



Net Zero Existing Buildings Strategy Briefing

Environment & Energy Division

July 5, 2021

A stylized illustration of city buildings in shades of blue and grey, located in the top-left corner of the slide.

Net Zero Existing Buildings Strategy

OVERVIEW

- Comprehensive strategy to identify a set of actions for the City to take in order to achieve net zero emissions by 2050 in existing buildings city-wide.
- Key component of the overall TransformTO Net Zero update (Q4 2021) in response to the City's Climate Emergency Declaration (Oct 2019). Developed in coordination with the CREM's *Net Zero Carbon Plan* for City-owned buildings.
- The Existing Buildings Emissions Strategy includes:
 - Detailed technical analysis and modelling of Toronto's building stock and pathways to achieving net zero emissions by 2050
 - Recommended package of actions needed to achieve the modelled net zero scenario
 - High level implementation plan and timelines



Net Zero Existing Buildings Strategy

KEY FINDINGS

- Over 80% emissions reduction is possible across TO's building stock; however net zero emissions is not technically & financially feasible from building retrofits alone – offsets or other measures will be needed.
- Fuel switching and a clean electricity grid are the two most significant technical requirements for achieving net zero emissions. Envelope upgrades are costly but necessary to deliver co-benefits of health, resilience and local economic impact.
- The costs of the needed retrofits represent a significant net investment for building owners over a 25 yr. life cycle analysis. Financial supports & co-investment by all levels of government and the private sector will be needed to enable market transformation.
- Voluntary measures are not enough, mandatory requirements are necessary. The City does not have all of the authorities needed to implement the recommended strategy in full - dialogue with the province will be necessary.



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SUMMARY OF RECOMMENDED ACTIONS FROM THE STRATEGY

Purpose	Category of Policy / Actions
Set requirements to assess building performance and create a path to net zero	<ol style="list-style-type: none">1. Require annual emissions performance reporting and public disclosure for all existing buildings2. Establish emissions performance targets3. Require energy and emissions audits and tune-ups
Provide support and resources to make retrofits easier and more affordable	<ol style="list-style-type: none">1. Provide integrated retrofit support2. Expand and enhance retrofit financing3. Support permitting and approvals processes for deep retrofits
Advocate and partner with other levels of government	<ol style="list-style-type: none">1. Build awareness and capacity of home and building owners for emissions reduction strategies and supports2. Support workforce development and training3. Advocate for action at other levels of government

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POTENTIAL IMPLEMENTATION TIMELINE

	Near-Term (2022-2024)	Medium-Term (2025-2029)	Long-Term (2030+)
1. Data Reporting, Disclosure, and Labelling			
All Buildings >50,000 f2	Voluntary	Mandatory	
All Buildings >25,000 f2	Voluntary	Mandatory	
All Buildings	Voluntary		
Single Family (HERD)	Voluntary	Mandatory	
2. Performance Targets			
All Buildings >50,000 f2	Voluntary	Mandatory	
All Buildings >25,000 f2	Voluntary		Mandatory
All Buildings	Voluntary		Mandatory
Single Family	Voluntary		
3. Audits, Recommissioning, Retrofit Roadmaps			
All Buildings >50,000 f2	Voluntary	Mandatory	
All Buildings >25,000 f2	Voluntary	Mandatory	
All Buildings	Voluntary		Mandatory

A stylized illustration of a city skyline with various buildings and a house, rendered in shades of blue and grey. The buildings are of different heights and widths, with some having windows. The house is a simple silhouette with a chimney. The illustration is positioned in the top left corner of the page.

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IMPLEMENTATION PLANNING

EED will lead the detailed design and implementation planning for Council approved recommendations, including:

- Analysis of approaches for introduction of actions on a voluntary basis first and transition over time to a mandatory approach based on learnings and further engagement.
- Further consultation and engagement with internal and external stakeholders
- Identifying resourcing and financial implications for City-led aspects of the strategy
- Advocating for external funding supports (e.g. Federal, provincial, FCM, CIB)
- Analysis of equity and housing affordability impacts and development of implementation strategies that mitigate negative impacts and enable positive impacts for equity-deserving groups.

An illustration in the top-left corner shows a stylized cityscape with several buildings of varying heights and colors (dark blue, light blue, and grey) against a light blue background. Below the illustration is a solid dark blue vertical bar that runs down the left side of the page.

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MODELLED ECONOMIC & EMISSIONS IMPACTS

Implementation of the Strategy is expected to:

- **Reduce overall sector-wide emissions by ~ 82%** from the baseline year of 2016 to 2050 – (Cumulative emissions reductions of ~ 149 Mt.)
- **Increase local building retrofit economic activity by 87%** from \$162 B to \$302 B and nearly double annual investment in existing buildings, from \$5.4 B per year to \$10 B per year.
- **Create an estimated additional 7,000 direct, full-time jobs** in local construction, energy services and supportive work over 30 years.



Thank you!

Questions?