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British Columbia's Clean Buildings Strategy

Nat Gosman

Executive Director, Built Environment
B.C. Ministry of Energy, Mines and Low Carbon Innovation

CEC Building Decarbonization - Energy Efficiency Workshop
May 25, 2021

BC Climate Action in Context

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	✔		✔		

Provincial GHG Targets

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:

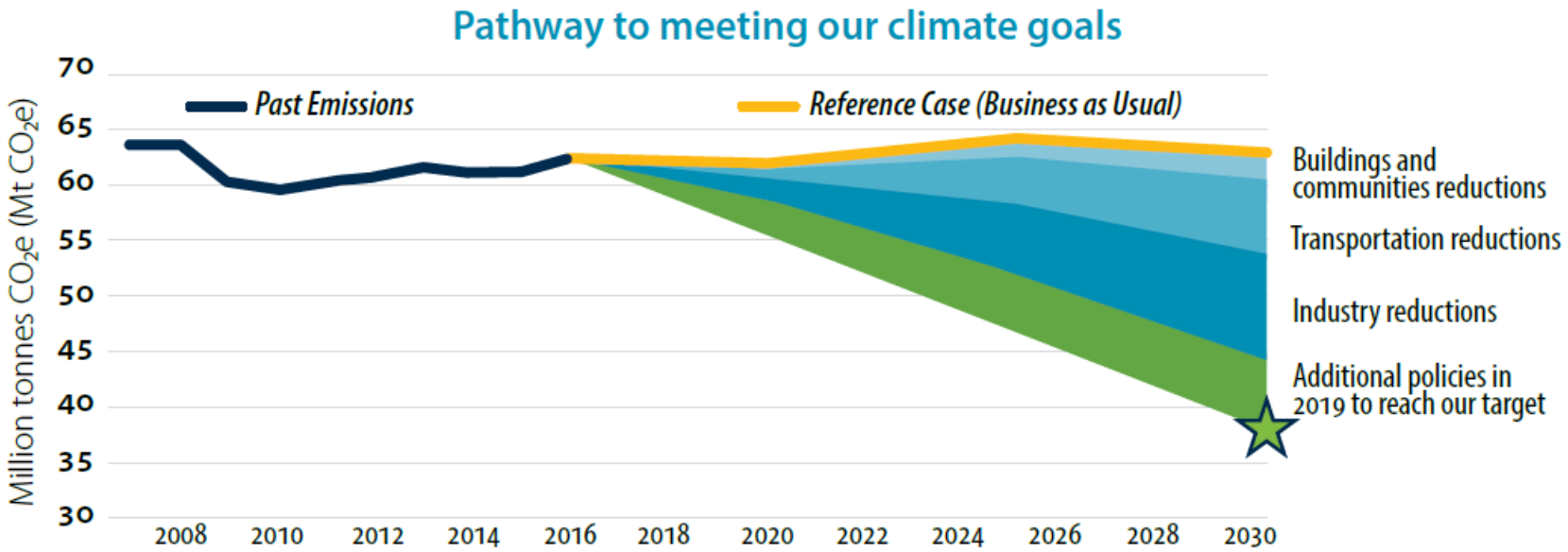
(a) [Repealed 2018-32-2.]

(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;

