

Durham Region's Carbon Budget Management Framework

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Clean Air Partnership - Municipal Carbon Budgeting Webinar
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Corporate Climate Change Action Plan

Regional Council approved the Corporate Climate Change Action Plan on March 24, 2021



The Regional Municipality of Durham Report

To: Finance and Administration Committee

From: Chief Administrative Officer

Report: #2021-A-3 Date: March 9, 2021

Subject:

2021 Climate Change Update and Corporate Climate Action Plan

Recommendation:

That the Finance and Administration Committee recommends to Regional Council that it:

- A) Approve new short, medium, and long-term targets to reduce corporate greenhouse gas (GHG) emissions, namely:
 - · 20 per cent GHG emissions reduction by 2025, below 2019 levels,
 - 40 per cent GHG emissions reduction by 2030, below 2019 levels,
 - 100 per cent GHG emissions reduction by 2045, below 2019 levels.
- B) Approve the Durham Region Corporate Climate Action Plan which identifies how climate change considerations will be embedded across all elements of Regional business, included as Attachment #1, and as outlined in this report;



Regional Corporate Influence over GHG Emissions



Municipal infrastructure, buildings, fleet and solid waste

Transportation network Land use planning Building efficiency standards Transportation mode share Residential and business energy efficiency Distributed energy resources Food systems Air travel Industrial energy efficiency Vehicle standards Bulk Electric System

