



Better Homes  
**HAMILTON**



Hamilton

# Better Homes Hamilton: Program Design

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**Hamilton City Council  
General Issues Committee**



**CENTRE FOR  
CLIMATE CHANGE  
MANAGEMENT  
AT MOHAWK COLLEGE**

May 3rd, 2023  
Presented by Nico Strabac, Project Lead  
Centre for Climate Change Management

# PROJECT BACKGROUND

In May 2021, City Council directed staff to "develop a detailed design for a flexible Home Energy Retrofit Opportunity (HERO) program"

Funding obtained from Federation of Canadian Municipalities (FCM) for the development of a Detailed Design Study and supporting consulting services

The Centre for Climate Change Management was contracted to complete program design and implementation plan



# Evidence-based Program Design



## Best practices

- Compared HERO programs in Canada, US, and Europe
- Examined best practices and lessons learned
- Evaluated existing incentive programs

## Stakeholder Engagement

Consulted with 40+ stakeholders:

- City staff
- Municipalities with HERO programs
- Environmental NGOs
- Tenant advocacy groups
- Contractors (HVAC, insulation, renovations)
- Building science experts
- Real estate lawyers and realtors
- Energy advisors and registered service providers
- Utility providers

## Survey

395 completed interviews:

- 204 by phone
- 195 online

Survey provided insights:

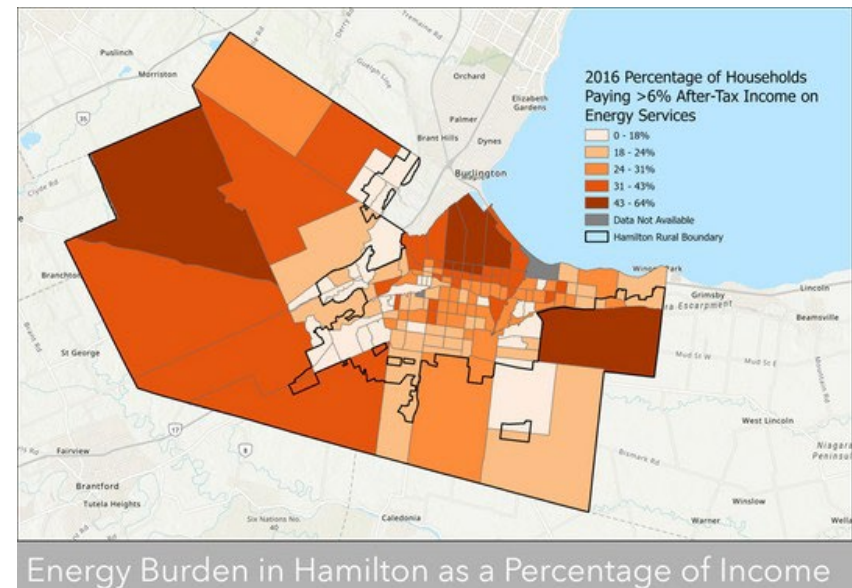
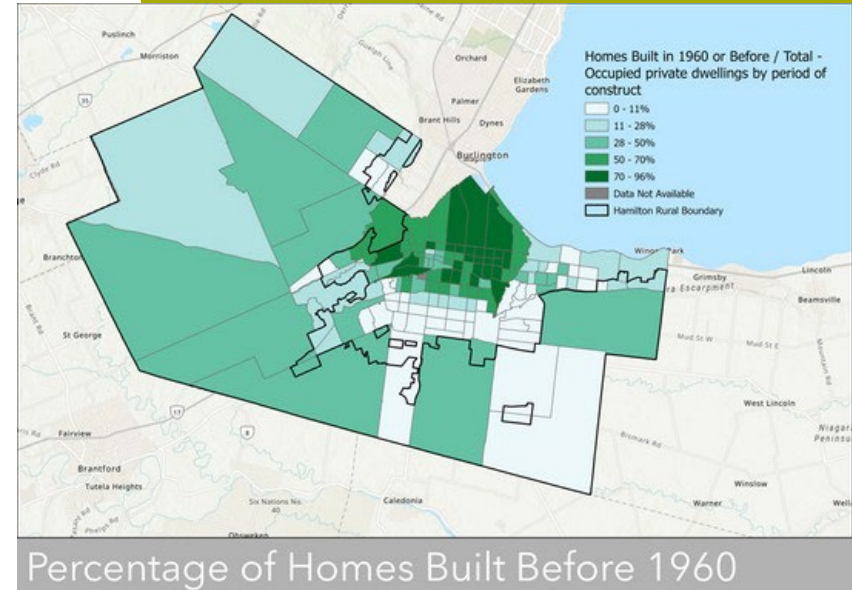
- Motivation to participate
- Barriers to participation
- Desires and needs from a HERO program

