

New Initiative Impact Assessment – Preparing the Greenhouse Gas Reduction Roadmap

Purpose

Develop a clear *Roadmap* to reduce corporate greenhouse gas emissions by 45% from 2010 levels by 2030.

Background

At their August 28, 2023, Special Committee of the Whole meeting, Council held a Climate Action Workshop. One of the directions to staff coming from the workshop was to provide Council with a clear *Roadmap* showing how the Township's corporate greenhouse gas emissions could be reduced to meet the target of a 45% reduction from 2010 levels by 2030.

Project Scope

The greenhouse gas emissions reduction *Roadmap* project has two main objectives:

Objective 1: To create a clear *Roadmap* of activities to undertake every year between 2024 and 2030 to decrease corporate GHG emissions by 45% from 2010 levels. Corporate GHG emissions would be based on the current provincially defined 'Traditional Services' scope: <https://toolkit.bc.ca/wp-content/uploads/2022/05/Carbon-Neutral-Workbook-v3-January-2020-0.pdf>.

Objective 2: To have a clear understanding of the annual financial commitment involved in retrofitting the municipally owned buildings and converting the municipal fleet and larger tools from internal combustion engines to electric motors.

To achieve these objectives, the following will be required:

- A *Greenhouse Gas Accounting Assessment* of the GHG emissions inventory data used for the 2010 calculation of total corporate emissions, including for each of Esquimalt's municipally owned buildings, the fleet vehicles, larger equipment, the most frequently used gas-powered tools, and travel expense accounts for the delivery of "traditional services". This data then needs to be calibrated with the 2022 and 2023 GHG emissions inventory to obtain an accurate calculation of the change in emissions. This assessment would also audit all sources of GHG emissions that are now being included within the scope of the Local Government Climate Action Program (LGCAP) traditional services and then develop several options (scenarios) for yearly GHG emission reduction required for the six years to 2030 with a prioritization for implementation and an understanding of the most immediate budget implications.

- A *Building Audit Assessment* which would allow for a partial completion of Climate Action Plan (CAP), Strategy 7.1:

Action 4.1 - Conduct building energy audits at all major buildings and implement recommended measures (note: audits will only be conducted for the Recreation Centre and Sports Centre as they account for the most significant greenhouse gas emissions from municipal buildings).

- An *Electric Vehicle Transition Study* to help chart the pathway for the conversion of the current fleet vehicles and equipment (tractors, ice resurfacers, etc.) including planning for the infrastructure upgrades needed to transition to electric fast charging at the Public Works Yard and determine the impact on the GHG inventory with costs.
- A new system to better account for GHG emissions from contracted services, including revising the professional services agreement template to include requiring emissions data or kilometres driven associated with a service/project’s delivery be provided by contractors at the end of a project or at year end.
- An internal communication program to raise interdepartmental awareness of and a positive vibe for the program of reducing emissions on a stepped-up timeline and stepping away from business as usual. A new public communications program to increase awareness of the plan, to add accountability, transparency, and celebrate the long-term co-benefits of GHG reduction and cost saving, will also be required.

Financial Impact and Project Schedule

Action	Who	When	Cost	Source of Funds
Establish clear criteria for measuring GHG emissions. The criteria have changed since 2010 so there needs to be a consistent set of criteria that can be used from 2010 to 2030.	Greenhouse gas accounting consultant	Second Period 2024	\$30,000	One-time supplemental 2024 budget request
Establish Reference Case in 2010. Using the established criteria, what				

Action	Who	When	Cost	Source of Funds
were the corporate GHG emissions in 2010.				
Establish where we are today. Using the established criteria, what are the current corporate GHG emissions.				
Establish the gap between today and where we need to be in 2030 to have a 45% reduction.				
Determine which actions can reduce GHG emissions in the most cost-effective manner.				
Prepare <i>Roadmap</i> outlining several scenarios for reaching the target of 45% reduction in greenhouse gas emissions from 2010 to 2030.				
Establish a digital monitoring system to track progress.	Greenhouse Gas accounting consultant or specialized consultant	Second Period 2024	\$2,000 for setup and \$2000per year	Operating budget – not yet budgeted for.
GHG audit of the Recreation Centre and the Sports Centre	Building Audit Consultant	Second Period 2024	\$20,000 to \$25,000 per building	One-time supplemental 2024 budget request

Action	Who	When	Cost	Source of Funds
Planning for infrastructure upgrades at the Public Works Yard to support fleet electrification.	Electric Vehicle Transition Consultant	Second Period 2024	\$30,000	One-time supplemental 2024 budget request
Communications strategy	In house			Within current budget
Review contracts to include the requirement to report greenhouse gas emissions.	In house			Within current budget
Total Estimated Cost			\$100,000 to \$110,000	

Staff Impact

Staff are recommending hiring a professional consultant(s) to undertake most of the project for the following reasons:

- Staff do not have the knowledge, skills, or software to undertake the types of audits and calculations required.
- The consultant would bring specialized expertise in this area.
- Consultant would be more able to dedicate specific time to this project.
- A consultant may be more able to act as a facilitator/mediator to assist with the choice of actions to add to the workplan.
- A consultant could bring specialized scenario planning and modelling software to the project.
- Staff have assessed the project and determined that they have capacity to manage the project consultants and support this initiative within their current commitments and workplans.

Staff Role

- Staff will need to learn more about compiling corporate inventories into a useful tool (calculator), and how other municipalities have gone about developing their corporate emission reduction plans.
- Staff would need to assist the consultant in completing the building retrofit analysis and infrastructure upgrade analysis, and potential for energy generation, by bringing knowledge of the buildings, infrastructure, and equipment needs.
- Staff are just beginning detailed asset management plans for all Esquimalt infrastructure and assets; this project could be added to those plans with retrofit and maintenance schedules to include GHG emission reductions.
- Staff would need to determine a means to collect, audit, and itemize the GHG emissions data from contracted service providers.
- Staff could work with the consultant to create scenarios (model) and be trained to use the software for future use if software is purchased or available.

Staff Leads:

- Overall Project - Director of Development Services
- Electric Vehicle Transition Study - Director of Engineering and Public Works
- Building Audit of the Recreation Centre and Sports Centre - Director of Parks and Recreation

Supporting Departments/Working Group:

- Human Resources and Community Relations, Fire Rescue, Finance and Information Technology, Community Safety Services, Corporate Services and, Internal Climate Action Working Group.

Stakeholders/Potential Participants or Dependencies

- Capital Regional District Climate Action Service staff are available to provide in kind support.
- Environment, Parks, Recreation, and Advisory Committee could provide input on choices and spending for emission reductions.
- No other outside participants are expected to be involved.

Conclusion

It is estimated that the preparation of the Greenhouse Gas Emissions Reduction *Roadmap* will cost approximately \$100,000 to \$110,000. Most of the work will be done by consultants with oversight by the respective Directors and their staff. The *Roadmap* will be presented to Council before the end of 2024. It should be noted that both the Engineering and Public Works Department and the Parks and Recreation Department have already initiated several projects aimed at reducing corporate greenhouse gas emissions. These projects will be brought under a

single umbrella through the *Roadmap* in order to ensure that there is a corporate coordinated approach to meeting our goal of a 45 per cent reduction in greenhouse gas emissions from 2010 levels by 2030.