Scaling Up Retrofits: A Guide for BC Communities





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April 2025



About Us

ZEIC is a purpose-built charitable organization dedicated to market transformation and enabling zero carbon communities and economies across the Metro Vancouver region and province. ZEIC is part of the Low Carbon Cities Canada (LC3) Network established by the Government of Canada and the Federation of Canadian Municipalities.





Territorial Acknowledgement

ZEIC acknowledges and is honored to work on the unceded and traditional lands of the q̈icʻəẏ (Katzie), q'wa:ṅλ̃əṅ (Kwantlen), kwikwəλ̇əm (Kwikwetlem), xwməθkwəẏəm (Musqueam), qiqéyt (Qayqayt), sɛmi¹ɑːmu (Semiahmoo), Skwxwú7mesh (Squamish), stɔːloʊ (Sto:lo), scʻəwaθən məsteyəxw (Tsawwassen), and səlilwətaɬ (Tsleil-Waututh).

The BC Retrofit Accelerator is kick-starting climate and energy upgrades in hundreds of larger commercial and residential buildings across British Columbia.

Across British Columbia, low-carbon, electric buildings are taking off, providing benefits for building owners and managers and tenants and workers.

Every building needs a plan. By timing cost-effective climate and energy upgrades with regular building renewals, property owners and managers can deliver healthier and more comfortable homes and workplaces while taking climate action.

The BC Retrofit Accelerator will create decarbonization plans for 500 existing large buildings and provide implementation support over the next three years.

Learn more: <u>zeic.ca/retrofitaccelerator</u>

Funders

- Natural Resources Canada
- Ronald S. Roadburg Foundation
- Metro Vancouver
- Zero Emissions Innovation Centre



Natural Resources Canada Ressources naturelles Canada









How Does it Work?

The BCRA provides expert advice and support services to strata councils and the owners and managers of larger commercial and residential properties — including rental, non-market, and off-reserve Indigenous housing.

This coaching includes support navigating all stages of a retrofit project. This includes helping to identify options and navigate complex projects, such as accessing incentives and financing and understanding procurement and installation best practices.

Process



Eligable Buildings

Commercial Buildings



Market Rental Buildings

LANDLORDBC

Non-Profit Housing





Strata-Owned Residential Buildings

Strata Energy Advisor

Better buildings start here
Powered by ZCIC

Zelc

Deep Energy Retrofit Approach

We support "deep energy retrofits" — upgrading multiple building systems to achieve a minimum 50 per cent reduction in energy use and 80-100 per cent reduction in GHG emissions.

Our approach relies on the "zero over time" model. This approach leverages trigger points, such as major building system replacements, to implement high-efficiency low-carbon measures, renewable energy systems, or add climate resilient features, such as cooling. Like a capital plan, our approach also helps prepare for upcoming replacements, so building owners and managers (including stratas) don't make decisions that have to be fixed later.

Over time, these upgrades achieve high-efficiency, zero emissions buildings that are climate resilient, healthy, and safe.

Financing

BCRA programs will help participants access available rebates and financing, but the initiative does not provide direct capital project funding.

The BCRA support aligns and connects with BC Hydro programs, such as the MURB Retrofit Program in partnership with the Province, the Solar & Battery Program, and other offers to support multi-family buildings.



Technologies

Climate and energy solutions are available today, using proven technology. Some examples include:

Heat Pumps



Heat pumps transfer heat from the air, ground, or water, with one piece of equipment providing both heating and cooling. Up to 3x more efficient than electric baseboards or natural gas systems.

Electric Water Heaters



Electric water heaters replace gas-based systems, but are highly energy efficient, non-emitting, and have fewer maintenance requirements.

Distributed Renewable Energy



These include solar photovoltaic systems allowing for on-site electricity generation, supporting heating, cooling, and EV charging.



Planning with the End in Mind

One of the benefits of the zero-over-time approach is the ability to plan ahead to achieve optimal building performance. This can be as simple as moving a project earlier so it won't damage the new roof you have planned or as complex as understanding your electrical demand to avoid a costly electrical capacity upgrade.

Program Benefits

By timing cost-effective energy and climate improvements with regular building renewals property upgrades, owners and managers can deliver healthier and more comfortable homes and workplaces. At the same time, the BC Retrofit Accelerator, working with public, non-profit, and private partners, will support a retrofit market transformation and help build industry capacity.

For Building Owners and Managers

- Manage regulatory risk: ensure compliance with existing and emerging building GHG reduction regulations.
- Better planning: prevent lock-in to old technologies with holistic plans timing major retrofits with climate, comfort, and community objectives.

For Building Occupants

- Better health: electrifying heating systems allow for the addition of cooling, protecting residents during extreme heat events.
- More comfort: building envelope improvements can help reduce traffic noise, drafts, or moisture and mould problems.