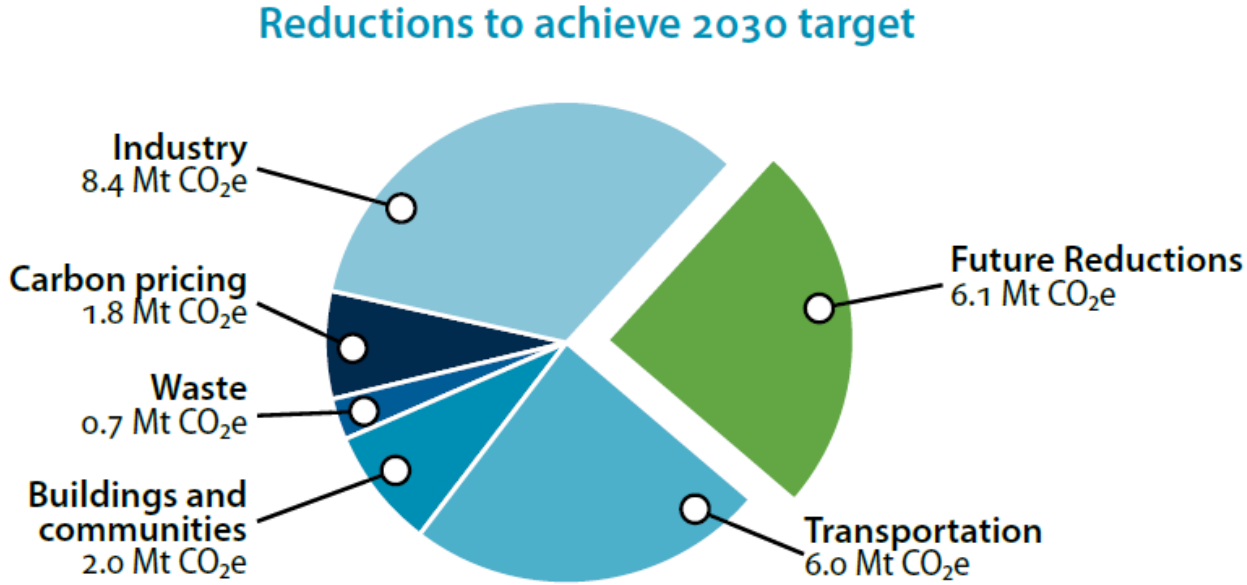
(a.2) by 2040 and for each subsequent calendar year, BC greenhouse gas emissions will be at least 60% less than the level of those emissions in 2007;

(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.

