

# Annual Energy Report

Facility Operations, Energy &  
Maintenance

# Why are We Here

- Annual Energy Report 2024
- Key Decarbonization Projects Completed in 2024
- Corporate Green Building Standard Projects



# Background

## Ontario Regulation 25/23



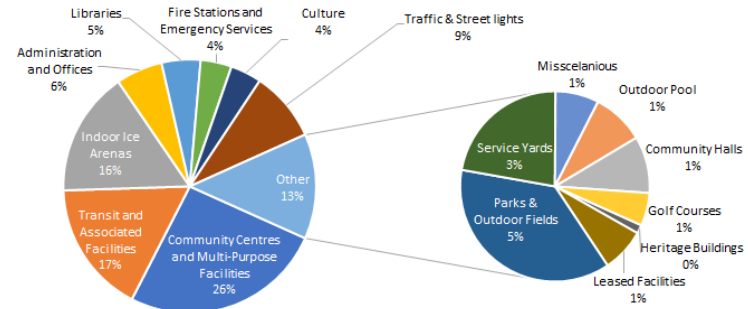
### CITY OF MISSISSAUGA 5-YEAR ENERGY CONSERVATION PLAN 2024 - 2028



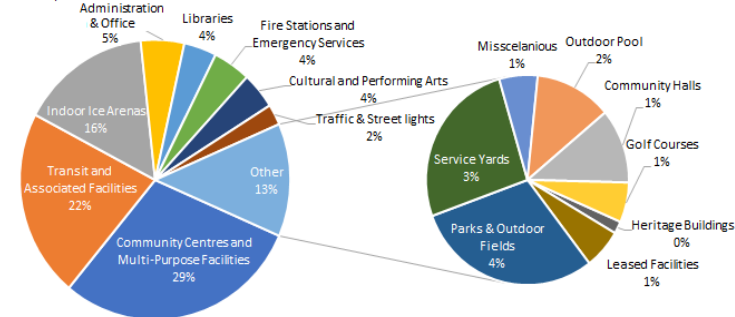
- Develop an energy management plan, which gets updated every 5 years
- Achieve 1% energy reduction and GHG Emission reduction every year using 2023 as Baseline year

- 349 Sites and 17 archetypes across the city
- Community Centers, Arenas and Transit are 3 biggest users
  - 59% Energy Use
  - 67% for GHG emissions
- Contribute towards City's Climate Change Action Plan

Percentage of Energy Consumption from all facilities (%)



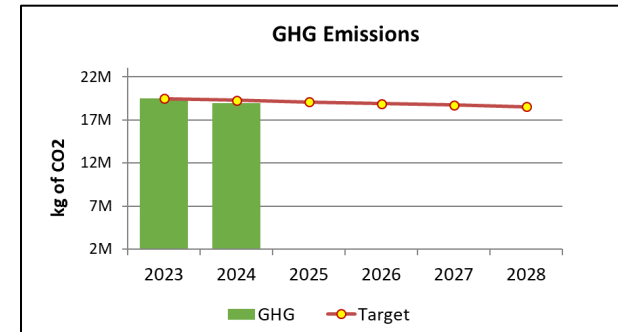
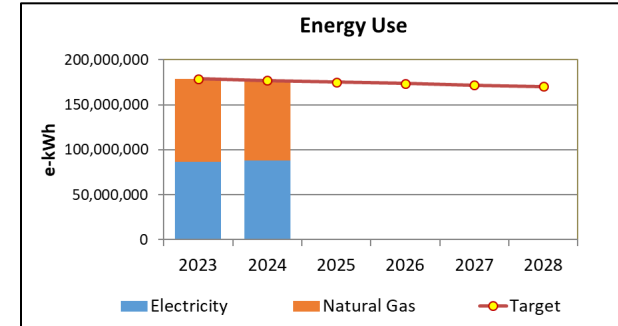
Percentage of GHG Emission from all facilities (%)



