

Zero Carbon Whitby

The Corporate Plan To Reduce
Greenhouse Gas Emissions

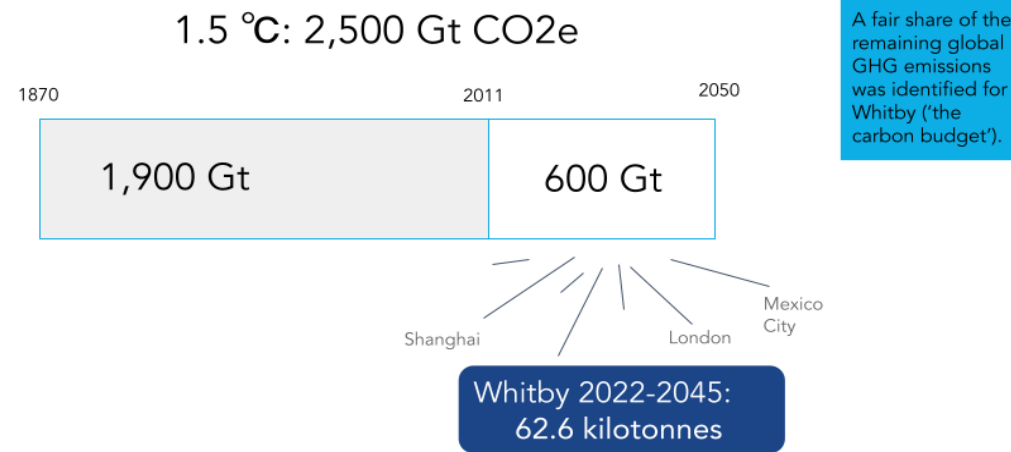
Key Drivers

- Updating the Energy Conservation Demand Management Plan.
- Wanted to align energy conservation with GHG reduction.
- Low hanging fruit has already been implemented.
- Actions quickly become dated (plans are not keeping up with emerging technology).
- Challenges getting “Buy In”.
- Struggling to “marry” capital costs with operating costs.
- Conflicting priorities between asset management, budget, responsibilities and resources.
- **We were not meeting our GHG Targets.**

