



Climate Action in Durham Region

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Presentation to Community Care Durham AGM

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“It is unequivocal that human influence has warmed the atmosphere, ocean and land. Widespread and rapid changes in the atmosphere, ocean, cryosphere and biosphere have occurred.”

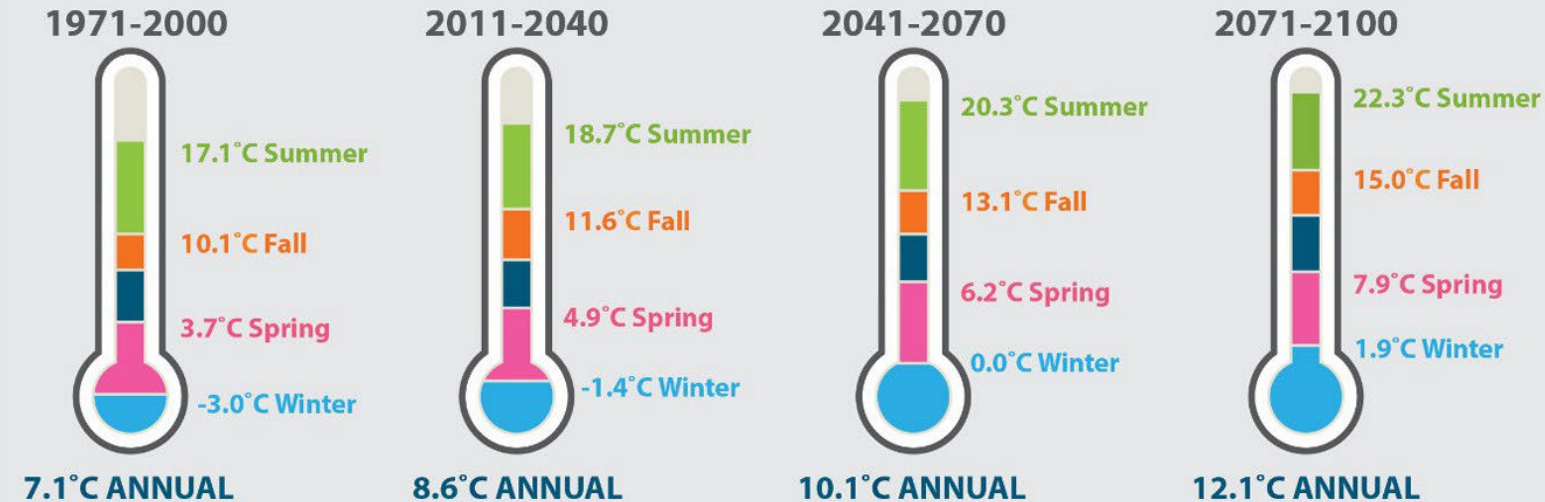
Intergovernmental Panel on Climate Change Sixth Assessment Report (2021)



Future Climate Trends for Durham Region

MEAN TEMPERATURE

By the end of the century, Durham Region is expected to warm by 5°C, leading to more variable and extreme weather



