



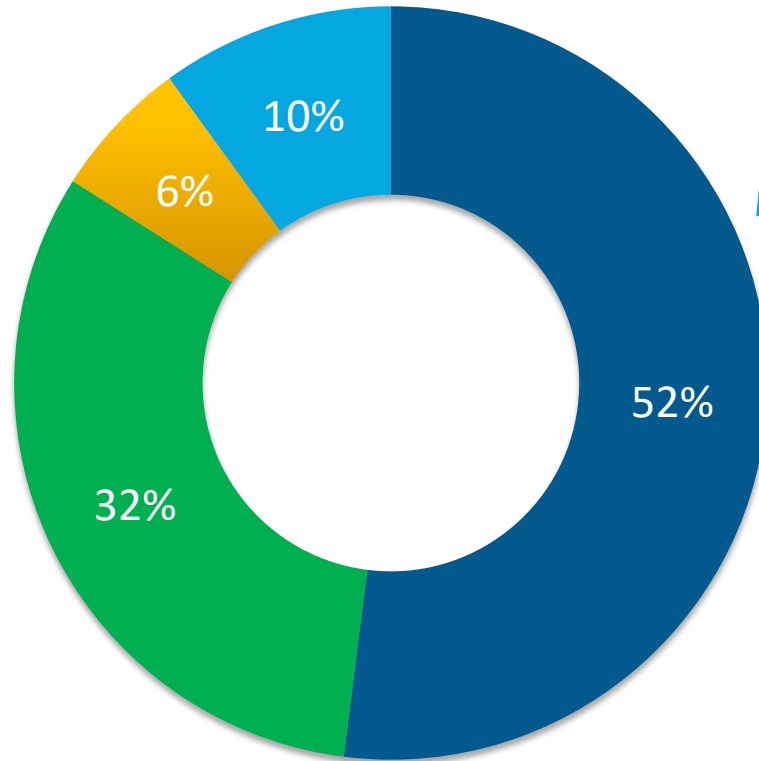
HOME ENERGY RETROFITS PROGRAM

Environmental Action Committee

October 6th

WHY HOME RETROFITS?

COMMUNITY GHG'S



The majority of community emissions come from buildings



- buildings
- transportation
- air travel
- industrial

6.2 million t/eCO₂ TOTAL

IN MISSISSAUGA TODAY... BUILDINGS

Homes in Mississauga cover 31% of built space, are large, and consume a lot of energy



Average Energy Use Intensity

0.7 GJ/m²

Non-residential buildings (e.g. commercial) in Mississauga use 3 times less energy than the average building in Ontario



Average Energy Use Intensity

0.4 GJ/m²

BUILDINGS FOOTPRINT, TODAY

RESIDENTIAL



SHARE OF BUILDING STOCK BY SQ FOOTAGE

TODAY
31%

AVERAGE RESIDENTIAL UNIT SIZE

TODAY
1,626 ft²
(151 m²)

