

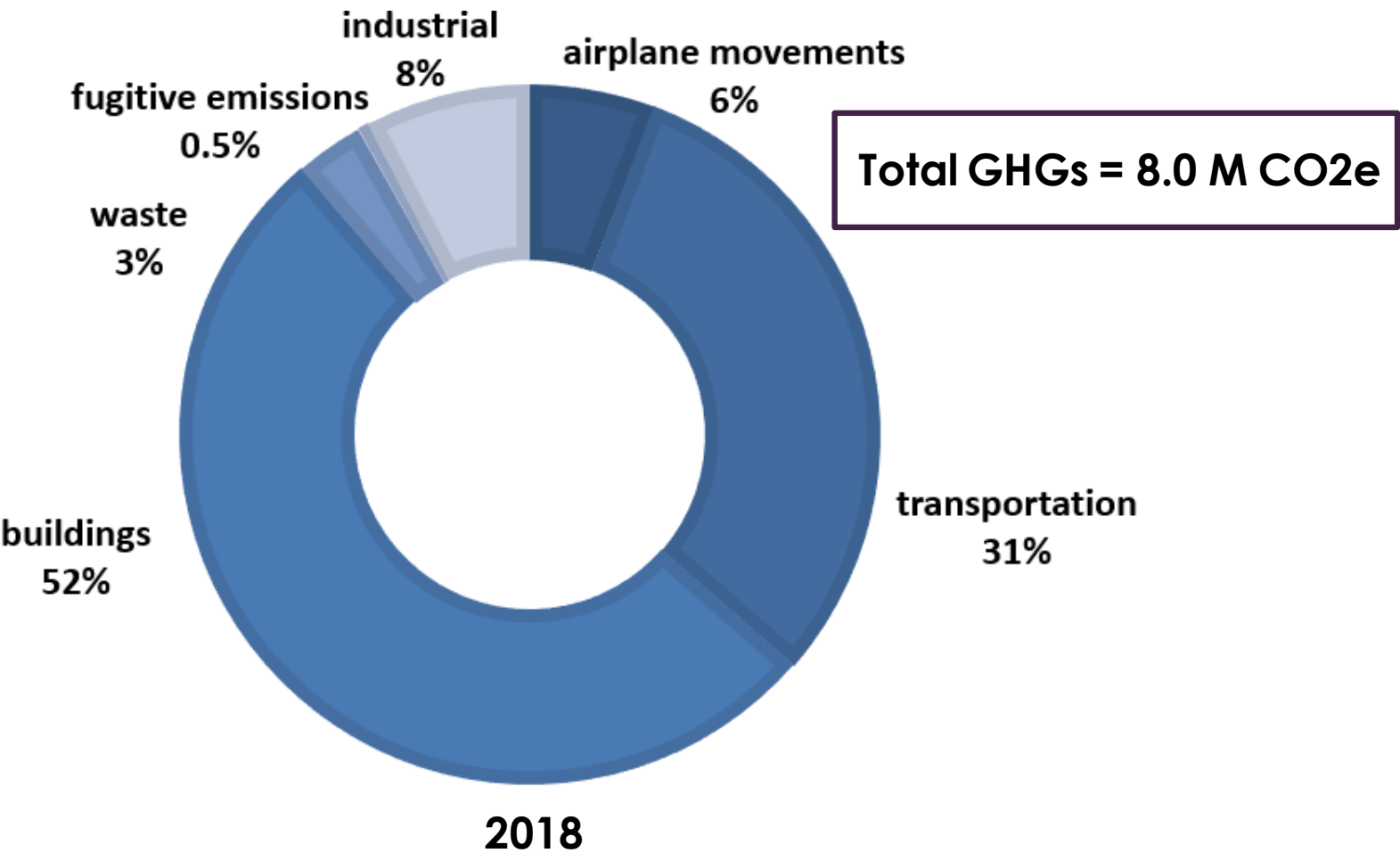


# HOME ENERGY RETROFITS PROGRAM UPDATE

Environmental Action Committee  
September 14, 2021

# WHY HOME RETROFITS?

# GHG EMISSIONS ARE INCREASING



# 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/m<sup>2</sup>

Non-residential buildings in Mississauga use 3 times less energy than the average building in ON



Average Energy Use Intensity

0.4 GJ/m<sup>2</sup>

# **BACKGROUND RESEARCH**

# WORK WITH LIGHTSPARK

- Worked with Lightspark to identify where most opportunity to reduce GHGs
- Identified 12 different housing types. Examples include:
  - **Archetype A:** medium floor area, natural gas heated with high efficiency furnaces
  - **Archetype B:** small floor area, electricity for heating and hot water
  - **Archetype F:** extremely large floor area, natural gas heated with medium efficiency furnaces

# LIGHTSPARK: FINDINGS

- Identified archetypes where could get some “quick wins” in GHG reductions:

Archetype	Upgrade
C	Wood stove to Heat Pump
D	Oil furnace to Heat Pump
E	Low efficiency gas furnace to Heat Pump + sealing air leakage
G	Low efficiency gas furnace to Heat Pump + sealing air leakage
I	Sealing air leakage
J	Propane furnace to Heat Pump
K	Oil furnace to Heat Pump