DAYS ABOVE 30°C



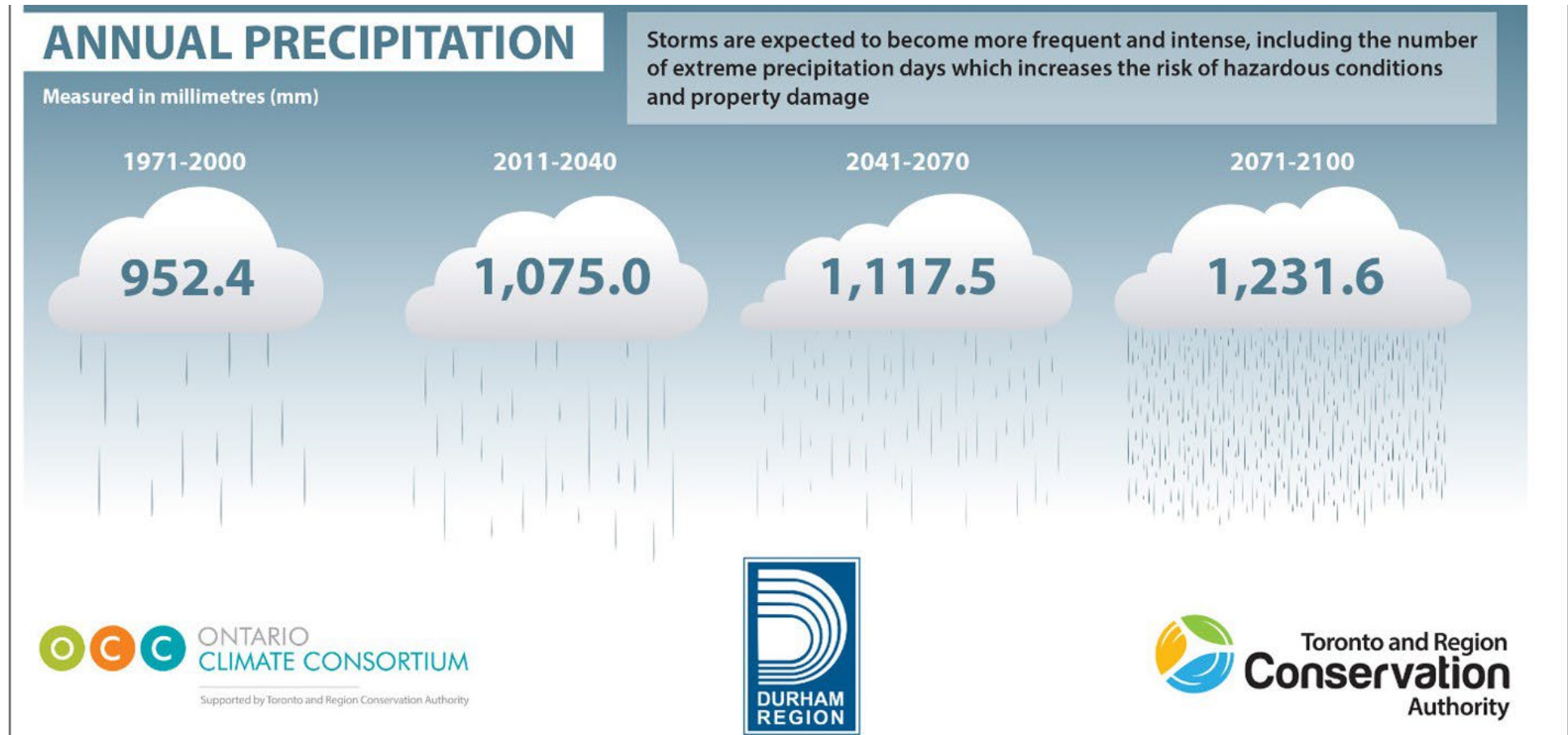
A 6-fold increase in the number of extreme heat days is expected by the end of the century, which will pose significant risks to people's health and well-being

DAYS BELOW -20°C



As winters become warmer, less snow and ice conditions are expected with more precipitation falling as rain instead of snow, which increases the risk of flooding among other impacts