TOTAL ELECTRICITY CONSUMPTION

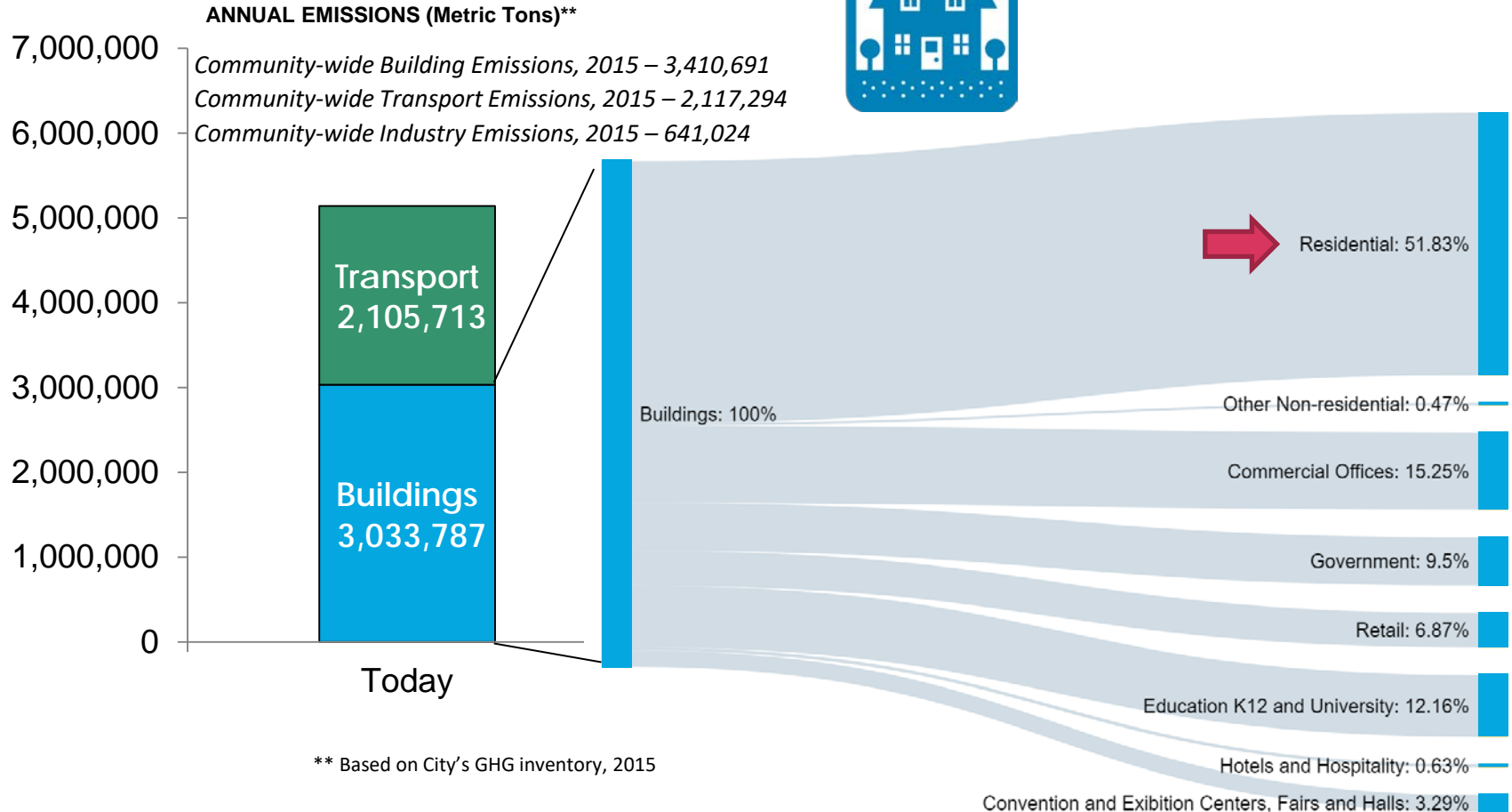
TODAY
2,188 GWh

AVERAGE ENERGY USE INTENSITY

TODAY
0.7 GJ/m²

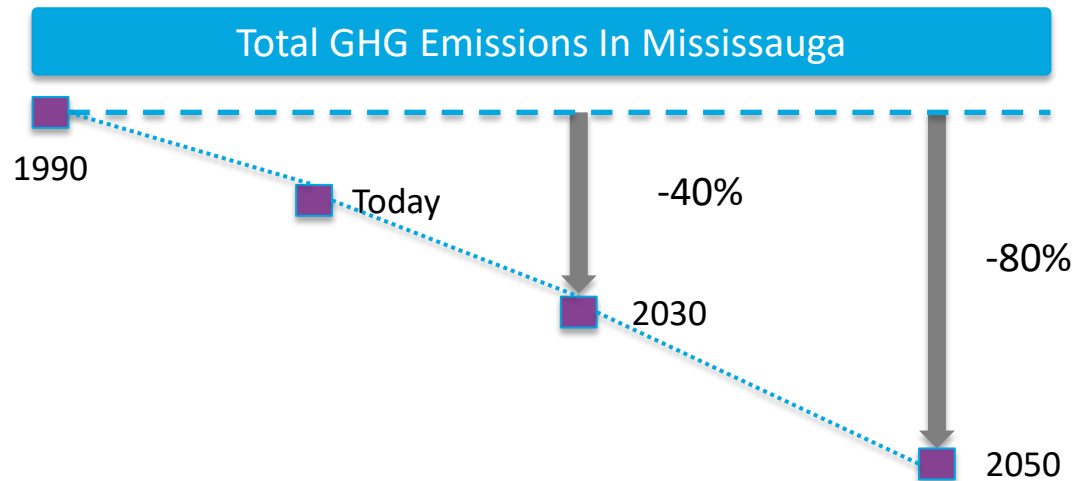


ESTIMATED GHG EMISSIONS, "TODAY"



CONTEXT

- Climate Change Action Plan approved by GC December, 2019
- GHG reduction targets for corporation and the community





BUILDINGS & CLEAN ENERGY

- Reduce greenhouse gases from homes and buildings
- Increase the supply of renewable energy
- Advance low carbon neighbourhoods
- Encourage energy conservation

BUILDINGS & CLEAN ENERGY

Action #6: Develop a Low Carbon and Resilient Retrofits Program

The City will pursue opportunities to educate land owners and promote the retrofitting of existing buildings (including residential and commercial) with low carbon and resilient technologies to support improved energy efficiency (e.g., through heat pumps, wall insulation, etc.) and resilience while extending the life of existing structures.

