
2023 CAPITAL BUDGET BRIEFING NOTE

Additional Expected Long-term Costs Resulting from Pushing Back Emissions-Reducing Programs in City Buildings

Issue/Background:

At its meeting on January 13th, 2023, the Budget Committee requested a briefing note from the Executive Director, Corporate Real Estate Management (CREM) on the details regarding the additional expected long-term cost resulting from pushing back implementation of emissions-reducing programs associated with reaching the City's Net Zero targets such as, but not limited to, the work currently highlighted within Capital Needs Constraints.

Key Points:

- Toronto's 2020 greenhouse gas (GHG) inventory shows the buildings sector represents 58% of community emissions. In terms of sources of City of Toronto corporate emissions, facilities and buildings represents 18% of corporate emissions, behind transportation (40%) and social housing (28%).
- Emissions from City-owned buildings represents approximately 0.85% of total community-wide emissions based on the 2020 GHG inventory.
- In terms of goals and targets, the City's community-wide GHG reduction targets, from 1990 levels, are 45% by 2025, 65% by 2030 and net zero by 2040.
- The City has established 2030 corporate goals in support of meeting the City-wide goals. Overall, the City has established a corporate goal of reducing GHGs by 65% from 2008 corporate levels, by 2030.
- Specifically related to City-owned facilities, the City has established a corporate goal of reducing emissions from City-owned buildings by 60% from 2008 levels by 2030, and to reach net zero by 2040.
- In addition, all new developments owned by City Divisions, Agencies and Corporations are to be designed and constructed to applicable Toronto Green Standard Version 4 standard achieving zero carbon emissions, beginning in 2022.
- The [2023 Capital Budget Briefing Note](#) – GHG Reduction and Climate Resilience Investment Summary - presents information on investments proposed in the City's

2023 Capital Budget and 2024-2032 Capital Plan that support transforming a significant amount of infrastructure towards reducing GHG emissions and/or increasing climate resilience in Toronto, including investments in City buildings.

- CREM developed a [Net Zero Carbon Plan](#) and began to implement this plan in 2022, collaborating with City Divisions, Agencies and Corporations to adopt the principles of the plan and initiatives that lead the City down the path of meeting the above goals and achieving net zero emissions by 2040.
- Implementation of the Net Zero Carbon Plan involves a variety of capital projects that are underway, planned or to be developed across the Divisions, Agencies and Corporations that manage the corporate building portfolio.
- Significant and sustained annual average capital investment of approximately \$205 million is estimated as necessary to achieve the Plan's objectives, City-wide.
- Due to the size of the investment required, funding from all levels of government will be a key driver to implementing the Net Zero Carbon Plan and achieving net zero emissions by 2040
- Any prolonged deferral of the implementation of the Net Zero Carbon Plan will lead to the need to invest more funds in a shorter period of time in order to meet current Corporate medium and long-term net-zero targets.

Potential Long-Term Costs from deferring emission-reducing programs

- Long-term costs from deferring emission-reducing programs are estimated to primarily be driven by continued expected construction cost escalations and limited supply, as well as expected carbon price impact escalations.

Construction cost escalations and supply

- Inflation impacts have been pronounced in many sectors, but in particular the construction industry has been impacted significantly in recent years from cost escalations.
- It is expected that cost escalations above the historical norms will continue for the next couple of years and then will stabilize back to historical averages.
- Therefore, delays in commencing the necessary work in the Net Zero Carbon Plan could result in cost escalations between 5-10% annually in the near term, compounded further by each year of delay.
- In addition to the escalation factors, affordability of construction costs are further impacted by supply chain constraints and rising interest rates.
- There is a small supply pool for efficient and non-emission producing equipment and systems, with a growing demand for such equipment and systems as building owners – both in the private sector and across all levels of government – mandate its use.

- Therefore cost escalations for these types of equipment and systems will also be impacted by a potential supply constraint, at least in the short term, leading to additional costs from deferring emission-reducing programs and initiatives. In the long term, as demand grows and there are technological advancements, supply could expand potentially alleviating cost pressures from supply constraints.

Carbon Price impacts

- The City-wide [Net Zero Carbon Plan](#) shows that overall investment in low-carbon building improvements will result in \$90 million of annual avoided utility costs by 2040, and improve building resilience.
- One of the main sources of these savings is the carbon price impacts, which will be increasing at an average annual rate of 18% to 2030 (\$50/tonne in 2022 to \$170/tonne in 2030). This will drive increases in the cost of existing utility sources, such as natural gas, year-over-year.
- For Corporate buildings, the primary utilities are natural gas, electricity and steam. Natural gas, and indirectly steam, will see the largest carbon price impacts, with electricity potentially being impacted, depending on future government policy decisions.
- In 2023 the City's utilities costs are estimated to include carbon price impacts of \$6.5 million related to facilities. Carbon price impacts from facilities are expected to continue to increase to over \$11 million by 2027. As fuel switching and other emission reducing initiatives are implemented and operationalized, these price impacts will be mitigated and decrease as the City strives to achieve its net-zero targets.
- Deferrals of emission-reducing programs, in particular related to buildings, will result in increasing carbon price impacts embedded within the price of emission producing utilities and a delay in the ability to realize the projected savings.

2023 plans

- A carbon budget is being developed to be implemented City-wide for the 2024 budget process. This will inform decision making and future investments related to emission reducing programs, linking investments to emission reductions and the impacts of these programs on meeting the City's net-zero targets.
- In addition, funding in the existing CREM 2023 Capital Budget and 2024-2032 Capital Plan for state of good repair (SOGR) investments will be focused on replacing carbon-producing infrastructure with non-emission equipment or systems, where applicable. This is consistent with the instructions from Council through the report "TransformTO – Critical Steps for Net Zero by 2040" ([IE26.16](#), December 2021, Recommendation 1.f). Council instructed that as of 2023, any new equipment being installed in a City facility must contribute to net zero and all new buildings be designed and built to net zero.

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