Future Climate Trends for Durham Region



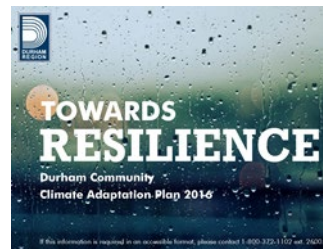


Climate Emergency Declaration/Race to Zero

Local Governments are critical actors in the global response to climate change

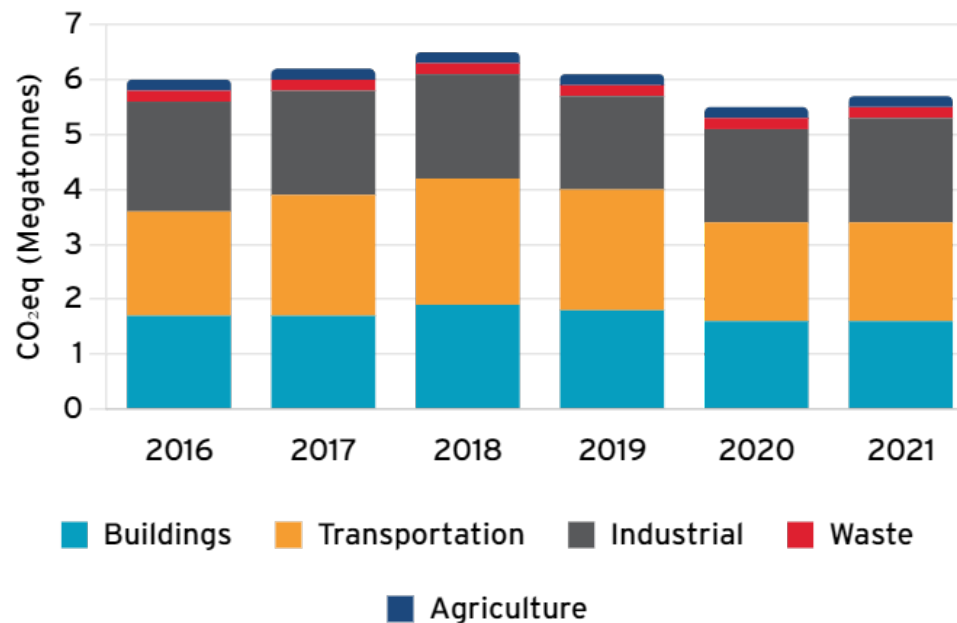


Source: Federation of Canadian Municipalities

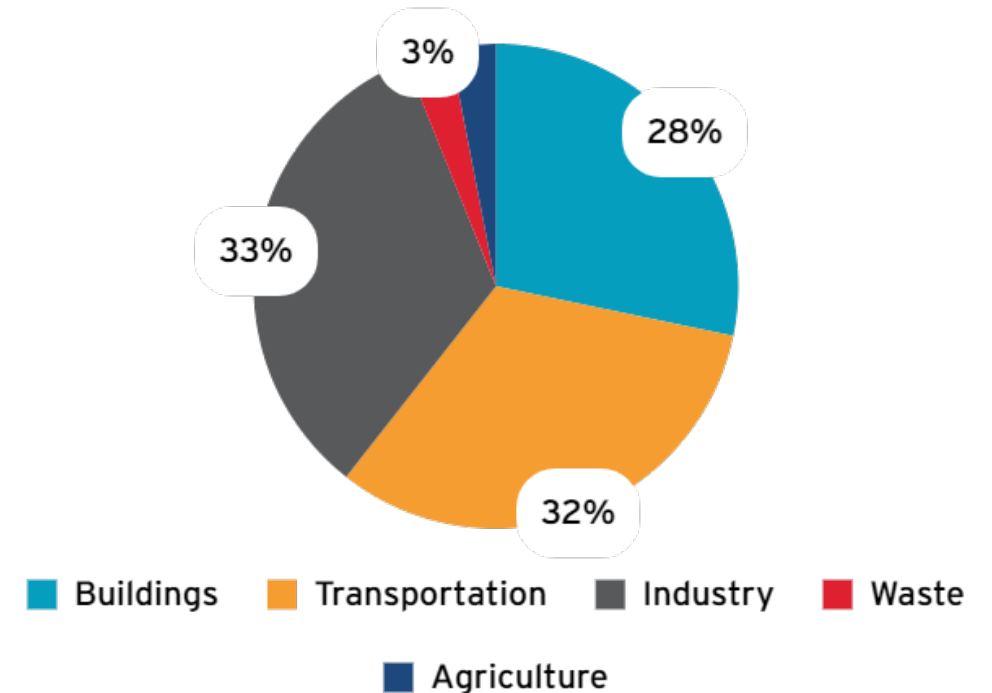


Carbon Emissions in Durham Region

Durham Total Emissions 2016-2021

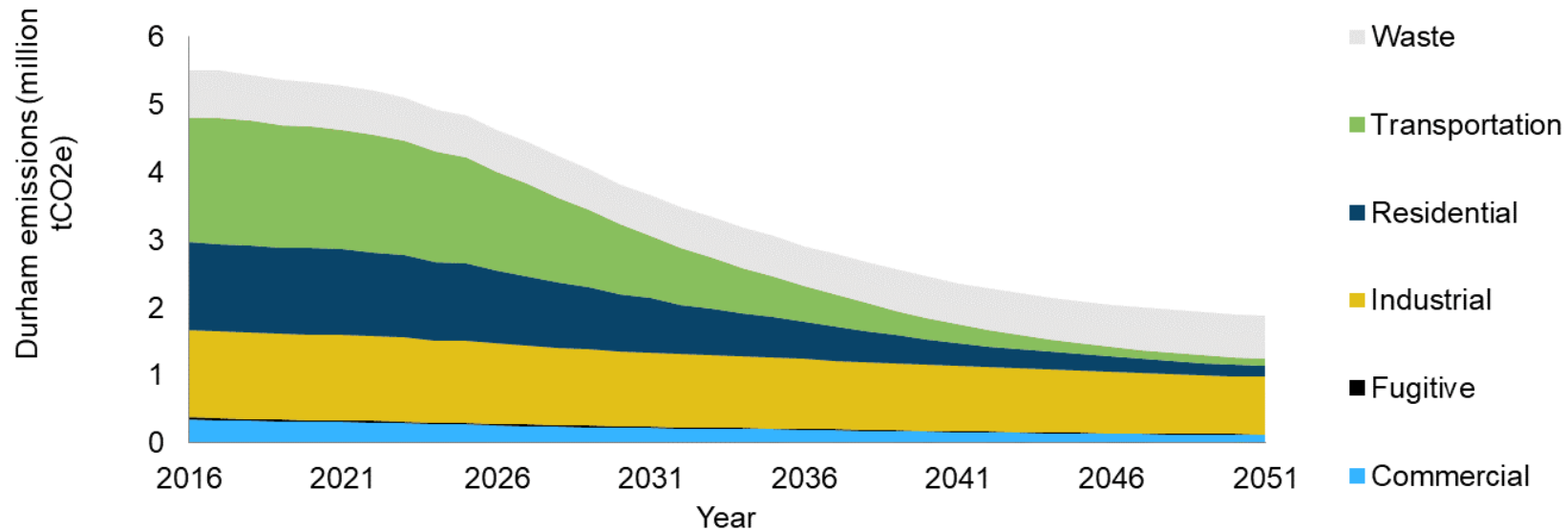


Durham 2021 Emissions Breakdown



Source: The Atmospheric Fund. *2021 GTHA Carbon Emissions Inventory*. Available online: <https://carbon.taf.ca/>

Durham's Low Carbon Pathway



The most *cost-effective* emissions reduction opportunities are found in the transportation sector, followed by space heating in buildings



Durham Clean Energy Economy Strategy

Vision

Durham has built an energy system which is cleaner, more efficient, affordable and self-reliant, attracting new investment to the region and creating jobs in the energy sector, while putting the Region on a pathway to net zero.

