



Zero Carbon Retrofit of Susan Fennell Sportsplex

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Project Objectives

The City of Brampton has committed to achieving energy efficiency and reducing GHG emissions in Brampton through:

- Council's Climate Emergency Declaration, reducing GHG emissions by 80% by 2050
- In 2019, the City of Brampton released the *Energy & Emissions Management Plan 2019-2024: A Zero Carbon Transition*, which aims to achieve a zero-carbon transition for the City's new and existing corporate facilities.
- Community Energy and Emission Reduction Plan (CEERP)

This project will reduce facility emissions to zero carbon (*100% GHG reduction*) and remove 99% of natural gas usage on site.

Project Benefits



Operational

- Reduced equipment failure due to major building systems being at the end of their useful life
- Lifecycle cost savings for maintenance of building systems



Community

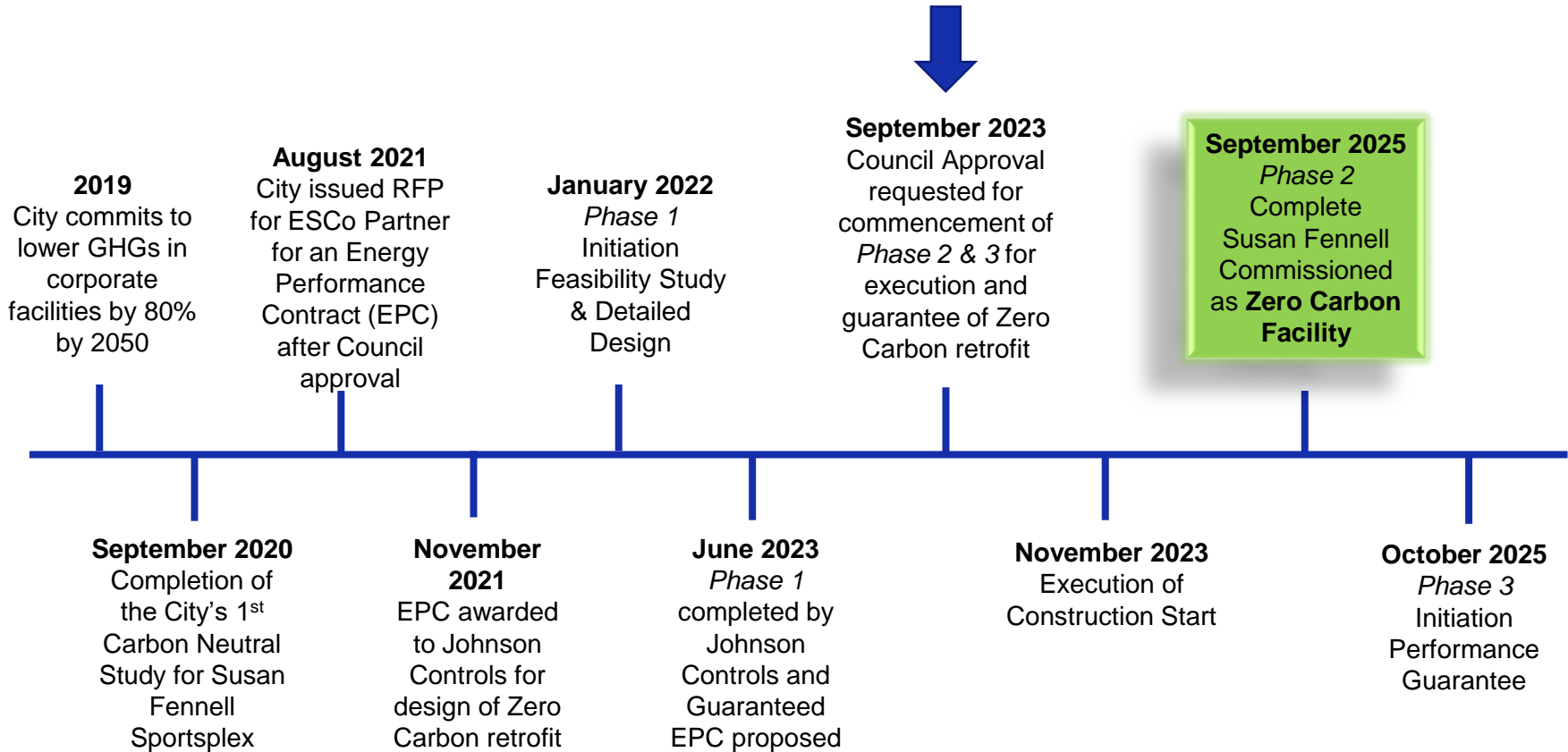
- Broader education, engagement & awareness regarding zero carbon technologies and the importance of reducing GHG emissions
- Encourages community to do their part in GHG reduction to support the community wide CEERP targets
- Improved thermal comfort for facility users
- Community pride in the City's first zero carbon recreation centre (upon recognition by the Canada Green Building Council)



