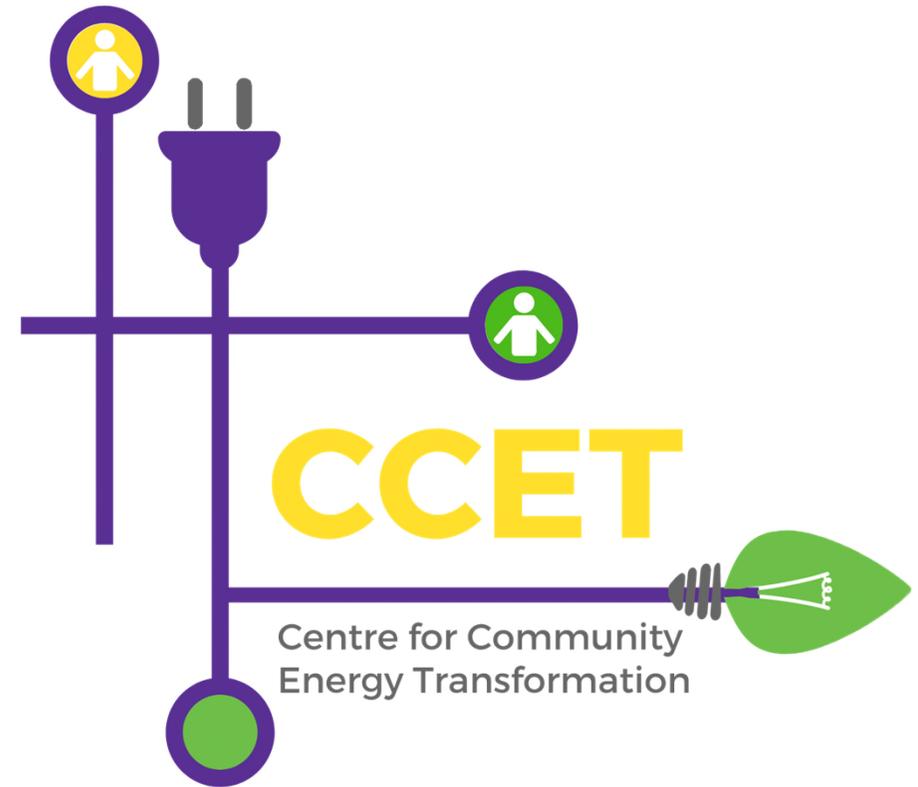


Centre for Community Energy Transformation

Peel Residential Energy Program (PREP)

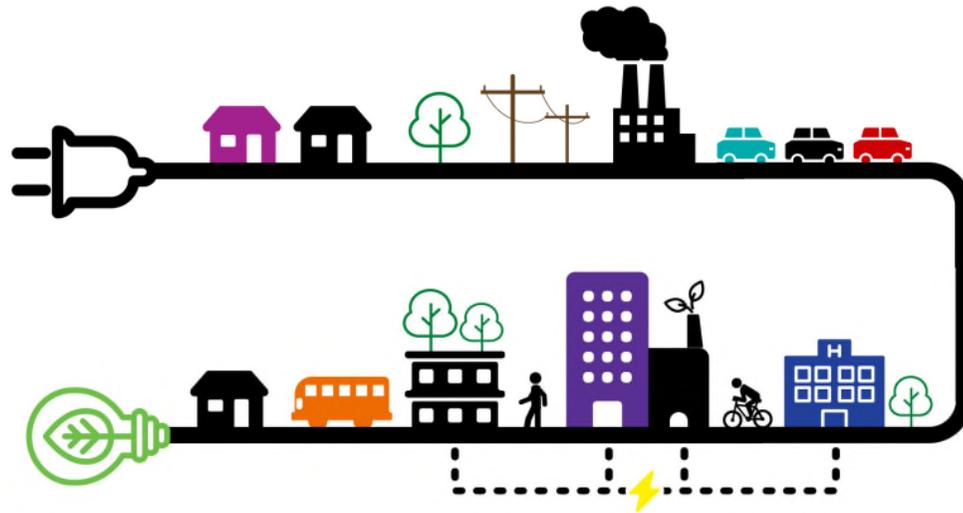
Advisory Task Force
2021.05.19



Community Energy and Emissions Reduction Plan (CEERP)