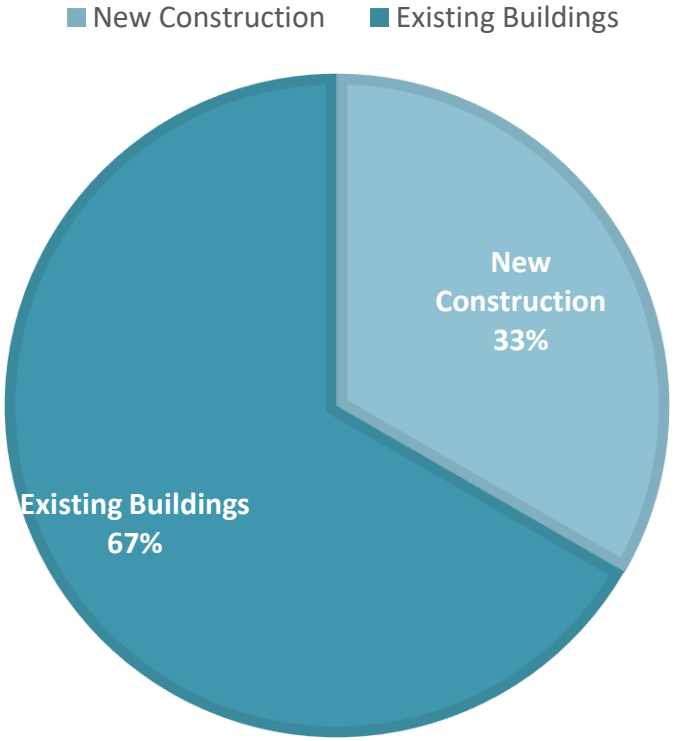
CleanBC Plan – Pathway to 2030



CleanBC Plan – Sector Reductions



Building Sector Focus



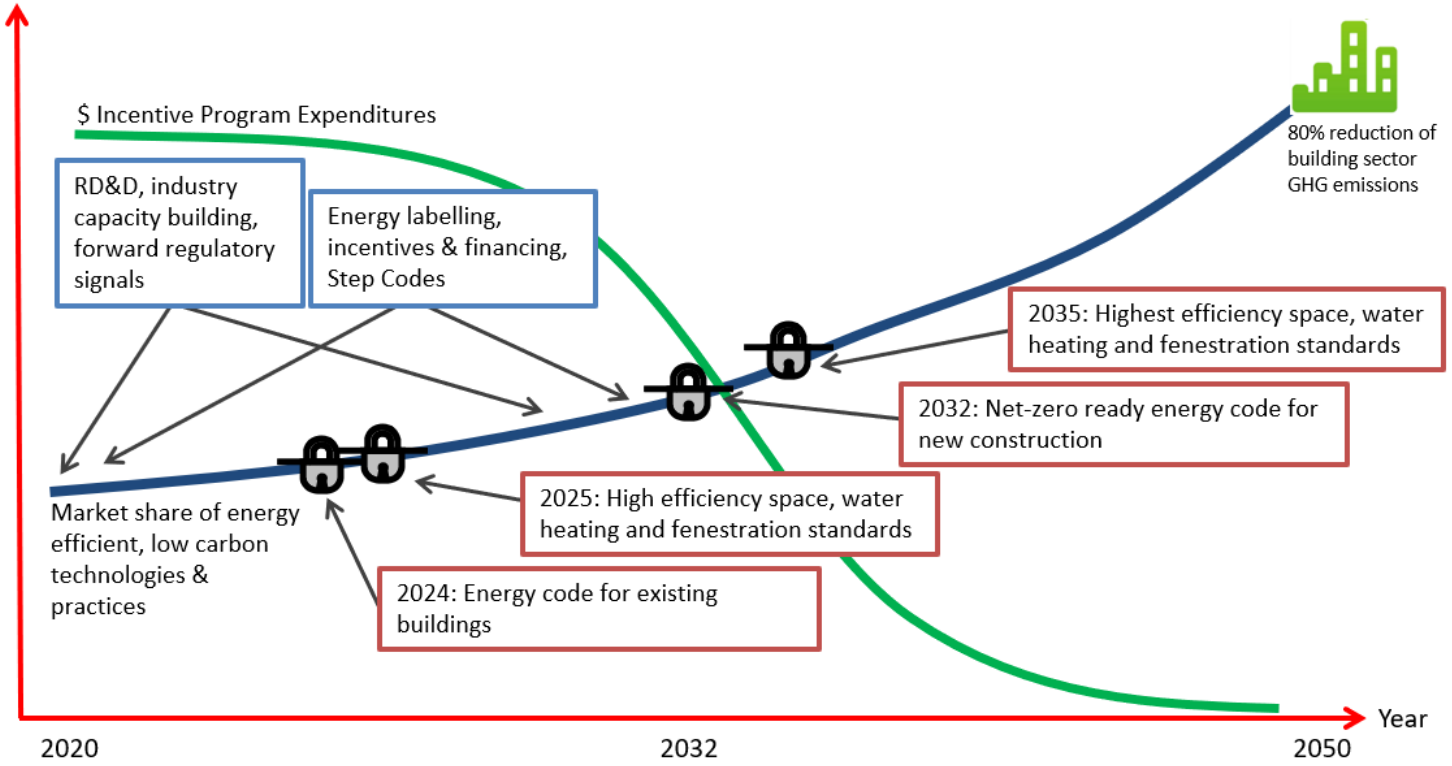
Building Sector Pathways

Clean Buildings Strategy

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



Clean Buildings Strategy - Goals

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 m^2 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%