For Communities and Economies

- Reduced GHG emissions: buildings are responsible for significant carbon pollution in British Columbia. Shifting to low-carbon, electric buildings will support the achievement of climate targets.
- Accelerate market transformation reduce barriers to efficient, resilient, and low- and zero-emissions buildings.
- Build industry capacity: support industry development and advance data, research, tools, and standards.

Background

Advisory and Research Partners

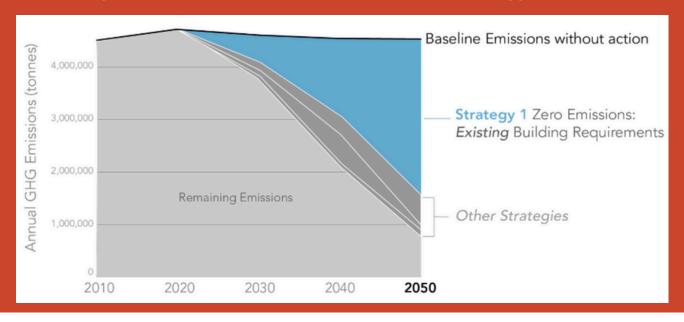
- BC Hydro
- City of Kamloops
- · City of Richmond
- City of Surrey
- City of Vancouver
- · City of Victoria
- District of Saanich
- Metro Vancouver
- University of Victoria's Energy In Cities group

Why Large Buildings?

Large buildings play a critical role in British Columbia, housing a significant portion of the population and serving as key hubs for employment, commerce, and industry.

In Metro Vancouver, apartments — both strata and rental — make up over 40% of all housing units, making them the region's dominant housing form. Buildings are also a major source of carbon pollution, responsible for 8% of the province's total greenhouse gas emissions and 25% of emissions in Metro Vancouver. With three-quarters of today's buildings expected to remain standing in 2050, addressing emissions from existing large buildings is one of the most effective strategies for municipalities to reduce carbon pollution while delivering broader community benefits.

For buildings in Metro Vancouver, retrofit policies provide the biggest GHG lever



Source: Metro Vancouver - Climate 2050 Building GHG Emissions

Program Overview

Targets

BC Retrofit Accelerator targets (number of buildings) by program stream:

Step	Commercial	Market Rental	Non-Profit	Strata
1. Explore Options	75 - 90	250	1065	225
2. Create Plan	75 - 90	80	144	200
3. First Priority Retrofits	22	30	50	22

Eligability Requirements

Eligibility requirements vary by municipality and are subject to change from time to time. Please visit specific program pages for the most current eligibility requirements.

Supporting a Market Transformation

To reach net-zero emissions from buildings by 2050 is going to take all of us doing our best work. Here's how the BC Retrofit Accelerator will help.

- To support, amplify and complement existing initiatives. The scale and pace of transformation required necessitates a broad contribution from diverse stakeholders. No one entity can do it all.
- 2. To play a convening and coordinating role in British Columbia. To help reduce market confusion and build on the work being done requires us to share information freely and cooperate to meet multiple objectives. As the proverb says, we can travel far together or fast alone we need to travel fast and far and that will require unprecedented levels of cooperation from government, utilities, financial institutions, manufacturers, distributors, contractors, and consultants.
- 3. To cut through complexity. Identify areas of research, tools and resources to support faster, lower-cost, low-carbon retrofits that maintain a holistic building as a system approach. This includes amplifying awareness of existing standards and best practices and supporting the development of new ones where they don't currently exist.
- 4. To build capacity through increased transparency and knowledge sharing. To build on the work of Zero Emissions Innovation Centre capacity-building programs (Zero Emissions Building Exchange and Building to Electrification Coalition) to create a knowledge sharing hub that supports supply-side market actors.
- 5. To support building owners to undertake deep energy retrofits to achieve provincial climate targets and prepare for new regulatory requirements. Especially for under-served or harder to move market segments.



Get Involved

Promote the BC Retrofit Accelerator in Your Community

Help realize climate, economic, and community benefits in your region: support the BC Retrofit Accelerator by spreading the message to the owners and managers of large commercial and residential buildings, including strata councils.

Promotional content in the form of pre-packaged messaging and graphics is available by program stream.



Stream	Contact Information	Website	
Commercial	Jennifer Davis jennifer@boma.bc.ca	Decarb Accelerator Program	
Market Rental	RARA Program rara@frescoltd.com	Rental Apartment Retrofit Accelerator Program	
Non-Market Rental	Edward Beckett edward@bcnpha.ca	BC Non-Profit Housing Association	
	Sarah Fralin sfralin@ahma-bc.org	Aboriginal Housing Management Association	
Strata	Strata Energy Advisor strataenergyadvisor@zeic.ca	Strata Energy Advisor	

Building Knowledge and Capacity

Get involved in a Zero Emissions Innovation Centre program: <u>Building to Electrification</u> <u>Coalition</u> and <u>Zero Emissions Building Exchange</u>.



MORE SOLUTIONS, LESS CARBON.

zeic.ca