

# TOWARDS NET ZERO BUILDINGS IN CANADA

Jérôme Bilodeau (Director, Buildings Division, Government of Canada)

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An aerial view of a city skyline, likely Toronto, featuring numerous skyscrapers and the CN Tower in the background. The image is slightly faded and serves as a background for the slide.

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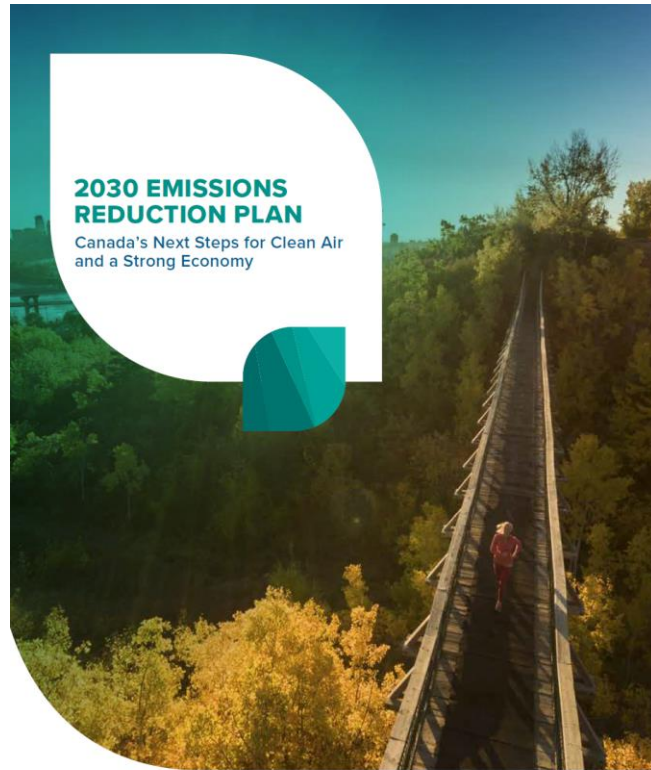
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# KEY FEDERAL POLICY DRIVERS



# EMISSIONS REDUCTION PLAN

Following up on the *Canadian Net Zero Emissions Accountability Act*, the federal government announced its *2030 Emissions Reduction Plan* in March 2022. Key highlights:



- **Economy-wide target:** 40-45% GHG emission reductions below 2005 by 2030 (economy)
- **Buildings sector modelling:** 24 Mt reductions below 2005 by 2030
- **Suite of programs & policies,** including in the buildings sector

Updates to this plan will be released in the future.



# MANDATE COMMITMENTS

The Government of Canada has also outlined **mandate commitments** to its Ministers:



- **Accelerate net-zero new construction and deep retrofits**
- **Develop net zero emissions model code by 2025**
- **Model code for alternations to existing buildings**
- **Transition away from fossil fuel home heating systems**
- **Requiring labels at time of sale**
- **Greening Government Strategy**
- **Low-carbon building materials innovation hub**
- **Buy Clean strategy**

These commitments are supported by initiatives – see next slides.

KEY FEDERAL POLICY DRIVERS

# CANADA GREEN BUILDINGS STRATEGY

The Government of Canada is **currently developing** the Canada Green Buildings Strategy:

## The Canada Green Buildings Strategy

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- *Focuses on:*
  - *building net-zero and climate resilient from the start*
  - *accelerating retrofits*
  - *transforming heating*

Stay tuned for details.

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# KEY FEDERAL INITIATIVES



# KEY FEDERAL INITIATIVES OVERVIEW

	CODES & STANDARDS	FINANCIAL SUPPORTS	ENABLING MEASURES
Residential	<ul style="list-style-type: none"><li>- <b>Tiered energy codes (model) + code for alterations to existing buildings</b></li></ul>	<ul style="list-style-type: none"><li>- <b>Greener Homes Initiative</b></li><li>- <b>Greener Neighbourhoods Pilot Program</b></li><li>- Co-Investment Fund (CMHC)</li></ul>	<ul style="list-style-type: none"><li>- EnerGuide Rating System</li><li>- ENERGY STAR certification</li></ul>
Commercial / institutional	<ul style="list-style-type: none"><li>- <b>Net zero emission codes for new construction, 2025</b></li><li>- <b>Codes Acceleration Fund</b></li><li>- <b>Greening Government Strategy</b></li><li>- Energy Efficiency Regulations</li></ul>	<ul style="list-style-type: none"><li>- <b>Canada Infrastructure Bank</b></li><li>- <b>Deep Retrofit Accelerator initiative</b></li><li>- Green and Inclusive Community Buildings</li><li>- Energy management systems (ISO50001)</li><li>- Energy Efficiency R&amp;D</li><li>- Tax credit for clean tech</li></ul>	<ul style="list-style-type: none"><li>- ENERGY STAR Portfolio Manager</li></ul>

...and lots more. Today we will focus on only a few initiatives (**bolded**).



# MODEL CODES: NEW CONSTRUCTION

In March 2022, Codes Canada published the delayed 2020 edition of the national model energy codes, the National Energy Code for Buildings (NECB) and the National Building Code (NBC), for large and small buildings, respectively. Some key facts:

APPLICATION	TIERED APPROACH	COMPLIANCE
<ul style="list-style-type: none"><li>• New construction only</li><li>• NECB for large buildings</li><li>• NBC (s. 9.36) for homes and small buildings</li><li>• Historically addresses energy, not GHGs</li></ul>	<ul style="list-style-type: none"><li>• Tiered approach, with increasing stringency</li><li>• 4 tiers for NECB, 5 tiers for NBC</li></ul>	<ul style="list-style-type: none"><li>• Both prescriptive and performance paths</li><li>• Prescriptive: outlines specific requirements</li><li>• Performance: based on whole building modelling</li></ul>

This approach allows subnational jurisdictions to: 1) signal to the market where future codes are headed; 2) adopt the tier that makes the most sense in each jurisdiction at a given time.