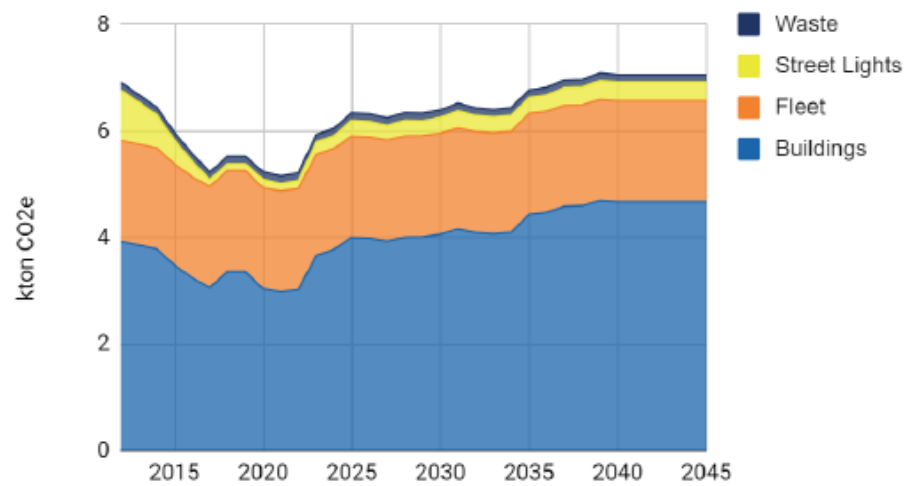


Reverse Engineering Your Climate Mitigation Plan

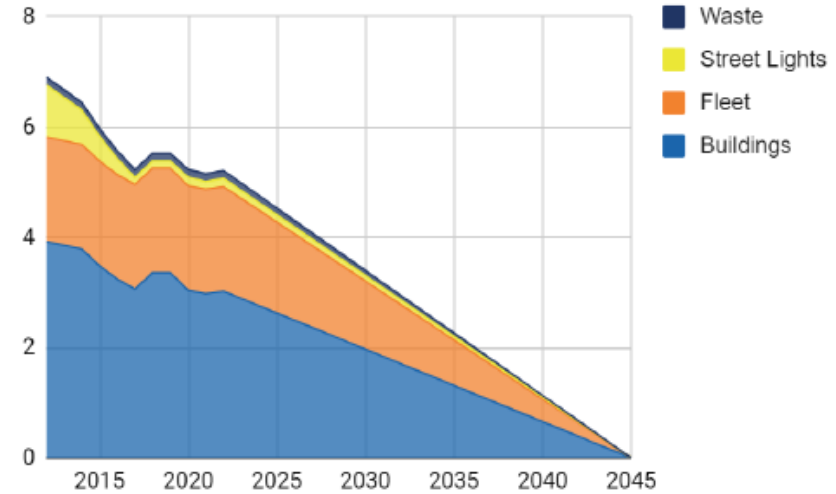
- Zero Carbon Whitby is a combined corporate Climate Mitigation and Energy Conservation Demand Management Plan.
- Unlike traditional plans where we look at our current inventory and work forwards toward the future.
- We started with a fair share climate target and worked backwards.



The Inventory

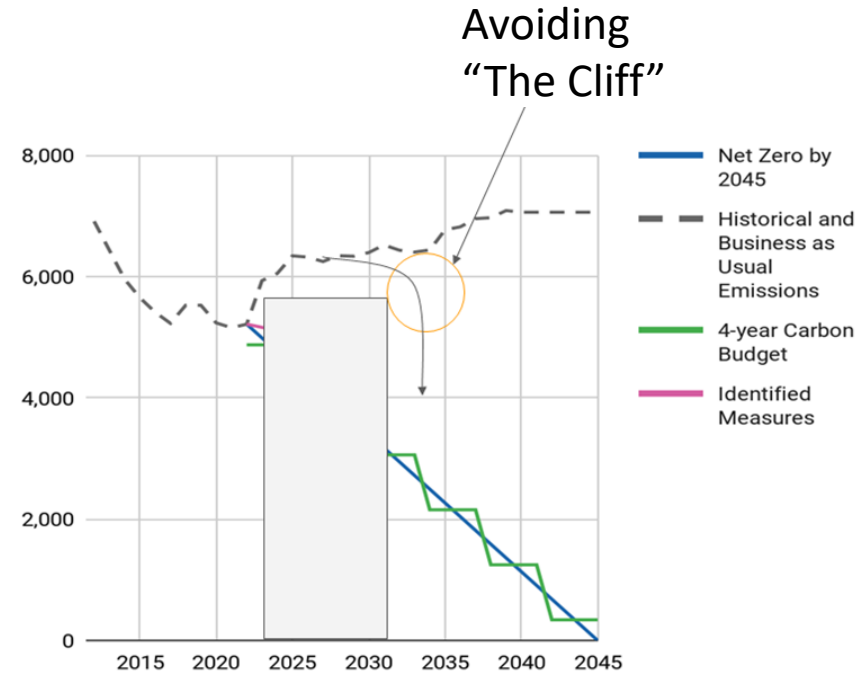
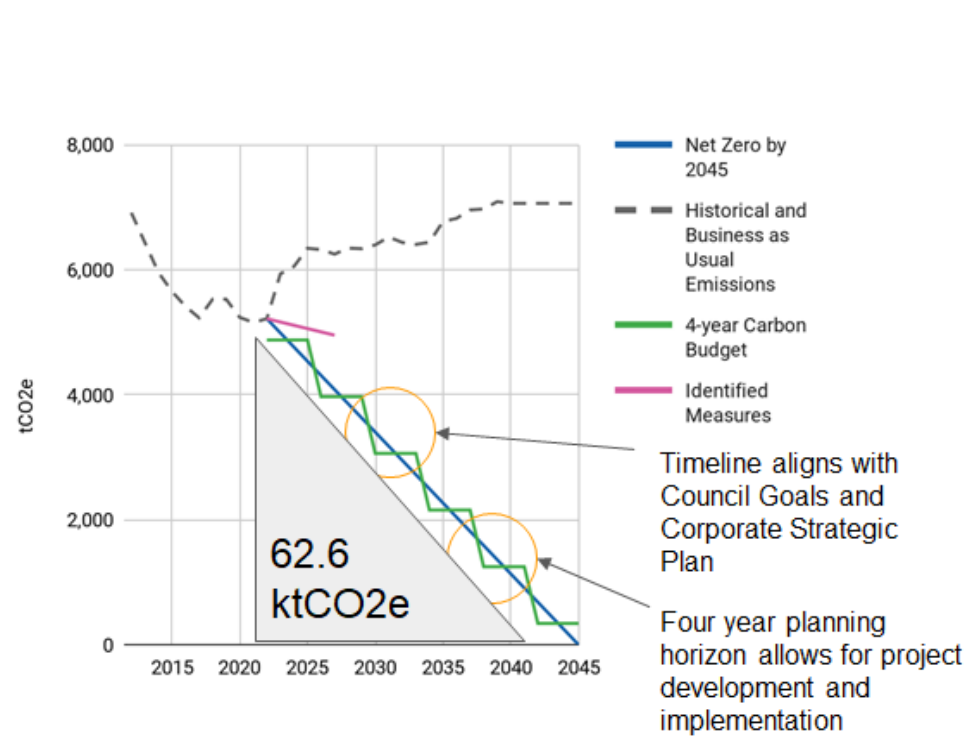