Mandate

To accelerate the transition to a clean energy economy

Guiding Principles

Innovation ⚙ Community Collaboration ⚙ Reliability ⚙ Resilience

2050 Goals*

Energy Use

Reduce regional energy use (GJ) by 37%

Energy Emissions

Reduce regional energy-related GHG emissions (tonnes CO_{2e}) by 66%

Energy Costs

Reduce regional energy expenditures (\$) by 35%

Transportation

Decrease vehicular mode share (%) by 32%

Strategic Pathways

Home and Building Efficiency



Local Energy Generation & Distribution



Transportation Efficiency

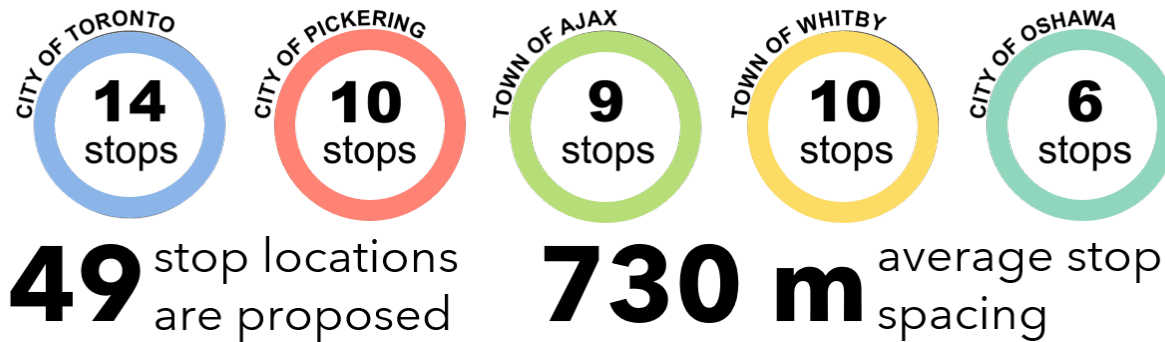


Industrial Efficiency



Transit oriented communities

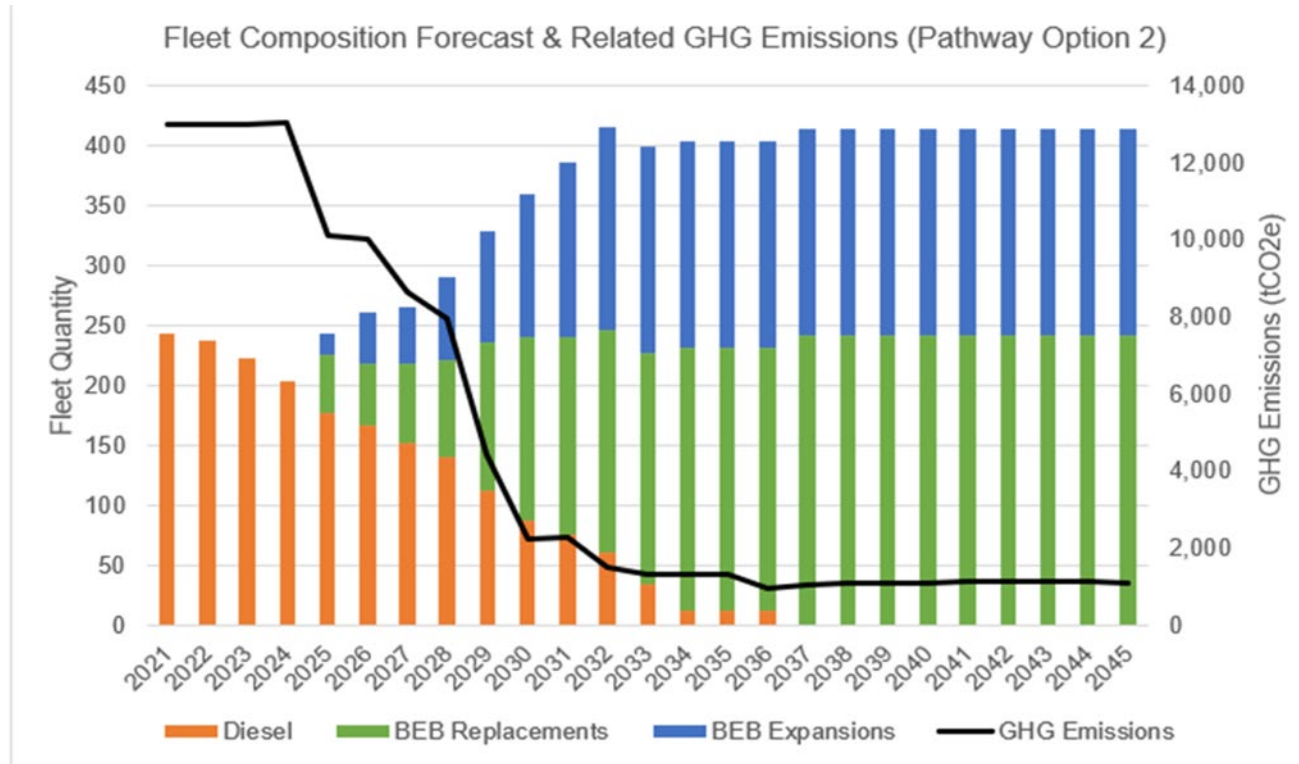
Durham-Scarborough Bus Rapid Transit