Addressing the **Climate Change Emergency** requires:

- Urban transition
- Energy transition
- Community commitment and collaboration



CCET

Centre for Community
Energy Transformation

Brampton City Council Declares Climate Emergency

by Dylan Olley on June 6, 2019
in News, Hot Topics, Politics

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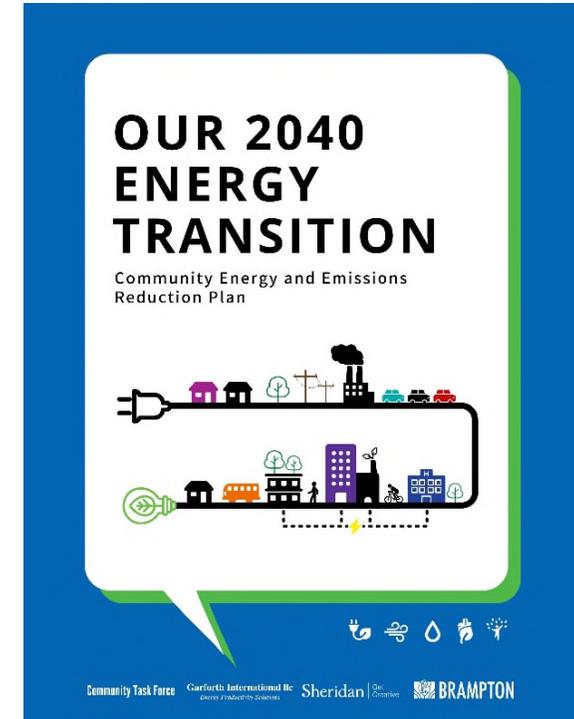


The Brampton City Council is looking to take action against climate change.

Brampton's Approach to Mitigating Climate Change



Urban transition =
Brampton 2040 Vision

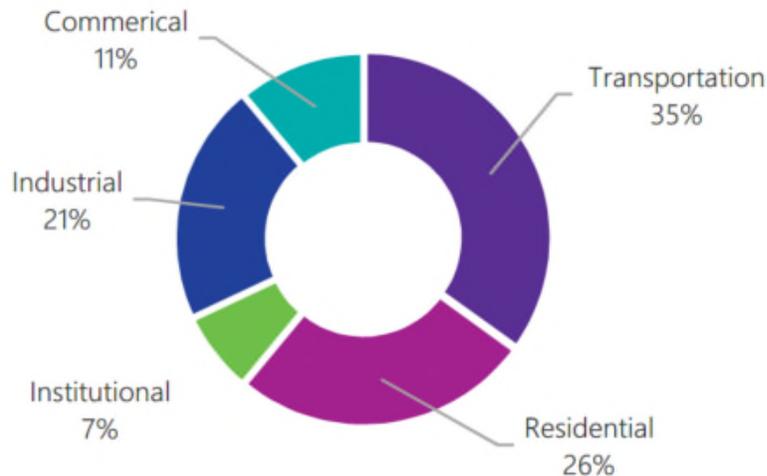


Energy Transition = Community
Energy & Emissions Reduction
Plan (CEERP)

CEERP: Energy and Emissions

- Brampton spends +\$1.8 billion on energy/year (~ 80% of those energy dollars leave the city)
- Energy costs projected to quadruple by 2050
- 5.6 tonnes CO₂e of GHG per resident (Ontario = 3.7t /capita)
- Brampton buildings ½ as efficient as global best practices
- One of Brampton's largest energy users is residential buildings (26% of source energy use)