Business As Usual

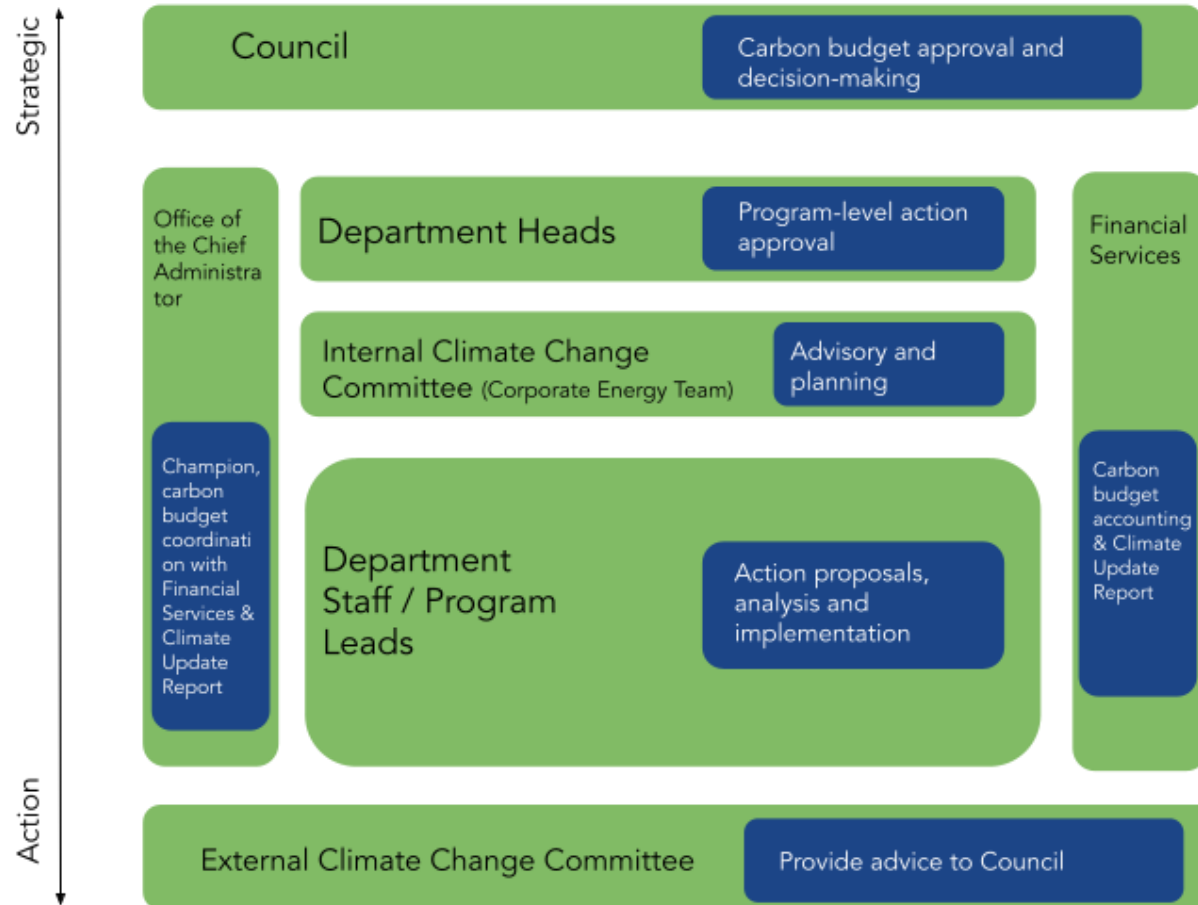


Low Carbon

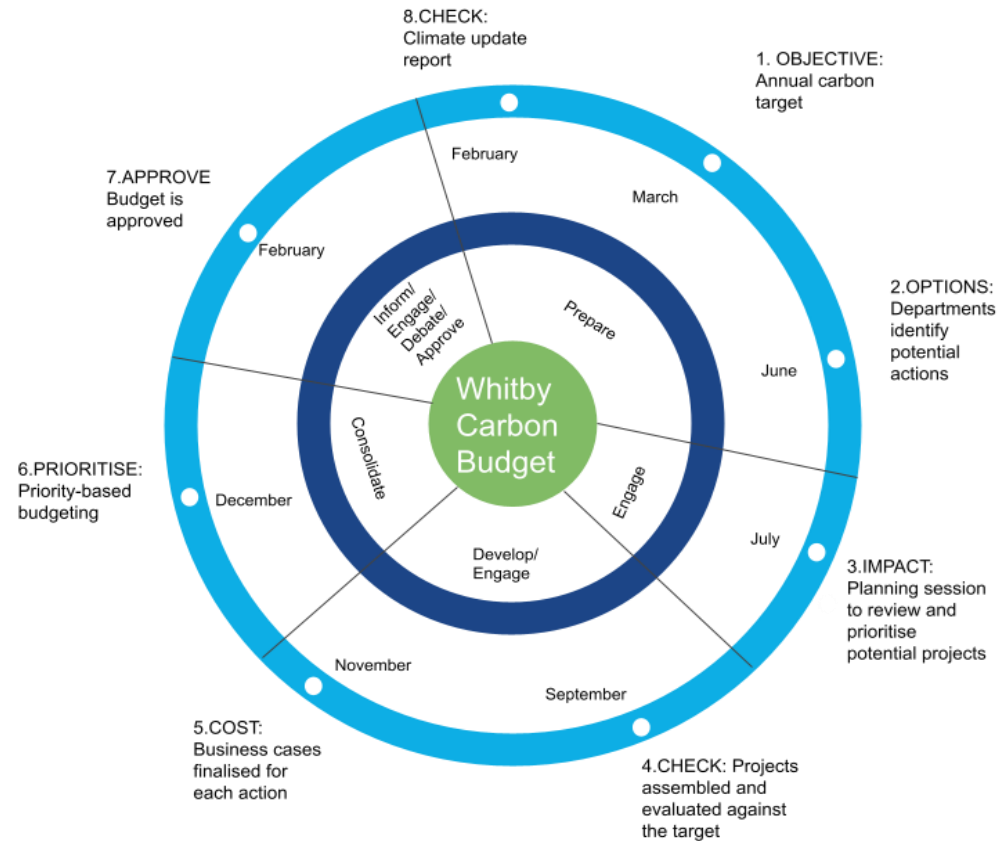
Trajectory and Risk of Avoidance



Governance

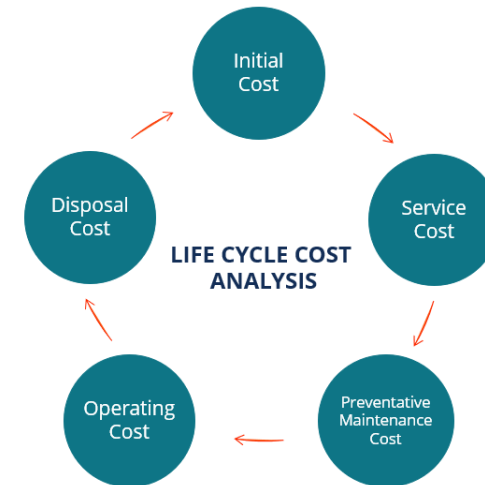


Alignment with the Budget Process



Price on Carbon

- Zero Carbon Whitby requires a consistent application of life cycle costing for business cases in order to capture the avoided energy and emissions costs of low or zero carbon investments.
- Through Zero Carbon Whitby the Town has adopted an internal price on carbon that is consistent with the Government of Canada's carbon pricing schedule that reaches \$170/tCO₂e by 2030.
- The internal price on carbon will be used in project-level life cycle cost analysis or investment decisions to avoid locking in investments that will impose a carbon and financial burden on the Town in the future.