Lakeshore East GO Line Extension

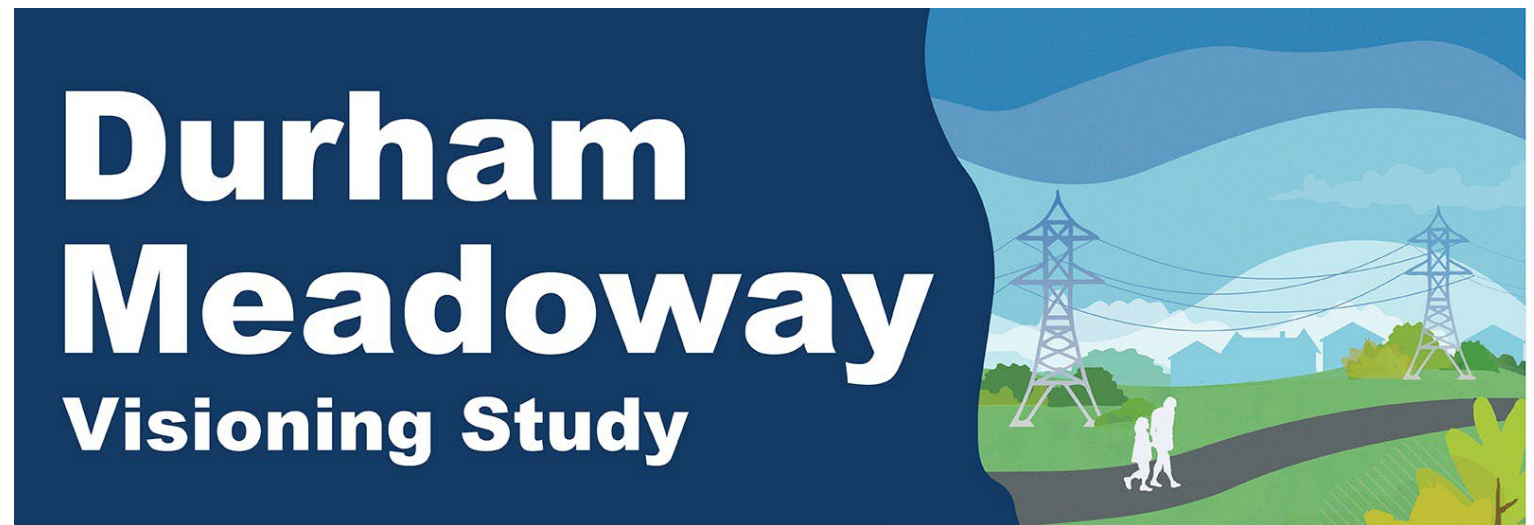


Corporate Leadership in Action – DRT Zero Emission Bus Plan



Year	GHG Emissions (tCO ₂ e)
Baseline Actual 2019	21,925
Forecast 2030	2,232 (90% reduction)
Forecast 2045	1,074 (95% reduction)

Support for Active Transportation



Collaboration on Electric Vehicle Charging Infrastructure

- Durham Region, local area municipalities, utilities, and educational institutions have collaborated to leverage federal funding
- 180 EV charge points at close to 60 locations across the Region
 - Multi-unit residential
 - Public spaces (e.g. rec centres, town halls)
 - Workplaces
 - Light-duty municipal fleets
 - On-street parking