# BUILDING DATA REVIEW

Examined residential building information:

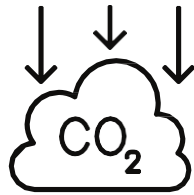
- Examined dwelling types per 2021 Census data
- Commissioned an energy data analysis and spatial mapping of eligible building archetypes
- Evaluated energy burden across the City of Hamilton
- Analyzed average GHG emissions across building archetypes

**75% of residential dwellings in Hamilton  
qualify for the program as designed**





# PROGRAM PRINCIPLES



Support Low Carbon Transformation 2: Transforming our Buildings within the Community Energy & Emissions Plan (CEEP)



Support the greatest number of Hamiltonians to undertake retrofits which lower GHG emissions while increasing household energy efficiency and home comfort



Maximize program uptake by reducing barriers to participation



Design a program that stacks with and compliments existing rebates and incentives to maximize rebates for lowering GHGs



Provide program participants with energy coaching services, delivered by a knowledgeable, trustworthy City staff member

# PRESENTING:



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# PROGRAM ELEMENTS

## Financial Model

- Local Improvement Charge (LIC)
- Max. \$20,000 loan per applicant
- Loan repaid via property tax

## Eligibility Criteria

- Homeowner within Hamilton
- Property tax account in good standing (no liens or arrears)
- Detached, semi-detached, townhouse, row house

## Eligible Expenses

- EnerGuide assessments & permits
- Mechanical upgrades: Air-source heat pumps, smart thermostats, smart controllers
- Building envelope: Air-sealing, and attic, basement, exterior wall insulation
- Supporting upgrades: Breaker panel upgrade (200 amp), ductwork repair

## Participant Supports

- Energy coach
- Contractor registry for informational purposes
- Guidance in project management & accessing rebates



# Let's take an example...

## ARCHETYPE B

Single-detached homes account for 56% of the City's residential building stock.

Building Archetype B represents 53% of Hamilton's single-detached building stock, over 66,800 structures.

- ♦ High efficiency natural gas furnace
- ♦ Approximately 1,800 square feet
- ♦ \$1,200 in electricity costs; \$1,025 in natural gas costs annually
- ♦ Emits 4.89 tCO<sub>2</sub>e per year





# ARCHETYPE B

In this scenario, the Hamilton homeowner:

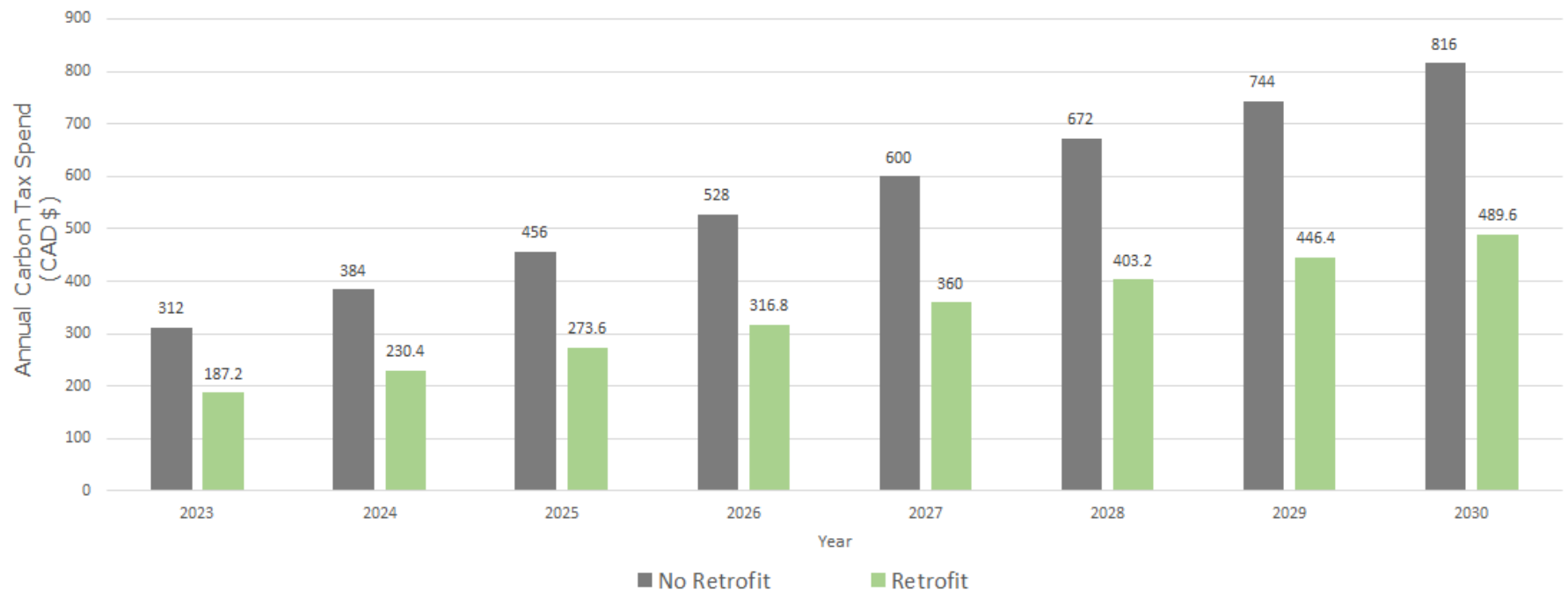
- Wants more efficient home heating/cooling
- Aware of the HER+ rebates but intimidated by the paperwork
- Would otherwise face challenges spending \$20,000 on home energy retrofits
- Has low understanding of home efficiency

**Better Homes Hamilton reduces barriers to home efficiency by providing a low-cost loan and supportive energy coaching services.**

Upgrade	Expense (\$)	Expected Cost with HER+ rebate
EnerGuide Energy Assessment	\$1,000	\$400
Air-source heat pump	\$17,000	\$11,750
Attic insulation to R25	\$2,000	\$1,200
Total cost of renovations	\$20,000	\$13,350*

\*Homeowner uses HER+ rebates as a lump-sum payment against the loan when received.

# CARBON POLLUTION PRICING SAVINGS: ARCHETYPE B



- Average single-detached home in Hamilton (4.89 tCO<sub>2</sub>e emissions/year)
- Assumes conservative 60% reduction in GHG emissions
- Carbon Pollution Pricing savings 2023-30: \$1,805
- Annual Carbon Pollution Pricing savings 2030-beyond: \$327/year



# INCUBATION STAGE: PILOT PROGRAM

Administered by the Office of Climate Change Initiatives, a recommended 2-year pilot will allow staff to evaluate and tweak the program.

Program element	Description
Target	50 homes with variety of eligible building types, diversity of homeowners
Financial model	Max \$20,000 LIC loan with 0% fixed interest rate
Eligibility	Homeowners in Hamilton Current on property tax payments No other liens against title Single-detached, semi-detached, townhouse, row house
Eligible expenses	Permits and assessments Building envelope (air sealing, insulation) Mechanical systems (ASHP, smart thermostat, smart controllers) Supporting infrastructure (breaker panel upgrade, duct work repair)

# STEPS BEFORE LAUNCHING

If pilot is approved, the next steps are:



- Hiring Senior Project Manager with Energy coach skillset, within the Office of Climate Change Initiatives
- Bringing forward required LIC by-laws for Council approval
- Establishing inter-departmental workflows between supporting divisions (Finance, Legal, Taxation)

# Key Recommendations



- Approval of the 'Incubation Stage' Better Homes Hamilton (BHH) program (Appendix "A" BHH Program Overview);
- Direction to Staff to bring forward enabling Local Improvement Charge (LIC) By-law;
- Launch 'Incubation Stage' with target of 50 homes before the end of 2024;
- Approve \$1.0M loan receivable on City's balance sheet;
- Approve \$275K from Climate Change Reserve for fixed costs (i.e. loan loss, marketing, software, staff support etc.);
- Direction to Staff to report back within 2 years on results and feasibility for scaling.



# THANK YOU! QUESTIONS?



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