Corporate Climate Action Plan

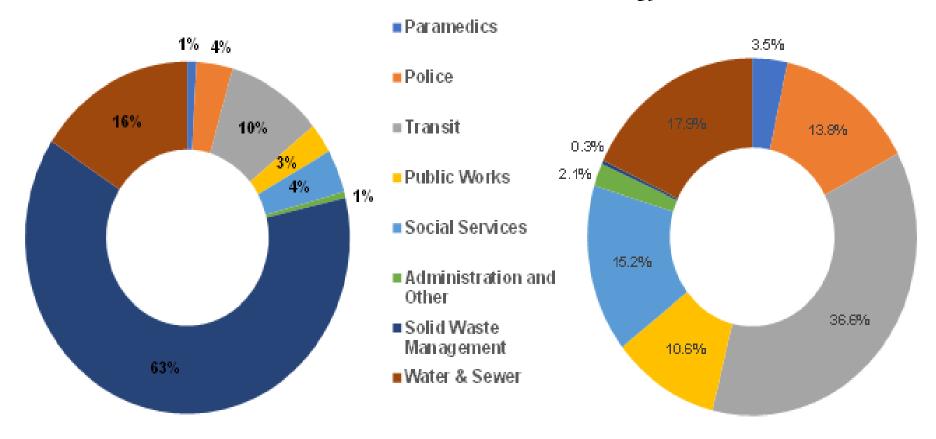




Durham Region's Corporate GHG Footprint

Total Corporate GHG Emissions

Energy-Related GHG Emissions

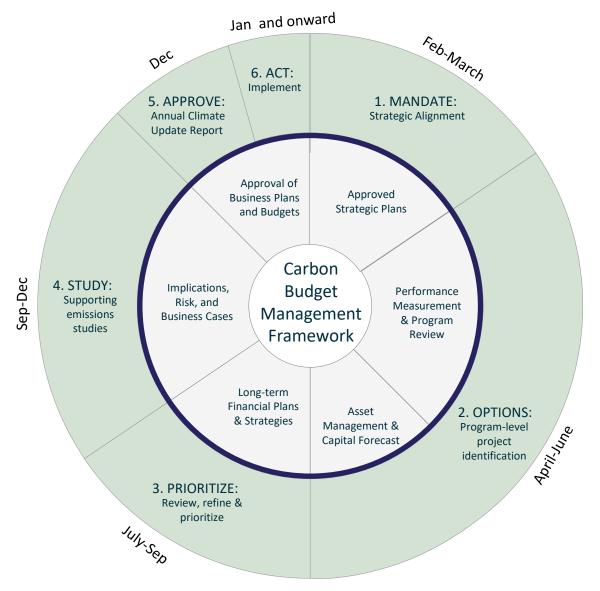


Total 2020 corporate emissions = ~172 KtCo2e

Total 2020 corporate energyrelated emissions = ~50 KtCo2e

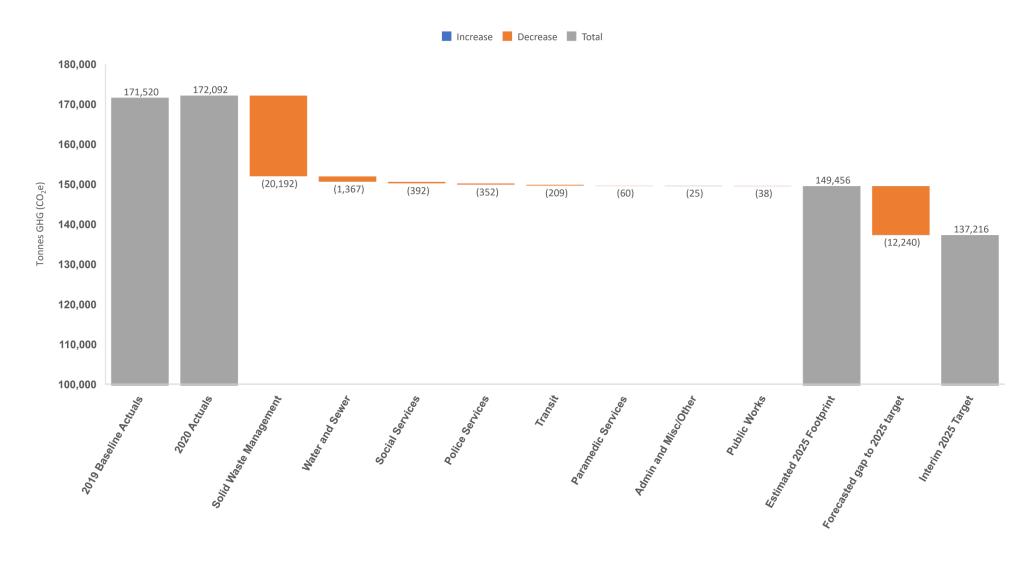


Carbon Budget Management Process (in theory)





2021-2025 GHG Reduction Forecast by Corporate Operating Area





Short-term Corporate GHG Reduction Priorities

| Operating Area | GHG Reduction Initiative(s) | CCAP identified short-term GHG reduction impacts by 2025 | Updated short-term GHG reduction projects by 2025 |
|--------------------------------|---|--|---|
| Solid Waste | Renewable natural gas production | 0 - 7,500 tCO ₂ e | 4,677 tCO ₂ e |
| Solid Waste | Landfill biocover | 12,000 tCO ₂ e | 16,419 tCO ₂ e |
| Corporate Facilities | Energy efficiency, and deep energy retrofits | 1,000 - 2,000 tCO ₂ e | 220 tCO ₂ e |
| Corporate Fleet | Transition to low carbon & zero-emission vehicles | 2,000 - 4,000 tCO ₂ e | 1,319 tCO ₂ e |
| Total | | 15,000 – 25,500 tCO ₂ e | 22,635 tCO ₂ e |
| GHG emissions reduction target | | 33,900 tCO ₂ e | 34,300 tCO ₂ e |
| % of target | | 44% to 75% | 66% |



Durham Region Corporate Carbon Budget Management - Next Steps

- Develop decarbonization plans by operating area, and integrate into 10-year capital plan
 - Long-term waste management strategy
 - Water/wastewater GHG Emissions Management Strategy
 - Durham Region Transit zero emission transition plan
 - Durham Standard for Corporate Facilities new and retrofit
- Support staff with training and tools on calculating GHG impacts at project planning/design stage
- Secure an enterprise-wide energy tracking and reporting platform
- Consider expansion of corporate footprint to include scope 3 GHG emissions categories
 - e.g. contracted waste hauling;
 - other community emissions sources indirectly influenced by corporate decisions



Some lessons learned

- Interdepartmental engagement is key -> important role for Finance on carbon accounting/forecasting
- Top down & bottom-up process -> complex, sometimes messy, but is critical to organizational change process
 - Corporate targets frame the level of ambition, and integration into budget process brings it nearterm.
 - However push and pull at budget time requires flexibility, and accommodation of operating pressures.
- Need to build climate & carbon literacy across the organization to facilitate corporate buy in and organizational alignment
- Challenges associated with addressing population driven emissions, esp. waste, wastewater, and water treatment
 - Significant capital requirements for decarbonization of these systems
 - Municipal fiscal capacity constraints require innovative solutions
- Dedicated funding stream (climate reserve fund) for low carbon projects has been critical





Questions?

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