# LIGHTSPARK: FINDINGS

Potential tCO<sub>2</sub>e Reduced

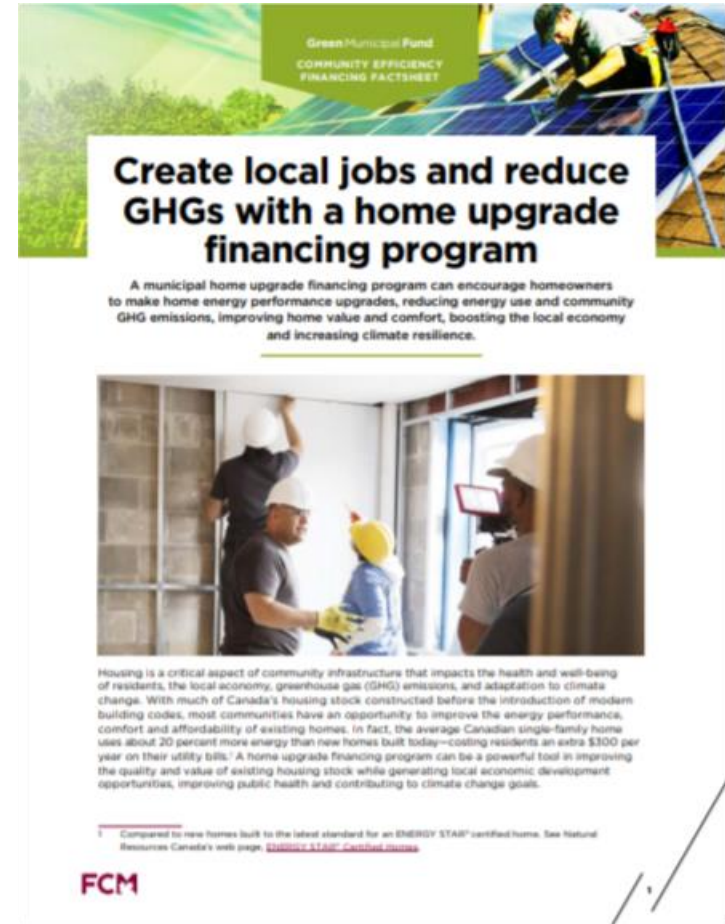
23.6%

When the upgrades are  
made, the city's GHG  
footprint would be **reduced**  
**by 133,220 tCO<sub>2</sub>e**  
.....  
(of a total of 563,172 tCO<sub>2</sub>e  
across the City)

# **FUNDING A HOME RETROFITS PROGRAM**

# A HOME RETROFIT PROGRAM


- Mississauga, with Brampton and Caledon, submitted a funding application to the Federation of Canadian Municipalities (FCM) for a **home retrofits design study**
- FCM notified us that our application was successful!



Green Municipal Fund  
COMMUNITY EFFICIENCY  
FINANCING FACTSHEET

## Create local jobs and reduce GHGs with a home upgrade financing program

A municipal home upgrade financing program can encourage homeowners to make home energy performance upgrades, reducing energy use and community GHG emissions, improving home value and comfort, boosting the local economy and increasing climate resilience.



Housing is a critical aspect of community infrastructure that impacts the health and well-being of residents, the local economy, greenhouse gas (GHG) emissions, and adaptation to climate change. With much of Canada's housing stock constructed before the introduction of modern building codes, most communities have an opportunity to improve the energy performance, comfort and affordability of existing homes. In fact, the average Canadian single-family home uses about 20 percent more energy than new homes built today—costing residents an extra \$300 per year on their utility bills.<sup>1</sup> A home upgrade financing program can be a powerful tool in improving the quality and value of existing housing stock while generating local economic development opportunities, improving public health and contributing to climate change goals.

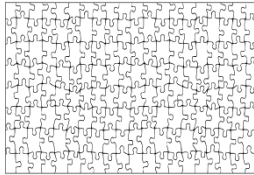
<sup>1</sup> Compared to new homes built to the latest standard for an ENERGY STAR<sup>®</sup> certified home. See Natural Resources Canada's web page: [ENERGY STAR<sup>®</sup> Certified Homes](#)

FCM

# DESIGN OBJECTIVES



**Design home retrofits program to significantly reduce GHGs from single family homes**



**Determine key program features (e.g., Region-wide, third-party delivery)**



**Build understanding & support among internal and external stakeholders, including the public**

# MILESTONES

Q2-Q4 2021

**Milestone 1**

 Program  
Foundation


Q1 2022

**Milestone 2**

 Background  
Research


Q1 2022

**Milestone 3**

 Determine  
Opportunities


Q3 2022

**Milestone 4**

 Draft Program  
Design


Q2 2023

**Milestone 5**


 Final Program  
Design


Q2 2023


**Milestone 6**

 Market  
Program


**LEGEND**



**Council, LT consultation**



**Advisory group consultation**




**Public consultation**


# QUESTIONS?


# THANK YOU!

## MISSISSAUGA IS TAKING ACTION ON CLIMATE CHANGE

**climate change  
is real.**

 **20-32  
MORE HOT  
(+30°C)  
DAYS**

 **EXTREME WEATHER  
EVERY 6 YRS  
VS 40 YRS**

 **70mm  
MORE  
RAIN/YEAR**

 **+1°C  
OVER LAST  
60 YRS**

**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](http://THECLIMATECHANGEPROJECT.CA)



the  
**CLIMATE  
CHANGE**  
project

  
MISSISSAUGA