Brampton Source Energy Use by Sector, 2016



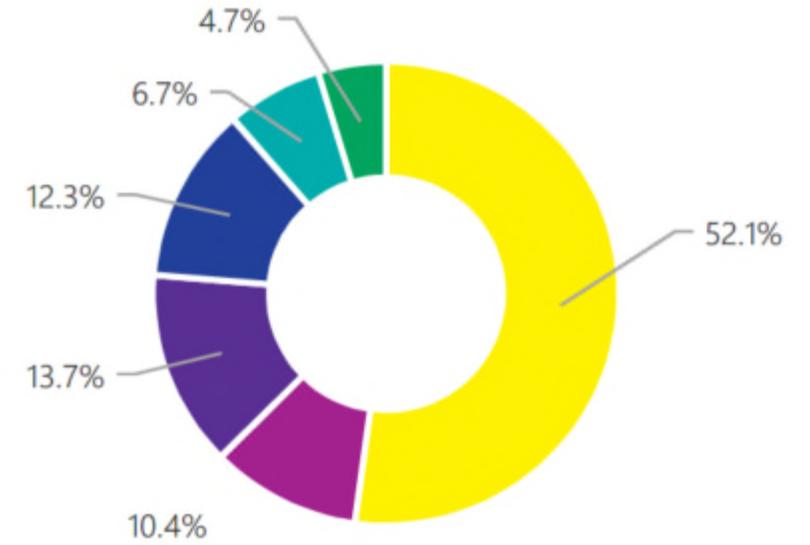
Brampton Emissions by Sector, 2016



CEERP: Energy and Emissions

- Increasing residential energy efficiency is critical to achieving CEERP goals and addressing the climate emergency
- New construction methods result in better energy efficiency than previously, but majority of Brampton's neighbourhoods were built prior to 1990.

Dwelling Types in Brampton, 2016



- Single-detached house
- Apartment in a building that has five or more storeys
- Semi-detached house
- Row house
- Apartment or flat in a duplex
- Apartment in a building that has fewer than five storeys



CEERP: Objectives and Targets

- Objectives and targets reflect the measures considered in the energy efficiency simulations

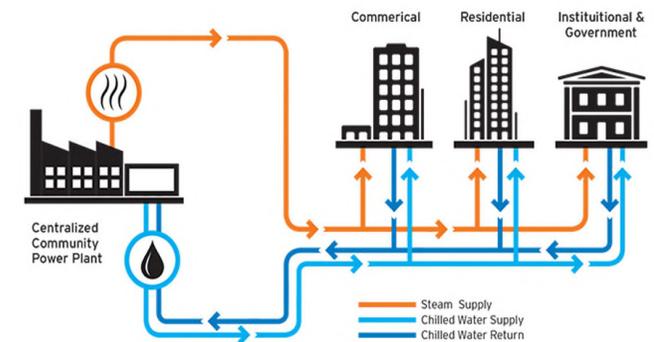
Home and Building Efficiency	3A	Increase efficiency of existing homes	Achieve a 35% residential sector efficiency gain from 2016 levels by retrofitting 80% of existing homes
	3B	Increase efficiency of other existing buildings	Achieve a 22% commercial and institutional sector efficiency gain from 2016 levels by retrofitting 60% of existing buildings
	3C	Increase delivered efficiency of new property	Achieve a 17% Ontario Building Code efficiency gain from 2016 levels
	3D	Increase water efficiency of existing homes and buildings	Achieve a 34% water efficiency gain from 2016 levels