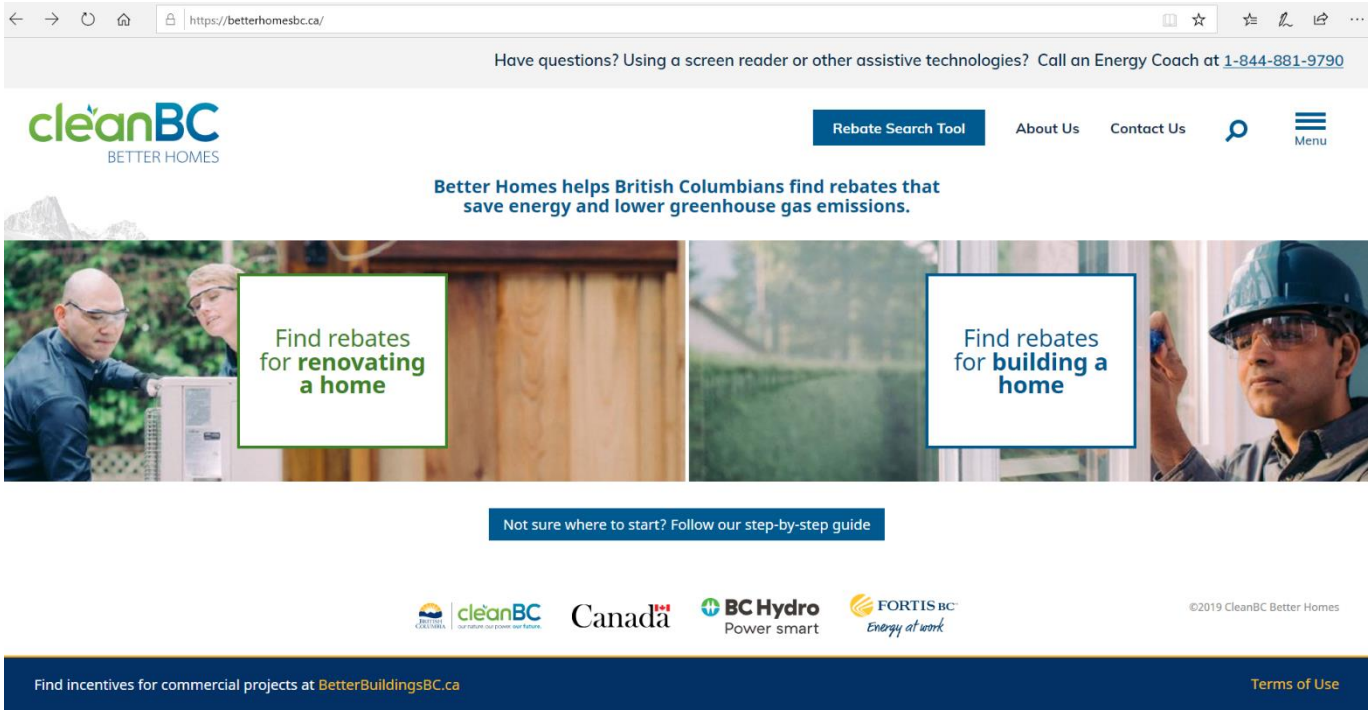
Programs

Building Innovation Fund

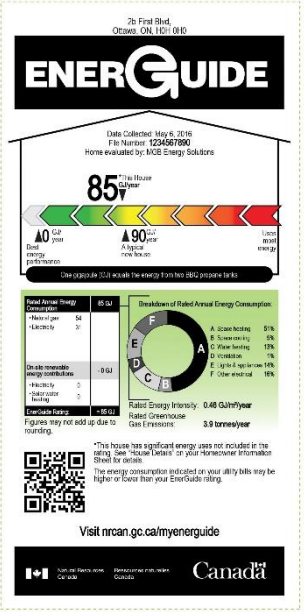
- Funding for projects that advance innovation in building designs, construction practices, systems, materials and products.
- Focus on projects that reduce emissions from building operations and/or have low embodied carbon, have potential to scale and be cost competitive.
- Funding streams for research, 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

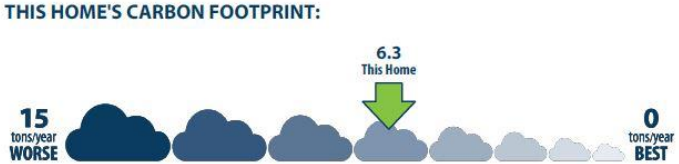
Tools

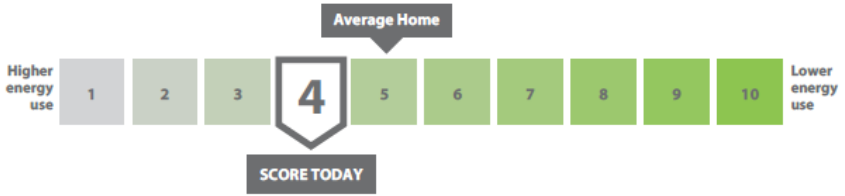
Better Homes – Energy Coach and Decision Assistance Platform



Energy Labelling







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			$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			$2,000
	MINI-SPLIT HEAT PUMP	HIGHEST EFFICIENCY VARIABLE SPEED HSPF≥10.00, SEER≥18	FORTIS BC Energy at work ELECTRIC SERVICE AREA	$1,200
	MULTI-SPLIT HEAT PUMP	HIGHEST EFFICIENCY VARIABLE SPEED HSPF≥9.30, SEER≥16	FORTIS BC Energy at work ELECTRIC SERVICE AREA	$2,000
	CENTRAL DUCTED "TIER 2" HEAT PUMP			$2,000
	CENTRAL DUCTED "TIER 1" HEAT PUMP	HIGH EFFICIENCY HSPF≥8.50, SEER≥15	FORTIS BC Energy at work ELECTRIC SERVICE AREA	$1,200
UPGRADE YOUR NATURAL GAS HEATING	NATURAL GAS FURNACE	HIGH EFFICIENCY ≥97% AFUE	cleanBC FORTIS BC Energy at work	$700
	NATURAL GAS FURNACE	HIGH EFFICIENCY 95-96.9% AFUE	FORTIS BC Energy at work	$500
	NATURAL GAS BOILER	HIGH EFFICIENCY ≥94% AFUE	FORTIS BC Energy at work	$1,000
	NATURAL GAS COMBINATION HEATING AND HOT WATER SYSTEM	ENERGY STAR or P9 Certified	FORTIS BC Energy at work	$1,500

Better Buildings Program

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.

