Energy Labelling



26 First Blvd.
Ottawa, ON, K1H 1R1

ENERGUIDE

Date Collected: May 6, 2016
File Number: 1234567890
Home evaluated by: MCE Energy Solutions

85% of the House
Energy Efficient

150 kWh/year
Less energy
performance

190 kWh/year
More energy
performance

Use objects like CFLs to reduce the energy from non-BTU propane tanks

Final Annual Energy Consumption		Breakdown of Rated Annual Energy Consumption	
Heating gas	50	A. Space heating	0%
Electricity	0	B. Space heating	0%
Drinking water	0	C. Water heating	13%
Refrigeration	0	D. Water heating	1%
Electricity	0	E. Appliances	18%
Electricity	0	F. Other electrical	18%

Rated Energy Intensity: 0.49 GJ/m²/year
Rated Greenhouse Gas Emissions: 3.8 tonnes/year

*This house has significant energy uses not included in the rating. See "Energy Issues" or your Homeowner Information Sheet for details.
The energy consumption indicated on your utility bills may be higher or lower than your EnerGuide rating.

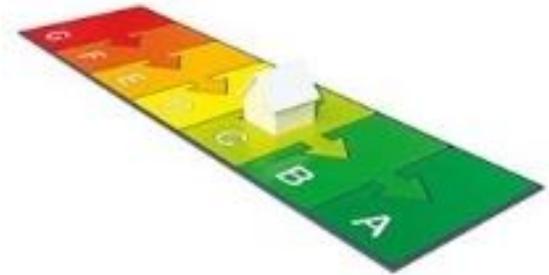
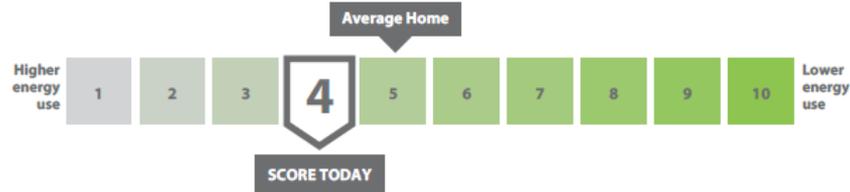
Visit nrcan.gc.ca/myenerguide

Canada

THIS HOME'S CARBON FOOTPRINT:



What should my home's carbon footprint be? Between now and 2030, Portlanders should reduce carbon pollution per household to 3 metric tons per year to reach our climate goals.



Better Homes Program



- Rebates for clean fuel-switching and energy efficiency in fossil-fuel heated homes
- Integrated with utility and local government offers
- Accessible through single website and application at BetterHomesBC
- Served by the BC Energy Coach
- Enhanced incentives and supports for Indigenous communities and income-qualified participants