Climate Change Leadership & Future Proofing

- Demonstrates the City's commitment towards climate change leadership including the future proofing of our facilities against emerging codes and legislations, carbon pricing, and higher performance building standards

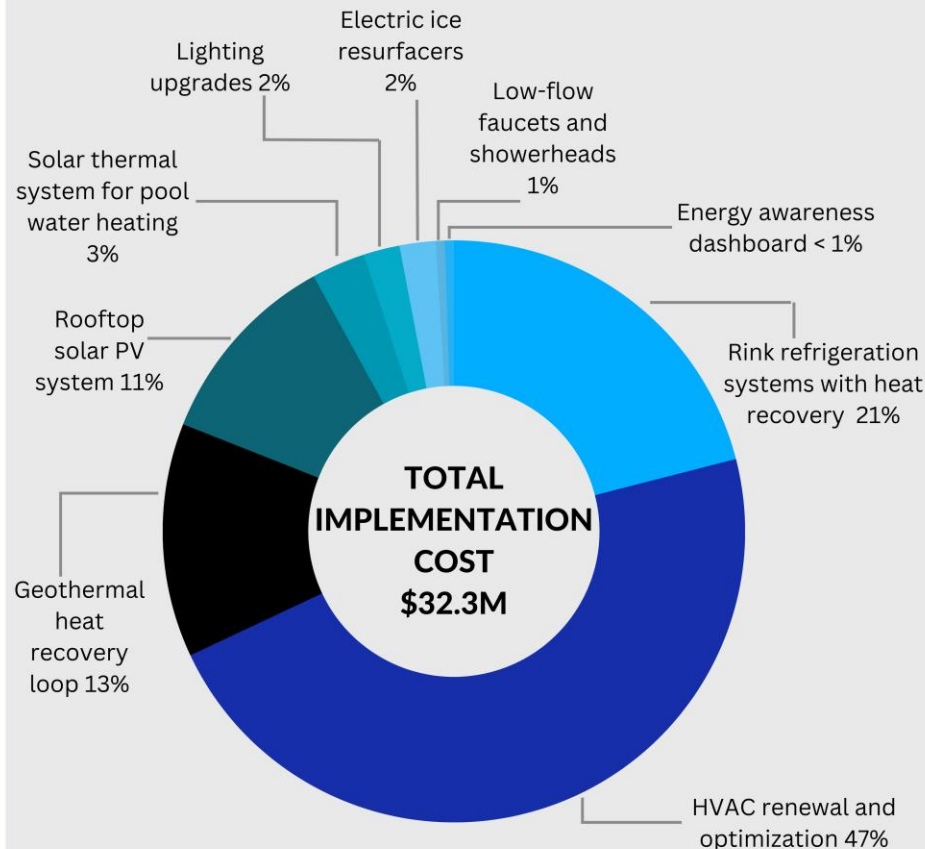
Overview



Project Summary

SUSAN FENNELL SPORTSPLEX NET ZERO RETROFIT PROJECT

100% GHG REDUCTION SCENARIO



Annual GHG Reductions equal to 420 homes energy use for one year



Annual GHG Reductions equal to 550 cars taken off of the road for one year



Annual GHG Reductions equal to 30,000 tree seedlings grown for 10 years



100% GHG Reduction
(9% from carbon offsets)



\$194,195 projected utility cost reduction



99% natural gas reduction



\$15,743,000 GICB grant



\$10M FCM CBR Funding:
\$2,500,000 in grant
\$7,500,000 Low Interest Loan



Carbon Offsets

- Carbon Offsets are included in this project to bridge the gap from the 91% reduction* from Energy Conservation Measures to Net Zero Emissions
- The remaining 9% carbon emissions* are equal to 152 tCO₂e/year
- Approx. cost of \$40/ tCO₂e
- Offsets will be provided as part of Phase 3: Measurement and Verification to ensure accuracy of the amount



Johnson Controls is allowed a maximum of 20% in Carbon Offsets

- If carbon reduction does not meet the 80% minimum reductions through the energy conservation measures installed, Johnson Controls must provide measures to reach the mandatory 80% reduction in the facility*

*from a 2010 baseline



Thank You!

Johnson Controls
Sustainable Infrastructure