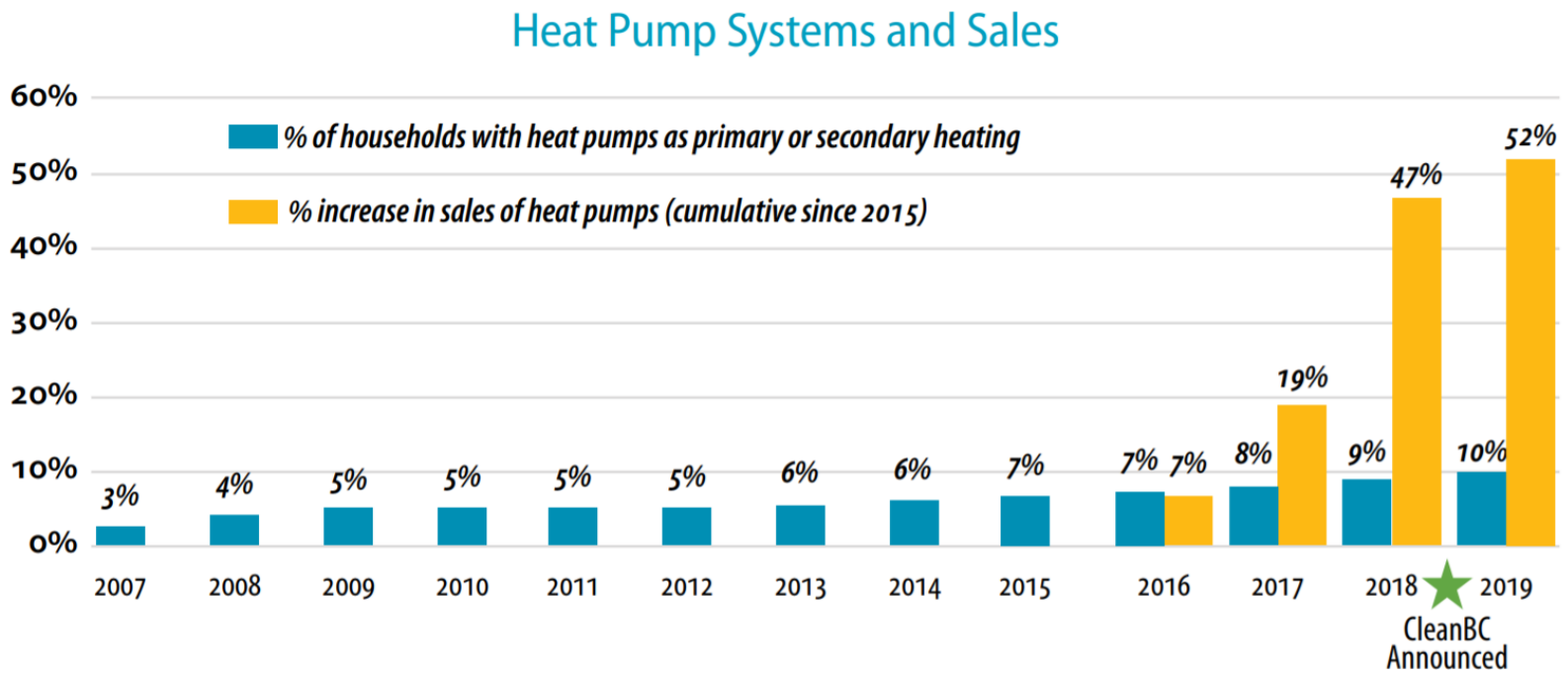
If you are a customer in FortisBC's electricity service area (including the City of Grand Forks, City of Penticton, District of Summerland, or Nelson Hydro), please contact your FortisBC Technical Advisor to discuss similar funding opportunities for fuel switching. If you are considering a natural gas 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.