Financial Impact

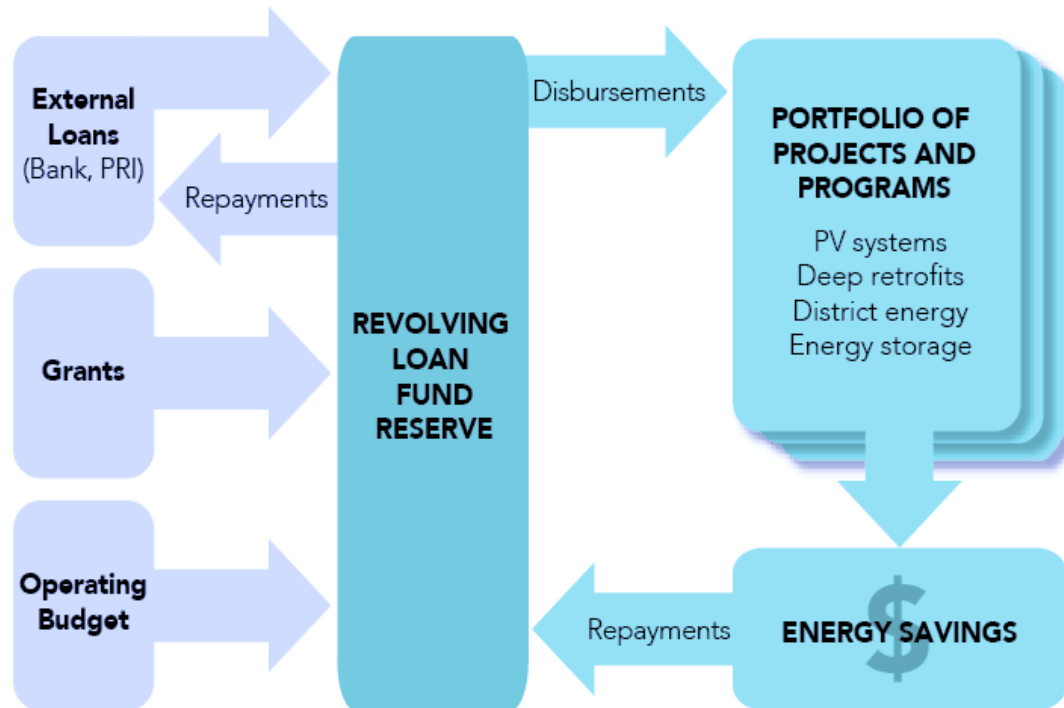
Sector	Financial impacts
New construction	New construction costs to achieve net zero can range from 4% to 15% depending on the building type and design.
Retrofits	Retrofitting all the buildings in the municipality to net zero at a high level is estimated to cost between \$40 and \$60 million. The reduced operating costs have not yet been evaluated.
Fleet	The cost will be minimal as light duty electric vehicles are projected to be at cost parity by 2030 and the price of heavy-duty vehicles is also declining. Increased capital costs are also offset by lower operating costs. There may be some additional infrastructure costs for charging infrastructure depending on how this is procured.
Other	Additional staff resources may be required to achieve GHG reduction targets, as well as resources for training, education.

Financial impacts have been evaluated at a high level,
Further analysis is currently under way to assess the avoided costs resulting from lower electricity and natural gas expenditures.

^[1] CAGBC (2019). Making the Case for Building to Zero Carbon. Retrieved from: https://www.cagbc.org/cagbcdocs/advocacy/Making_the_Case_for_Building_to_Zero_Carbon_2019_EN.pdf

^[2] This analysis is based on the application of costs identified by SSG to buildings owned or operated by Whitby. A high-level assessment, this number should not be used for budgetary or policy decisions.

Financial Tools



Keys to Success

- Don't get stuck in the data, (this is a strategic approach not a scientific approach).
- Work with Finance & Senior Management for Buy-In.
- Strive to align the carbon budget with the fiscal budget.
- Strive to align with Asset Management Plan.



Co-Benefits

- Shifts responsibility off of one person/ small team, to the whole organization.
- Encourages collaboration.
- Allows long term goals to be celebrated with short term wins (this gains momentum).
- It's a living process, it doesn't require major updates.



Next Steps

- Currently undertaking a Costing Study to understand Incremental Costs
- Preparing the 2023 budget (including a 10 year Capital Budget with the Carbon Budget for EVERYTHING)
- Developing a revolving fund to support implementation.
- Community wide Climate Adaptation & Mitigation Plans (likely with community wide Carbon Budget) for June 2022 & Jan 2023.
- Preparing to complete a Climate Disclosure in 2023/2024.



Thank You



Jade Schofield, MSc (Env), EP
Project Manager – Sustainability & Climate Change
schofieldj@whitby.ca • 905.444.3167