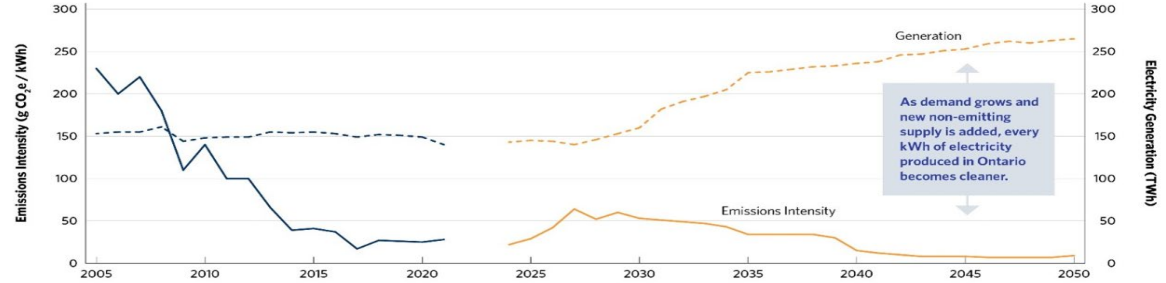
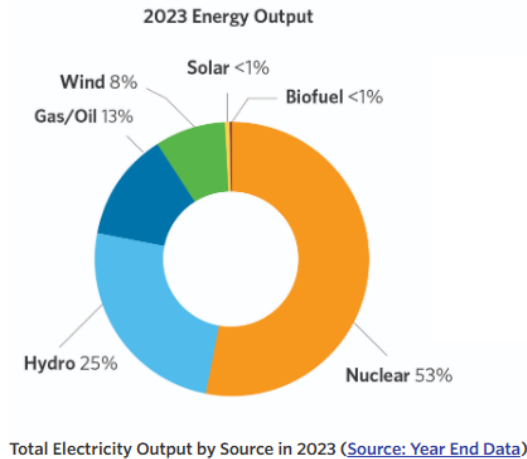
# Annual Energy Report 2024

## Results

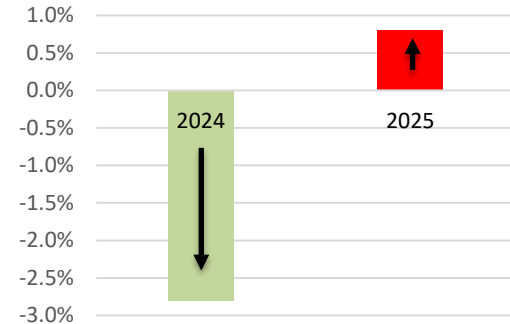
- 1.6% reduction in Energy since 2023
  - 3.2% reduction in natural gas
  - 0.1% increase in Electricity
- 2.8% reduction for GHG emissions since 2023
- \$160K in avoided utility costs
- \$140k in received incentives



# Electricity Grid Challenges



Difference in GHG  
Emission Savings of 2024  
data using 2024 emission  
factors and 2025  
emission factors



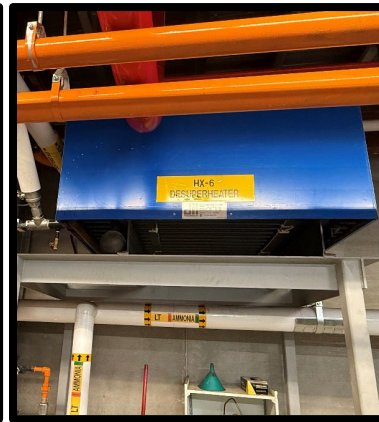
# Iceland Arena Major Renovation



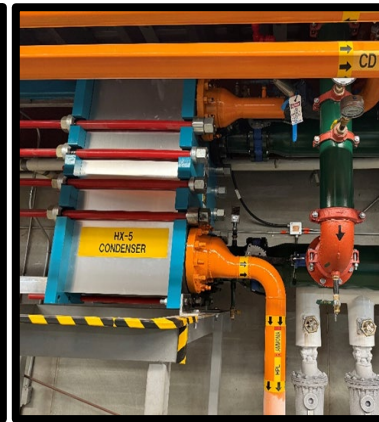
Air Sourced Heat  
Pump MAU



High Efficiency  
Refrigeration  
Compressors



Heat Recovery to  
DHW Loop



Heat Recovery to  
Space Heating Loop



Electric DHW boiler  
(Hybrid System)