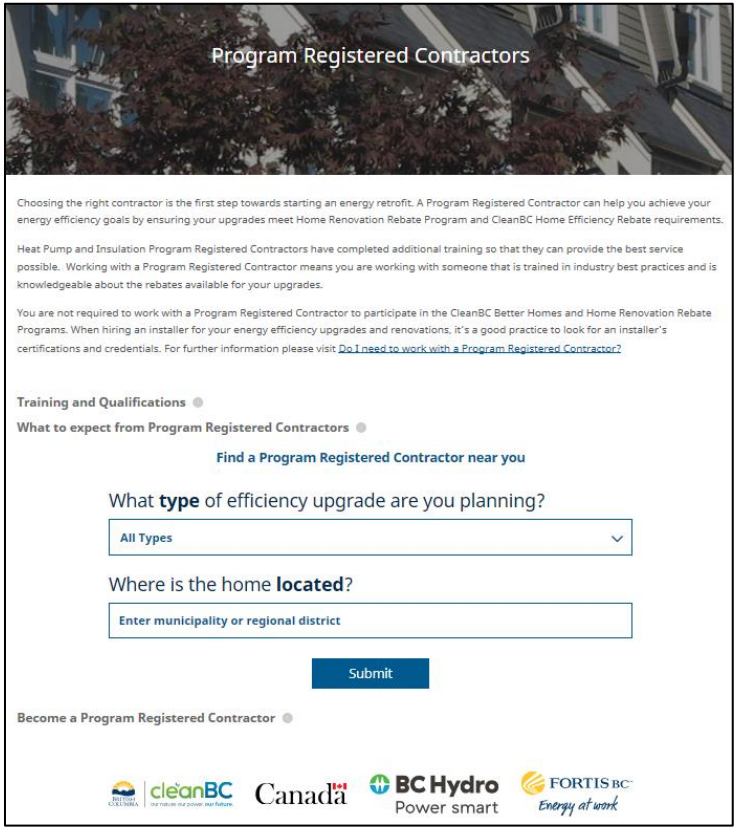
Custom Capital Funding Incentives – based on a rate of $40/tCO2e of lifetime greenhouse gas savings, BC Hydro will support up to $200,000 per customer. For heat pump rooftop units, the Program offers a rate of $60/tCO2e.

Program Impacts



Program Registered Contractors

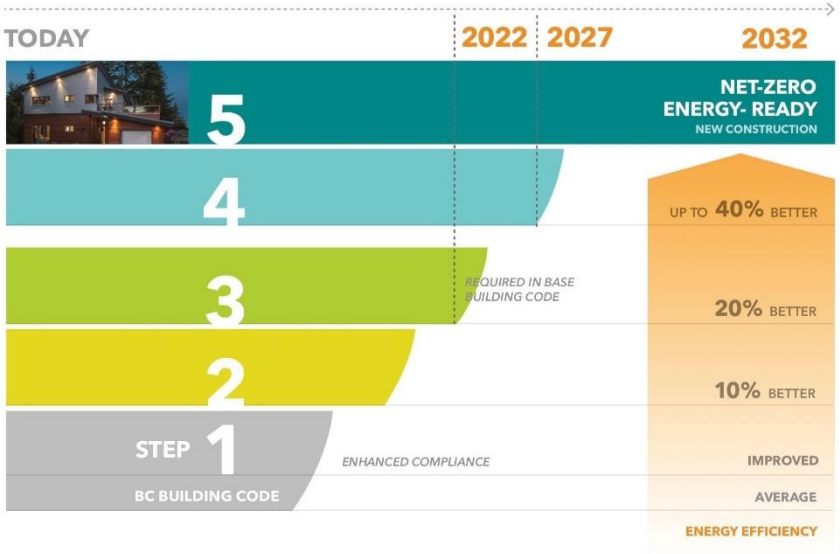
- Developing best practice installation training & certification for retrofit trades
- Building a network of qualified retrofit contractors
- Searchable by location
- Use of PRC will become mandatory for access to Better Homes and utility incentives