# CODE FOR EXISTING BUILDINGS

Model codes for alterations to existing buildings are also under development:



## Model codes for alterations to existing buildings

- To be adopted by provinces, territories, and select other jurisdictions
- Will trigger energy efficiency requirements in the case of buildings undertaking significant renovations (“alterations”)
- Details are being finalized

The next code cycle is scheduled for **2025**.

# NEXT STEPS ON CODES

Two upcoming initiatives pertaining to codes for new construction:



## **Codes Acceleration Fund**

Support for PTs and other players to accelerate adoption of highest tiers of codes + compliance



## **Develop of net zero emissions code**

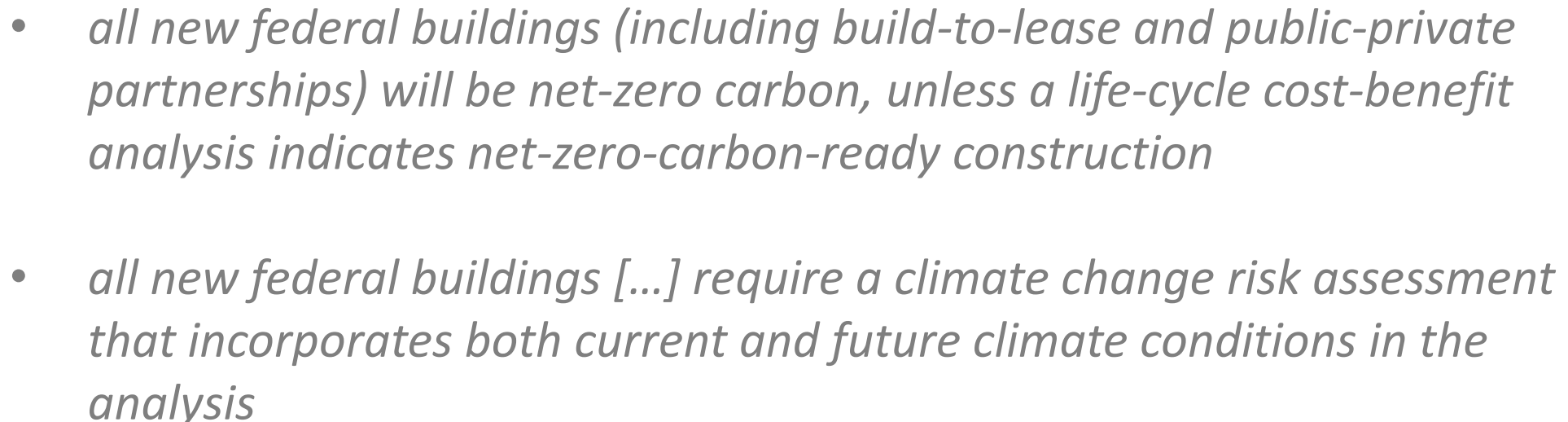
Currently under discussion (both operational and embodied emissions)

This work is done in close collaboration between the federal government and subnational jurisdictions.



# GREENING GOVERNMENT STRATEGY

For the fleet of federal buildings, the Greening Government Strategy has key requirements:

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- *all new federal buildings (including build-to-lease and public-private partnerships) will be net-zero carbon, unless a life-cycle cost-benefit analysis indicates net-zero-carbon-ready construction*
  - *all new federal buildings [...] require a climate change risk assessment that incorporates both current and future climate conditions in the analysis*

The strategy also includes requirements related to 100% clean electricity by 2022, commissioning, and other activities.

# FINANCIAL SUPPORTS

The Government of Canada supports existing building retrofits in various ways. Some key initiatives:



**Canada Greener Homes Initiative**

*Grants (up to \$5k) and loans (up to \$40k) for home retrofits + support for oil to heat pump conversions  
(NEW!)*



Canada  
Infrastructure  
Bank

**Canada Infrastructure Bank**  
*Public-private financing of large retrofit projects*



**Greener Neighbourhoods Pilot Program**  
*Support for mass residential retrofits*



**Deep Retrofit Accelerator initiative**  
*Support for organizations – concierge services, enablers – that facilitate retrofit projects*

Additional initiatives at the subnational level also take place.

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# KEY SUBNATIONAL INITIATIVES





KEY SUBNATIONAL INITIATIVES

# NEW BUILDINGS

A sample of key initiatives pertaining to new buildings in Canada:



**Province of British Columbia**

BC Step Code

Carbon Pollution Standard



**City of Vancouver**

Net zero carbon buildings by 2030



**City of Victoria**

Net zero carbon buildings by 2025



**Ville de Montréal**

Net zero carbon buildings by 2025

...and many more.

KEY SUBNATIONAL INITIATIVES

# EXISTING BUILDINGS

A sample of key initiatives pertaining to building retrofits in Canada:



**Province of British Columbia**  
CleanBC plan



**City of Vancouver**  
Vancouver Building Bylaw  
(building performance standard)



**City of Toronto**  
Net Zero Existing Buildings Strategy



**Ville de Montréal**  
Existing building by-laws

More information available upon request.



# CONTACT

**Jérôme Bilodeau**

Director, Buildings Division

Office of Energy Efficiency

Natural Resources Canada

[jerome.bilodeau@nrcan-rncan.gc.ca](mailto:jerome.bilodeau@nrcan-rncan.gc.ca)