- Renovation project is expected to achieve **40% GHG** emission reduction

# Other Decarbonization Projects



Pool Drain Heat Recovery  
(2 Systems at 1 Facility)



Heat Pump Roof Top  
Units (4 Facilities)



Heat Pump Water  
Heater (2 Facilities)



Electric Boilers  
(2 Facilities)

## MiWay Bus Repair Facility (Solar PV System 1 MW)



# Burnhamthorpe Community Centre (Solar PV System 165 kW)



## Fire Station 125 (Solar PV System 85kW)



# Building Controls Upgrade

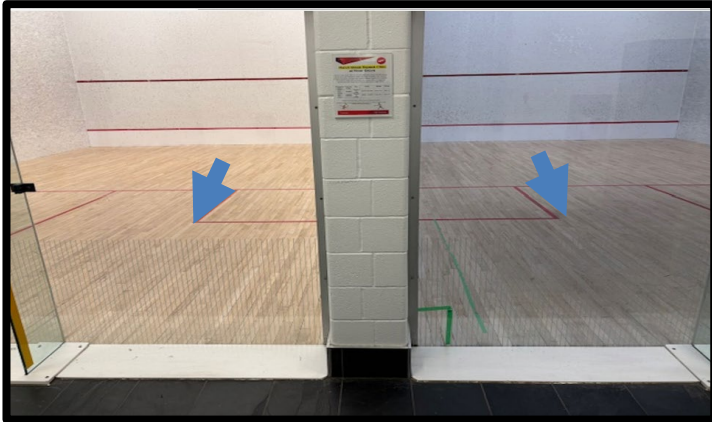
- BAS Projects Completed at 5 Facilities
- 4 Upcoming BAS Projects

# Lighting Upgrades

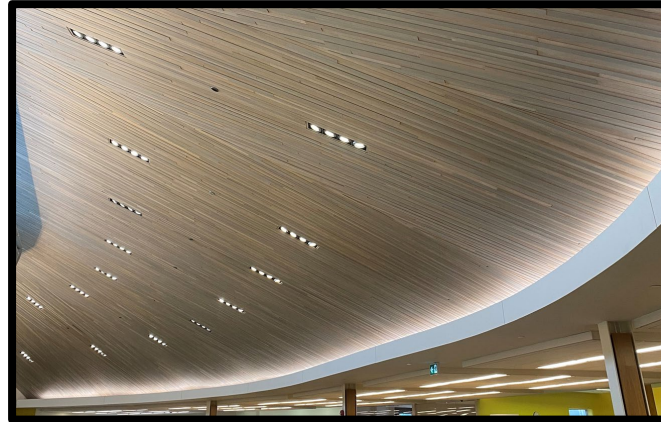
Completed:

- Community Centers (2)
- Libraries (3)
- Yards (4)

River Grove Community Centre



Churchill  
Meadows Branch  
Library



Burnhamthorpe  
Library

# CGBS Projects Completed



**Burnhamthorpe CC (Level 1)**



**Central Library (Level 1)**



**Fire Station 125 (Net Zero Energy)**

# CGBS Projects Upcoming



South Common CC (Level 2)



Carmen Corbasson CC (Level 1)



PFFC Raptors 905 (Level 1)



Fire Station 123 (Net Zero Energy)



Fire Station 124 (Net Zero Energy)