HOME HEATING REBATES				
UPGRADE CATEGORY	UPGRADE TYPE	TECHNICAL DETAILS	SPONSOR	REBATE
SWITCH FROM NATURAL GAS, PROPANE OR OIL TO ELECTRICITY	MINI-SPLIT HEAT PUMP OR MULTI-SPLIT HEAT PUMP	HIGHEST EFFICIENCY VARIABLE SPEED HSPF≥9.30, SEER≥16	cleanBC	\$3,000 & up to \$2,000*
	CENTRAL DUCTED "TIER 2" HEAT PUMP	HIGHEST EFFICIENCY VARIABLE SPEED HSPF≥9.30, SEER≥16	cleanBC	\$3,000 & up to \$2,000*
	CENTRAL DUCTED "TIER 1" HEAT PUMP	HIGH EFFICIENCY HSPF≥8.50, SEER≥15	cleanBC	\$1,200 & up to \$2,000*
	AIR-TO-WATER HYDRONICS HEAT PUMP SYSTEM	OBTAIN PRE-APPROVAL FROM BetterHomesBC@gov.bc.ca	cleanBC	\$3,000 & up to \$2,000*
	COMBINED SPACE AND HOT WATER HEAT PUMP	OBTAIN PRE-APPROVAL FROM BetterHomesBC@gov.bc.ca	cleanBC	\$1,000 - \$4,300 & up to \$2,000*
UPGRADE YOUR ELECTRIC HEATING	MINI-SPLIT HEAT PUMP	HIGHEST EFFICIENCY VARIABLE SPEED HSPF≥10.00, SEER≥18	BC Hydro Power smart	\$1,000
	MULTI-SPLIT HEAT PUMP	HIGHEST EFFICIENCY VARIABLE SPEED HSPF≥9.30, SEER≥16	BC Hydro Power smart	\$1,000
	CENTRAL DUCTED "TIER 2" HEAT PUMP	HIGHEST EFFICIENCY VARIABLE SPEED HSPF≥9.30, SEER≥16	BC Hydro Power smart	\$2,000
	MINI-SPLIT HEAT PUMP	HIGHEST EFFICIENCY VARIABLE SPEED HSPF≥10.00, SEER≥18	FORSTIS BC Energy of mind ELECTRIC SERVICE AREA	\$1,200
	MULTI-SPLIT HEAT PUMP	HIGHEST EFFICIENCY VARIABLE SPEED HSPF≥9.30, SEER≥16	FORSTIS BC Energy of mind ELECTRIC SERVICE AREA	\$2,000
	CENTRAL DUCTED "TIER 2" HEAT PUMP	HIGHEST EFFICIENCY VARIABLE SPEED HSPF≥9.30, SEER≥16	FORSTIS BC Energy of mind ELECTRIC SERVICE AREA	\$2,000
	CENTRAL DUCTED "TIER 1" HEAT PUMP	HIGH EFFICIENCY HSPF≥8.50, SEER≥15	FORSTIS BC Energy of mind ELECTRIC SERVICE AREA	\$1,200
UPGRADE YOUR NATURAL GAS HEATING	NATURAL GAS FURNACE	HIGH EFFICIENCY ≥97% AFUE	cleanBC FORSTIS BC Energy of mind	\$700
	NATURAL GAS FURNACE	HIGH EFFICIENCY 95-96.9% AFUE	FORSTIS BC Energy of mind	\$500
	NATURAL GAS BOILER	HIGH EFFICIENCY ≥94% AFUE	FORSTIS BC Energy of mind	\$1,000
	NATURAL GAS COMBINATION HEATING AND HOT WATER SYSTEM	ENERGY STAR or P9 Certified	FORSTIS BC Energy of mind	\$1,500



RD&D
Energy Information
Incentives
Industry Training
Codes & Standards

Better Buildings Program



Incentive Search Tool

About Us

Contact Us



CleanBC Custom Program

The CleanBC Custom Program offers energy study funding and capital incentives for fuel switching and other electrification measures. The program is funded by the Province of British Columbia and the Government of Canada and is administered by BC Hydro.

If you are a customer in FortisBC's electricity service area (including the City of Grand Forks, City of Penticton, District of Summerland, or Nelson Hydro), please contact your [FortisBC Technical Advisor](#) to discuss similar funding opportunities for fuel switching. If you are considering a natural gas conservation project, please contact your [FortisBC Key Account Manager](#), or visit the [Fortis BC Custom Performance Program](#) for more details.