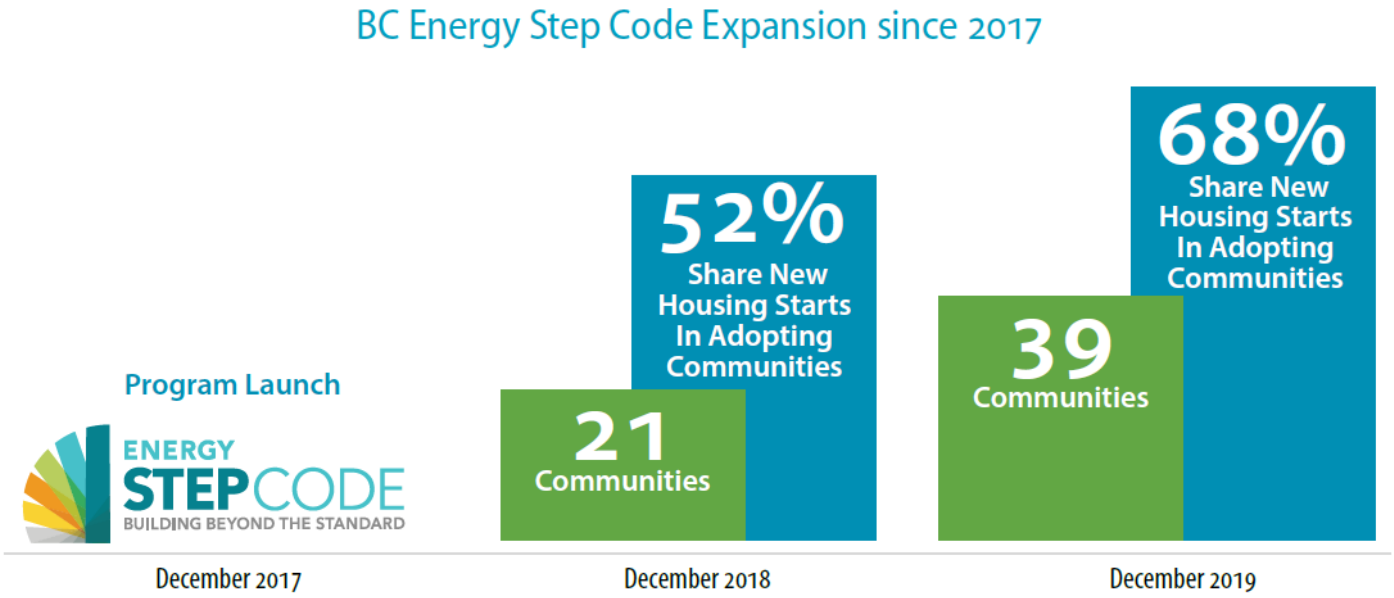
Energy Step Code

Large, complex buildings (Part 3)

Low-rise buildings (Part 9)



Energy Step Code Results



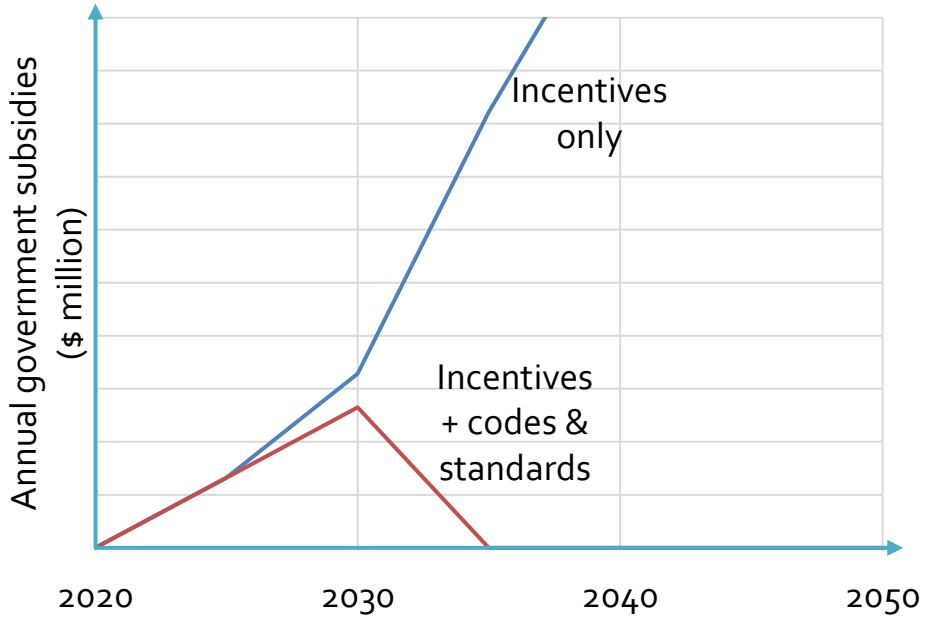
Future Commitments

- **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.

nathaniel.gosman@gov.bc.ca