Goals Supported

Adaptation

Mitigation



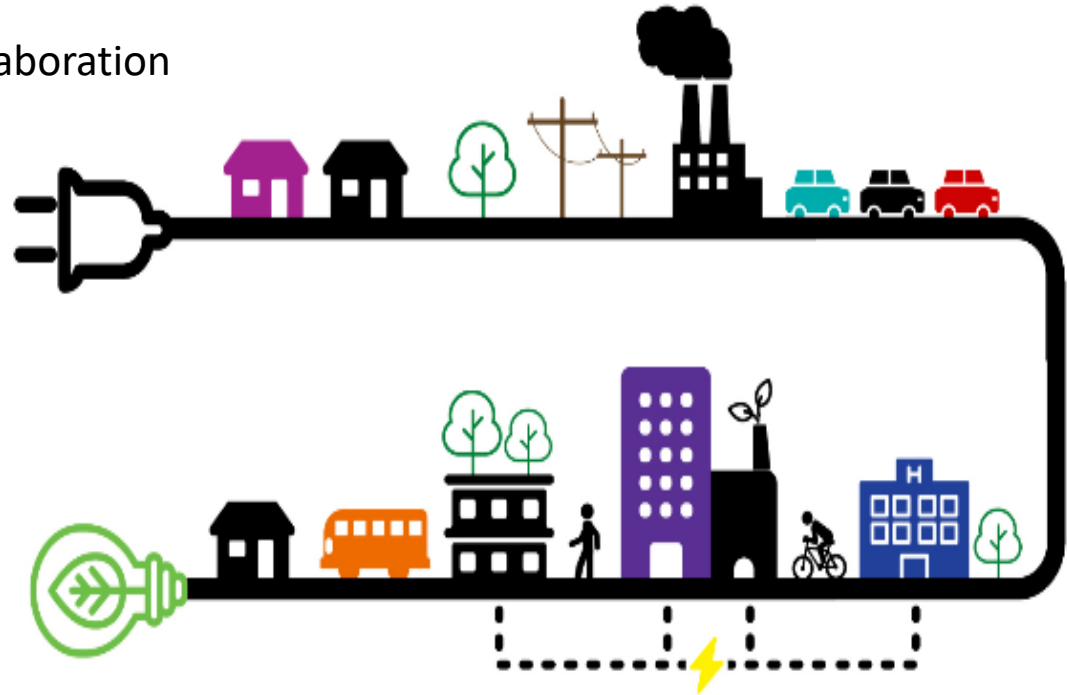
Supporting Actions		Action Type	Timeline	Cost	Status	Responsibility		Additional Stakeholders
						Lead	Support	
6-2	Develop energy and resilience retrofit programs for homeowners and landlords to promote opportunities, existing programs, incentives, and technologies that improve resilience, drive energy efficiency, and reduce greenhouse gas emissions	Program/ Project	■■■	N/ A	Planned	City Planning Strategies/ Parks , Forestry & Environment (Environment) * *Co-Lead		The Atmospheric Fund, Utilities
6-4	Encourage the use of low carbon heating and cooling technologies (e.g., heat pumps) for space and water heating and cooling	Procedure	■■■	\$	Not initiated	Parks, Forestry & Environment (Environment)	Information Technology (Geospatial Solutions)	Utilities
6-5	Promote building envelope upgrades (e.g. wall insulation, energy efficient windows) in residential, commercial, and industrial buildings	Program/ Project	■■■	N/ A	Not initiated	Parks, Forestry & Environment (Environment)		Utilities

CLIMATE ACTION FRAMEWORK

Addressing the climate change emergency and achieving our climate targets requires:

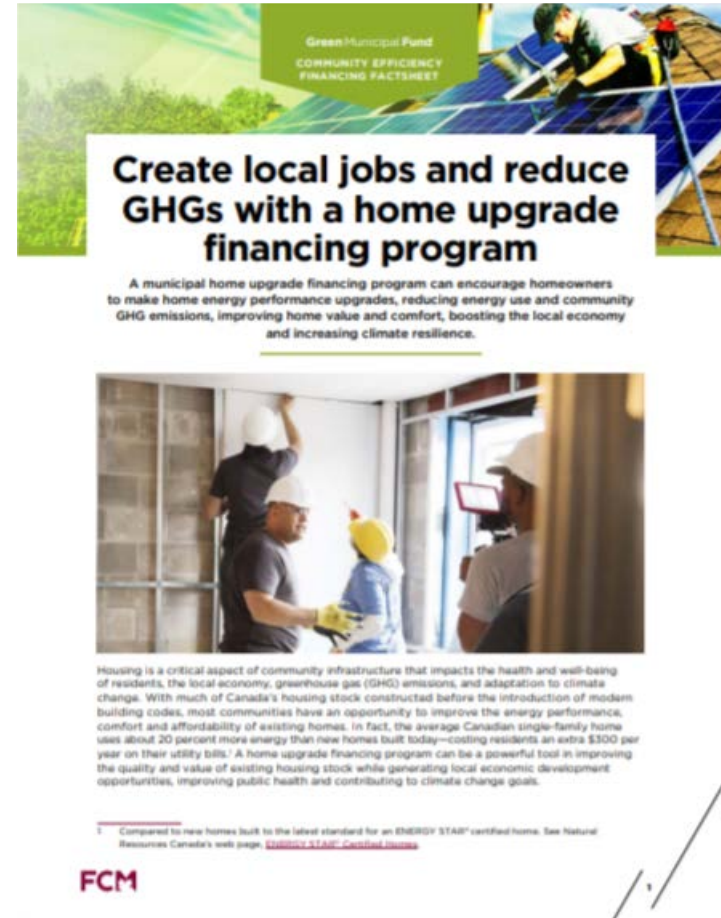
- Urban transition
- Energy transition
- Community commitment and collaboration

There is an opportunity for Mississauga to make a clean energy transition by improving energy efficiency, lowering costs, and localizing energy production.



A HOME RETROFIT PROGRAM

- Funding Opportunity with the Federation of Canadian Municipalities (FCM) to design a home retrofit program
- Mississauga, in partnership with City of Brampton and Town of Caledon, is submitting a funding application to complete a **design study in 2021**.
 - The **Design Study** will use market intelligence and research to advance the design of a home retrofit program to meet the needs and priorities of the three regional partners




HOME RETROFIT PROGRAM

- **What is a home retrofit program?**

- A financial program that drives investment in home energy performance upgrades

- Three main types:

- 
1. **Property Assessed Clean Energy (PACE) – most popular option.** Uses a municipality's local improvement charge (LIC) mechanism for loan repayment. In this program, a homeowner hires a contractor to upgrade their home and the contractor invoice amount is financed with an annual charge on the property tax bill.
 2. **On-bill repayment financing** allows the cost of the home energy upgrade to be repaid via the homeowner's utility bill. This type of program requires the close participation and partnership of a utility company.
 3. **Direct lending** occurs when a municipality works with a credit union or bank to offer a financial product customized for home energy upgrades. Municipalities can often offer a partial loan guarantee to a lending institution in exchange for attractive rates, good terms, and a convenient homeowner application process

BENEFITS OF A HOME RETROFIT PROGRAM



Value for homeowners

- An energy-efficient home is more **comfortable, healthier and affordable**
- A well-designed financing program can offer a comprehensive suite of services **to make upgrading a home simple and easy**
- Municipalities are uniquely positioned to offer services and programs that give homeowners **confidence and peace of mind to undertake a home energy retrofit**



Climate action and economic recovery

- Home retrofit programs can have deep **and lasting environmental and economic benefits**
- They can **drive significant investment in the local economy** by engaging local energy advisors, suppliers, and contractors to help homeowners save energy



Community resiliency

- A home retrofit program can encourage homeowners to invest in measures that will **protect homes from extreme weather events** like wind storms, heavy rain, flooding and heat waves **while improving energy efficiency**

VALUE PROPOSITION

A **HOME RETROFIT PROGRAM** that can reduce energy consumption and GHG emissions while addressing a number of other public policy goals:

- **Economic development and job creation:** Local contractors complete the home energy upgrades, which means more money circulates in the community.
- **Addressing energy poverty and social equity concerns:** Programs can target low-income homeowners, offering an opportunity to lower energy bills.
- **Neighbourhood revitalization:** Programs can focus on improving the health and vitality of specific neighbourhoods, achieving savings on energy upgrades by targeting groups of homes to create economies of scale.
- **Public health:** Retrofitted homes have better comfort and indoor air quality, improving the health and well-being of residents.

FEEDBACK AND QUESTIONS

THANK YOU!

MISSISSAUGA IS TAKING ACTION ON CLIMATE CHANGE

**climate change
is real.**



we have a plan.

**REDUCE
EMISSIONS
80% BY 2050**



**BUILD
RESILIENCE
TO CLIMATE
EVENTS**



**everybody
has a role
to play.**



The Climate Change Action Plan is built around a central vision that Mississauga will be a low carbon and resilient community, with the long-term goal of becoming a net-zero community. It focuses on mitigation and adaptation – with 21 key actions delivered over 10 years.

THECLIMATECHANGEPROJECT.CA



the
**CLIMATE
CHANGE**
project


MISSISSAUGA