Available Incentives

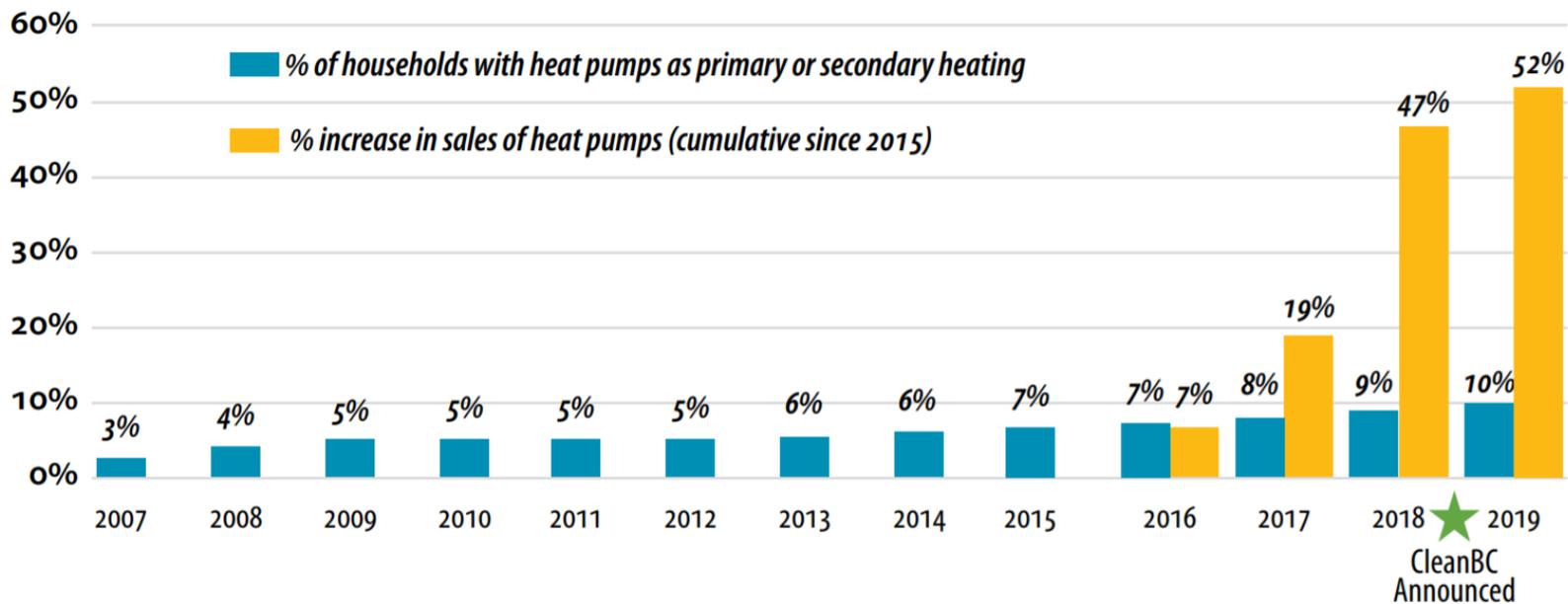
Energy Study Funding – the Custom Program supports up to 50% of an energy study's cost, up to a maximum of \$20,000.

Custom Capital Funding Incentives – based on a rate of \$40/tCO₂e of lifetime greenhouse gas savings, BC Hydro will support up to \$200,000 per customer. For heat pump rooftop units, the Program offers a rate of \$60/tCO₂e.

Program Impacts

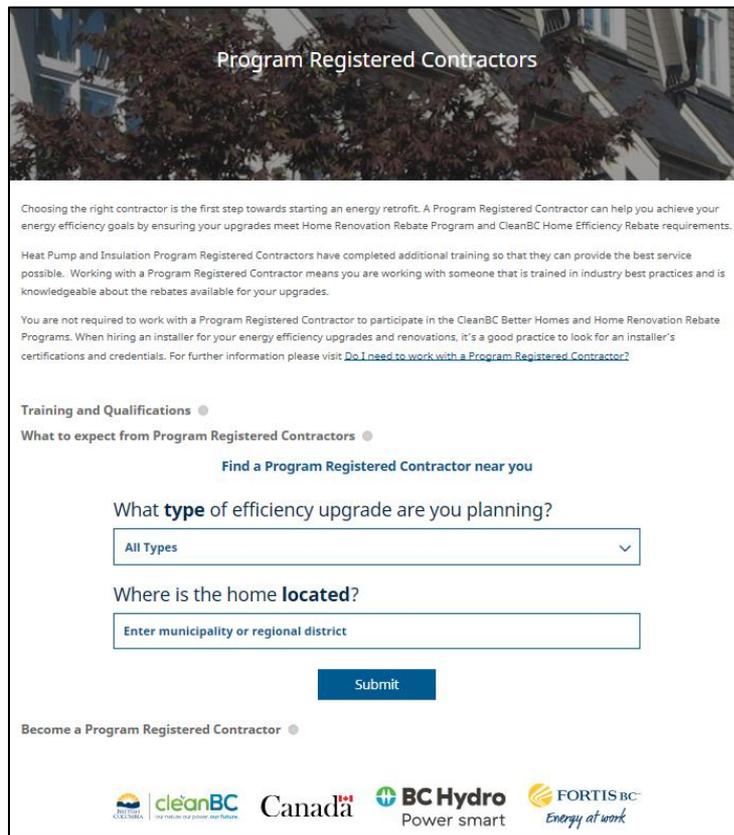


Heat Pump Systems and Sales



Program Registered Contractors

- Developing best practice installation training & certification for retrofit trades
- Building a network of qualified retrofit contractors
- Searchable by location
- Use of PRC will become mandatory for access to Better Homes and utility incentives



Program Registered Contractors

Choosing the right contractor is the first step towards starting an energy retrofit. A Program Registered Contractor can help you achieve your energy efficiency goals by ensuring your upgrades meet Home Renovation Rebate Program and CleanBC Home Efficiency Rebate requirements.