Examples of the Energy Transition in Action in Durham Region



Whitby Sports Complex, proposed design concept



Altona Towns, Pickering



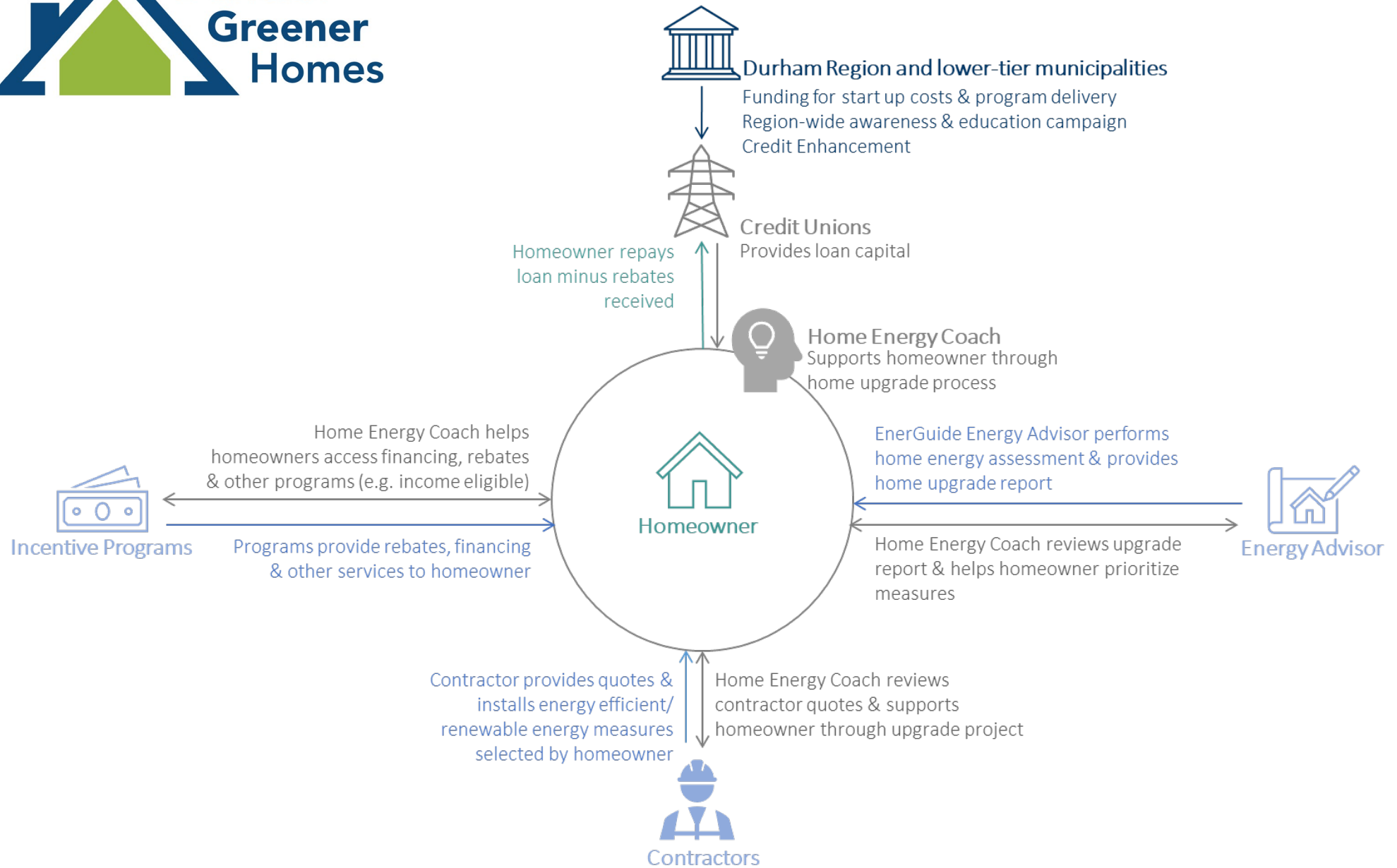
Energy Innovation Centre, Oshawa



Darlington Small Modular Reactor Conceptual Design



Helping Durham residents save on energy costs





Questions?

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