

Schedule C to Staff Report 2021-0121: Resilient Caledon Plan 10-year Corporate Capital Incremental Cost Estimates (2022-2031)

Important Disclaimer: Please note that this table provides estimates of incremental municipal investments to provide a general sense of what level of effort that may be required over the 10-year forecast horizon (2022-2031) to implement the Resilient Caledon Plan. These costs are not inclusive of all of the actions in the Resilient Caledon Plan and have not discounted for potential grant or alternative financing mechanisms. The estimates are based on the information that staff currently have available and costs will likely become more economical in due course as technologies become more market ready (i.e. cost of electric vehicles and solar photovoltaics).

These estimates will be further refined on a project-by-project basis and staff will refine these costs through studies with the goal to inform the Town’s 10-year capital forecast exercise. Staff will also pursue all available grant opportunities for each project and will explore unique financing mechanisms to reduce Town costs.

Action Area	Description	Potential Funding and Alternative Financing Opportunities	Estimated 10-year Forecast	Estimated Avoided Costs over 10-year forecast	Notes/Assumptions
CORPORATE BUILDINGS					
New Town Buildings or Major Expansions	Incremental additional costs to construct new Town buildings and expansions to net zero (or near net zero) greenhouse gas (GHG) emissions standards.	<ul style="list-style-type: none">• Enbridge Gas new construction incentives• Federation of Canadian Municipalities’ (FCM) Green Municipal Fund• Recover costs, where possible, through Development Charge (DC) By Law reviews.	\$10,271,865 - \$17,510,221	<p>On average, 25%-40% more energy efficient compared to a LEED Gold building and 32%-63% less GHG emissions. Average annual energy utility cost savings of 23% - 33% compared to a LEED Gold building.</p> <p><u>Additional Benefits:</u></p> <ul style="list-style-type: none">• Avoided costs of retrofits• Avoided carbon tax• Reduced water consumption• Building maintenance savings• Improved occupancy comfort and indoor air quality• Improved building resiliency to climate impacts	<p>The estimated costs are based from anticipated new Town buildings and major renovations until 2030. Estimated incremental costs are derived from cost premium ranges outlined in the City of Mississauga’s Corporate Green Building Standard that reflects gradual increases in green building investments closer to 2030.</p> <p>Average savings are determined through comparing the Town’s LEED Gold certified OPP building with new targets currently being considered as part of the Corporate Green Building Standard update.</p> <p>Costs will be further refined with the completion of the Town’s Corporate Green Building Standard update and cost premiums, expected Q3 2021. Where possible, staff will include cost premiums through DC Bylaw reviews.</p>

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Retrofits to existing Town-owned buildings	Energy efficiency retrofits to existing Town facilities to reach net zero or near net zero emissions, such as window and HVAC upgrades.	<ul style="list-style-type: none"> Enbridge Gas and saveONenergy incentives Town's Corporate Energy Revolving Fund Energy Services Companies (ESCO) Federal and Provincial infrastructure grants 	\$10,118,415	<p>\$4,481,876</p> <p><u>Additional Benefits</u></p> <ul style="list-style-type: none"> Avoided carbon tax Building maintenance savings Improved occupancy comfort and indoor air quality Improved building resiliency to climate impacts 	<p>Consultant estimate based on average floor area of municipal buildings. Cost estimates also include solar photovoltaics.</p> <p>Costs will be refined in the 10-year capital budget through phased net zero building retrofit studies.</p> <p>The estimated savings are representative of reduced energy operating costs and avoided rising carbon tax prices.</p>
CORPORATE FLEET					
Zero Emissions Town Fleet Vehicles	Incremental capital cost of replacing existing Town fleet with zero and lower emissions vehicles, aligned with the estimated asset replacement schedule.	<ul style="list-style-type: none"> Enbridge Gas compressed natural gas program support FCM Green Municipal Fund Natural Resources Canada's Zero Emissions Vehicle Program 	\$2,411,000	<p>\$1,240,000</p> <p><u>Additional Benefits</u></p> <ul style="list-style-type: none"> Avoided carbon tax Improved air quality Reduced maintenance costs 	<p>Initial estimate provided by the Town's Green Fleet Strategy consultant. Costs will be further refined once the detailed Green Fleet Strategy and fuel switching plan is brought forward to Council by Q3 2021.</p> <p>The estimated savings are representative of reduced maintenance, fuel cost savings and avoided carbon taxes due to lower emissions fuels and are estimated to be reached by 2029.</p>
Transit, Alternative Transportation and Active Transportation	<p>Building on the Transportation Master Plan and Transit Feasibility Study, options will be assessed for using alternative fuels for transit fleet and active transportation initiatives, subject to feasibility and cost.</p> <p>Implementation of future policies outlined in Regional and Town's OP as they relate to transportation and climate change.</p>	<ul style="list-style-type: none"> Canada Infrastructure Bank transit funding 	TBD	<p>TBD</p> <p><u>Additional Benefits</u></p> <ul style="list-style-type: none"> Improved air quality Improved human health from increased physical activity Providing affordable and accessible transportation alternatives (i.e. for youth and seniors) 	<p>Feasibility and costs will be assessed as opportunities arise, and further refined through the upcoming Multi-Modal Transportation Master Plan.</p>