Heat Pump and Insulation Program Registered Contractors have completed additional training so that they can provide the best service possible. Working with a Program Registered Contractor means you are working with someone that is trained in industry best practices and is knowledgeable about the rebates available for your upgrades.

You are not required to work with a Program Registered Contractor to participate in the CleanBC Better Homes and Home Renovation Rebate Programs. When hiring an installer for your energy efficiency upgrades and renovations, it's a good practice to look for an installer's certifications and credentials. For further information please visit [Do I need to work with a Program Registered Contractor?](#)

Training and Qualifications

What to expect from Program Registered Contractors

Find a Program Registered Contractor near you

What **type** of efficiency upgrade are you planning?

All Types

Where is the home **located**?

Enter municipality or regional district

Submit

Become a Program Registered Contractor

Energy Step Code



Large, complex buildings (Part 3)



Low-rise buildings (Part 9)



Energy Step Code Results



BC Energy Step Code Expansion since 2017

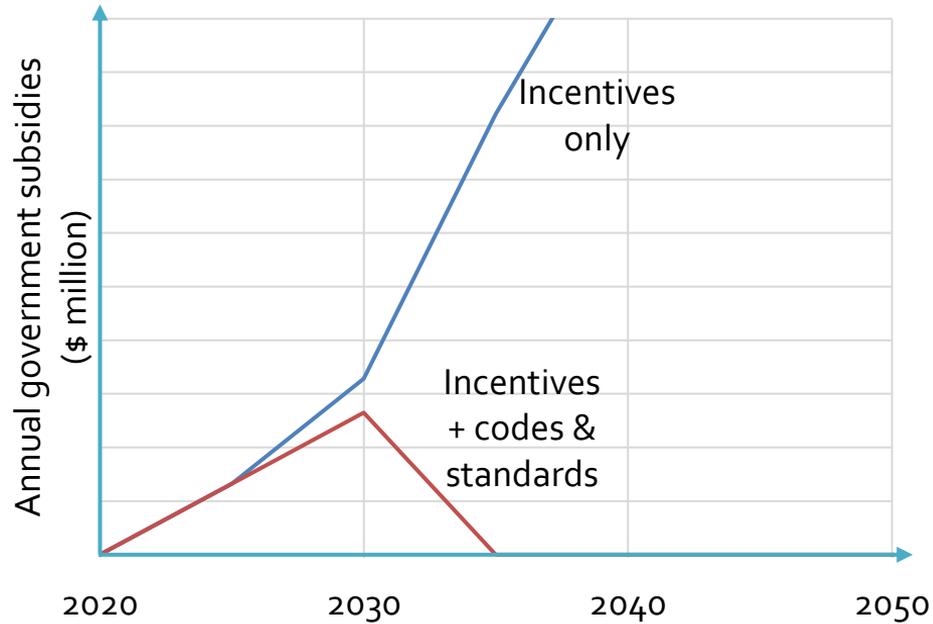


Future Commitments



- **BC Building Code – New Construction**
 - 20 per cent more energy efficient by 2022 (Step 3 Part 9; Step 2 Part 3)
 - 40 per cent more energy efficient by 2027 (Step 4 Part 9; Step 3 Part 3)
 - 80 per cent more energy efficient by 2032 (Step 5 Part 9; Step 4 Part 3)
 - Support local governments to set their own carbon pollution performance standards for new buildings
- **BC Building Code – Existing Buildings**
 - New standards for building upgrades developed by 2024
- **Energy Efficiency Standards Regulations**
 - New energy efficiency standards for space heaters, water heaters and residential windows between 2022-25

Clean Buildings Strategy - Challenges & Opportunities





Thanks.

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