CEERP Priority Projects

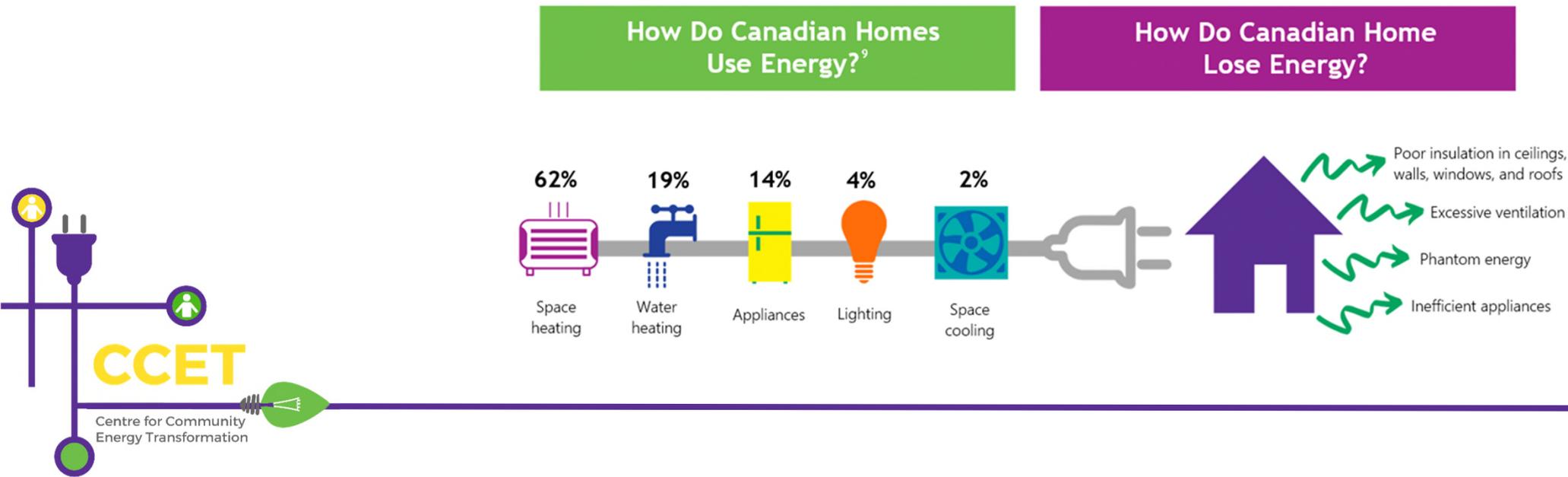
Implement in the next 5 years:

- Align City policies/programs to support CEERP targets
- **Establish a standardized Home Retrofit Program**
- Update Transportation Master Plan
- Integrate District Energy Systems into City/Town Centres
- Develop Integrated Energy Master Plans
- Establish a Community Organization



Establish a Standardized Home Retrofit Program

- Standardized retrofits – a consistent set of modifications to existing buildings designed to improve energy efficiency or decrease energy demand
- Examples: Toronto, Windsor, Newmarket, Vaughan, Ottawa, Edmonton, Vancouver
- Collaboration with Mississauga and Caledon, create a Peel program
- Completed a Feasibility Study and submitted application to FCM for funding for a Design Program



FCM Green Municipal Fund

- This initiative helps municipalities deliver energy efficiency retrofits and renewable energy financing programs for low-rise residential properties
- Prerequisites for a municipality:
 - A community energy, sustainability or climate action plan, or similar, that identifies energy efficiency and renewable energy in the residential sector as a priority area for action
 - A feasibility study, market study, business case or similar for launching or expanding your financing program
 - A municipal program by-law or similar resolution, which authorizes the use of the specified financing mechanism in accordance with relevant provincial/territorial legislation
 - A municipal council resolution or attestation from the city manager committing to capitalize or recapitalize the program
 - Proof you have legal authority to pursue the proposed initiative
- The maximum GMF contribution to any eligible program is up to 80% of eligible costs.



Home Retrofits through a Local Improvement Charge

- Residential homes represent 26% of energy use and 21% of GHG emissions in the City of Brampton.
- Enacting a Local Improvement Charge (LIC) to facilitate and accelerate Home Retrofits offers an opportunity to meet our target of a 35% residential efficiency from 2016 levels by retrofitting 80% of existing homes and also demonstrates we are being pro-active towards achieving a priority project of the CEERP.

What	allow homeowners eligible to receive low-interest and long term loans to make water conservation/energy efficiency /renewable energy improvements which they then pay-off through their property tax bill, as the loan is attached to the property not the individual
How	Enabled by 2012 changes to the Municipal Act, Ontario municipalities are now permitted to use the local improvement charge (LIC) mechanism to provide financing to private property owners for energy-related projects.



Home Retrofits through a Local Improvement Charge

Why	Improving the energy efficiency of Brampton’s residential building stock through a retrofit program is a key CEERP action to meet GHG emissions reduction targets, help residents reduce their energy costs, and support local job creation.
Where	The City may establish criteria within the enabling by-law/business case to target specific neighbourhoods (can prioritize neighborhoods that have high residential energy consumption rates).
Legal	Municipalities are required to implement enabling by-laws to stipulate the sector of focus and specify the details regarding owner and project eligibilities, accompanied by program rationale/resolution describing how the program will function, key details, and considerations.
Eligibility	Residential low-rise buildings (detached, semi-detached, and townhouse). The property owner must have a property tax account with Brampton and also be a customer of the local utility.