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CORPORATE INFRASTRUCTURE					
Infrastructure Resilience	Additional cost to enhance the resilience of new and upgraded roads, bridges and stormwater infrastructure (i.e. new materials, processes, etc.).	<ul style="list-style-type: none"> Federation of Canadian Municipalities adaptation grant funding 	TBD	<p>TBD</p> <p><u>Additional Benefits</u></p> <ul style="list-style-type: none"> Safer communities Improved public health (i.e. avoided negative health risks from building flood damage) Reduced municipal liability risks 	Costs to be developed through Asset Management Plan and asset-scale vulnerability assessments. Insurance Bureau of Canada recommends municipal spending of 0.12% of GDP annually on infrastructure adaptation.
COMMUNITY INITIATIVES					
Home Retrofit Program	Provide long-term, low interest loans to Caledon homeowners to support energy efficiency retrofits and renewable energy installations. Staff are currently exploring the feasibility of a regional/third-party delivery model to maximize efficiencies.	<ul style="list-style-type: none"> Natural Resources Canada Greener Homes Program Federation of Canadian Municipalities' Community Efficiency Financing Program 	TBD	<p>TBD</p> <p><u>Additional Benefits</u></p> <ul style="list-style-type: none"> Avoided carbon tax Reduced energy expenses Improved affordability of home improvements Improved indoor air quality Local job creation 	<p>The Town has applied for a joint grant with the Cities of Mississauga and Brampton to complete a design study of how this program could be administered and understand the costs and resources required.</p> <p>Implementation costs to be determined once baseline study is complete and brought through annual budget process.</p>
Community Grants	Expand existing Green Fund programs to build community capacity and support deep energy and emissions retrofits	<ul style="list-style-type: none"> Applicants can utilize other funding sources in addition to the Green Fund to support their projects 	\$150,000	<p>TBD</p> <p><u>Additional Benefits</u></p> <ul style="list-style-type: none"> Enhanced Town and community capacity on climate action Improved community knowledge on climate change 	Additional \$15,000 annually for Green Fund program to be added to the existing budget. This would allow for \$50,000 annually (including base operating budget) to support both local community groups and schools to implement green projects.

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Electric Vehicle (EV) Charging Infrastructure	Installation of publicly available EV charging infrastructure to support community transition to electric or zero emissions vehicles	<ul style="list-style-type: none"> Natural Resources Canada Zero Emissions Vehicle Infrastructure Program (ZEVIP) 	\$1,000,000	<p>TBD</p> <p><u>Additional Benefits</u></p> <ul style="list-style-type: none"> Enhanced access to electric vehicles Community and corporate fuel, carbon tax, and maintenance cost savings Improved local air quality 	<p>Annual additional budget of \$100,000 (top up to an existing capital budget of \$100,000) to leverage long-term federal ZEVIP funds that provide up to 50% of the capital costs.</p> <p>The Town will strategically plan for placement of Level 2 (\$15-\$20,000) and Level 3 (\$60-\$100,000) charging infrastructure. The Regional Zero Emissions Vehicle Strategy can help to inform placement of charging stations.</p> <p>The Town will continue to leverage joint grant applications with the Peel Climate Change Partnership, where applicable, to achieve economies of scale.</p>
Green New Development	Incremental additional costs associated with implementing a Green Development Standard for low carbon new construction.	<ul style="list-style-type: none"> The Atmospheric Fund (Standard development) Incentives provided by local utilities Program support through conservation authorities 	TBD	<p>TBD</p> <p><u>Additional Benefits</u></p> <ul style="list-style-type: none"> Safer and complete communities Improved internal processes Potential reduced energy costs to homeowners Improved local air quality and public health 	Resourcing and implementation costs to be determined through the Green Development Standard program development, expected Q4 2022. Further information to also be provided by working with the Town's Growth Committee, made up of members from the Town's Senior Leadership Team to prepare the Town for its upcoming growth.
OTHER					
Green Infrastructure	Restoration of natural features, tree planting, invasive species management, etc.	<ul style="list-style-type: none"> Canada Infrastructure Bank Federal Clean Water and Waste Water Fund FCM Green Municipal Fund 	TBD	<p>TBD</p> <p><u>Additional Benefits</u></p> <ul style="list-style-type: none"> Enhanced green space and improved carbon sequestration 	To be determined through feasibility studies, in partnership with Conservation Authorities and other stakeholders.

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				<ul style="list-style-type: none">• Avoided investments in grey infrastructure (i.e. stormwater ponds)• Improved tree health	
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Plans/Studies/Resources	Feasibility and/or design studies such as developing strategies, vulnerability assessments, etc. and determining associated program resourcing.	<ul style="list-style-type: none">• The Atmospheric Fund• Relevant federal/provincial grant programs	TBD	TBD	Individual projects will be assessed with regards to cost, feasibility, delivery model, and return on investment, and further refined before being submitted for approval as part of the Town's annual budget process
TOTAL			\$23,951,280 – \$31,189,636	\$5,721,876*	

**Note: avoided costs will likely be much higher than what is quantifiable at this time and will be further refined through monitoring and verification studies and reported back to Council.*