Home Retrofits through a Local Improvement Charge

Conditions	<ul style="list-style-type: none">• Participation is voluntary, owner-initiated and all owners of the property must consent• Property tax, utility bills and all other payment obligations to the City for the past five years must be in good standing• evidence that all mortgage lenders have been notified or have consented to the imposition of a priority lien related to the LIC-based financing• the proposed retrofit measures submitted by the applicant/owner are consistent with those specified in the implementing by-law
Criteria	<ul style="list-style-type: none">• Prioritize areas with the highest energy intensity (highest utility-calculated natural gas and electricity end-use consumption)• Target community should have a higher average number of older homes• Consider demographic and socio-economic characteristics (i.e. low income neighbourhoods) to ensure a diversity of households are targeted• Consider existing community initiatives or organizations interested in being aligned with the Program to achieve efficiencies in terms of program delivery



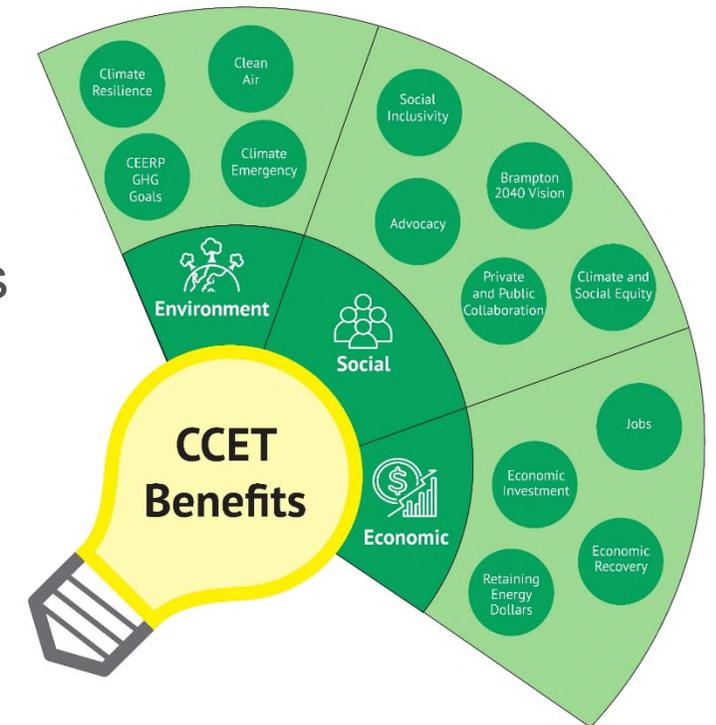
Retrofit Benefits

- New jobs/skills needed to support the businesses and organizations driving the implementation of the CEERP, such as knowledge and skills in home retrofits
- From post-secondary institutions (education for skills) to manufacturing (energy/construction technology and materials) to construction (installing retrofits), retrofitting buildings for energy efficiency can stimulate local economy and job growth
- Improve indoor air quality/thermal comfort for residents
- Save residents money on their energy bills
- Environmental benefits
- Peel program offers consistency to renovators and potential funders



CCET: Potential Community Benefits

- Coordinated action to catalyze the energy transformation in Brampton
- Measurable GHG reductions and traceable results
- Green job creation
- Partnerships between governments and other organizations
- Alignment of local efforts
- Community engagement and education
- Opportunity to inspire other (suburban) communities
- Showcase ongoing work



Next Steps

Task	Lead
Set up internal working team (Environmental Planning, Building, Legal, Finance)	City Staff
Project TOR/MOU with Mississauga and Caledon	City Staff
RFP for consultant/Procurement process	City Staff
Design Retrofit program	Consultant
Develop By-Law which authorizes the use of the LIC financing mechanism in accordance with relevant legislation	City Staff
Report to Council	City Staff
Design project webpage/communication materials	CCET
Create a project-level monitoring program that monitors program performance and contribution to municipal energy and GHG objectives	CCET
Program launch	CCET



Thank you

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