

Edmonton
EXPO
Centre

GREENHOUSE GAS REDUCTION PLAN

2020-2035

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BACKGROUND AND RATIONALE CONTEXT

The Corporate Climate Leadership Program (CCLP) is an initiative by the City of Edmonton that encourages and empowers Edmonton corporations to achieve greenhouse gas (GHG) reduction targets. GHG reduction targets can align with several different scenarios or pathways, outlined below.



GLOBAL: THE PARIS AGREEMENT



The Paris Agreement is an agreement within the United Nations Framework Convention on Climate Change (UNFCCC) addressing greenhouse gas emissions mitigation, adaptation and finance starting in the year 2020. The agreement was negotiated and adopted by 196 party representatives (including Canada) at the 21st Conference of the Parties of the UNFCCC in Paris on December 12, 2015. The Paris Agreement calls on climate science, citing the explicit need for immediate action to reduce climate change from GHG emissions. This research is recognized by the United Nations and calls on global governing bodies and businesses to limit the world's global temperature increase to 1.5 degrees.

NATIONAL: THE PAN CANADIAN FRAMEWORK

As a commitment to achieving the Paris Agreement, the federal government established The Pan Canadian Framework for Clean Growth and Climate Change, a collective plan to reduce emissions and build resiliency against a changing climate. The plan aims to reduce greenhouse gas emissions by 30% below 2005 by 2030 and is supported by eight provinces (including Alberta) and three territories.

LOCAL: EDMONTON DECLARATION

Edmonton City Council has recently advanced its commitment to a low carbon future when it led the development of the Edmonton Declaration. This protocol document was an agenda item at an international Mayor's Summit held prior to the Intergovernmental Panel on Climate Change's first ever Cities and Climate Change Science Conference in Edmonton in March 2018. Among other things, the Edmonton Declaration is a call to action for cities to develop and implement plans that are aligned with the Paris Agreement target of reducing emissions to a level that will maintain global average temperature increases to 1.5 degrees celsius.

City Council acknowledged the urgency of addressing climate change through the unanimous support of Edmonton's Community Energy Transition Strategy in 2015. The Community Energy Transition Strategy outlines over 150 actions that can be taken to reduce Edmonton's overall community greenhouse gas footprint with a target of reducing emissions 35% below 2005 levels by 2035. As part of the Community Energy Transition Strategy, the City commits to leading climate change action by investing in deep carbon reductions in its civic operations.

The work done in the Corporate Climate Leaders program will help the Edmonton EXPO Centre to set a GHG reductions goal for 2025 and 2035 that is in line with one or more of these frameworks.



THE IMPORTANCE OF GHG REDUCTION FOR THE EDMONTON EXPO CENTRE



The Edmonton EXPO Centre is the largest venue of its kind in Western Canada. Built in 1984, and expanded in 2009, the 522,000 square foot facility integrates high-tech features with flexible and adaptable indoor and outdoor space. Because of its size, the venue can accommodate major events that drive economic prosperity for Edmonton, but also contribute to a substantial electrical and heating/cooling demand.

The world's megatrends such as climate change, resource scarcity, the upsurge of clean technology and renewable energy and changes in expectations of business are already directly affecting business. Extreme weather threatens supply chains and operations and global action on climate change is shifting the views of policymakers.

Rising expectations from events and event planners require venues to provide a better understanding of the impact of these events, products and services.

The top performing convention centres in the 21st century are those that are positioning themselves as early implementers of sustainable planning and recognize carbon emissions planning as a fundamental piece of this. The Edmonton EXPO Centre identifies environmental sustainability as one of our core business pillars with a focus on climate resilience: a commitment to support the environmental priorities of the City of Edmonton by aligning the venue greenhouse gas reduction goals and activities with the Edmonton Declaration.

PROJECT SCOPE

In collaboration with Climate Smart, an organization that provides training and support to reduce greenhouse gas emissions for businesses, the Edmonton EXPO Centre collected and recorded emissions data for the energy and resources used in operations of the venue.

The Edmonton EXPO Centre Corporate Climate Leadership Team has attended training offered by Climate Smart to learn about the different types of emissions created by our operations, what the impacts of those emissions are and how to track and reduce these emissions. Senior management is committed to setting meaningful carbon reductions targets that will then be shared with partners and the public. Implementation began in 2020 with reduction strategies continuing to be implemented year-after-year to reach the Edmonton EXPO Centre's targets.

For the purpose of this report, all data entered is based on the Edmonton EXPO Centre building in scope 1, 2 and 3 of the Greenhouse Gas Protocol.



REPORTING METHODOLOGY

The Edmonton EXPO Centre selected January 1, 2018 – December 31, 2018 as the baseline year for emissions data collection. The following categories and assumptions were considered to develop the Edmonton EXPO Centre emissions inventory and to determine a 20-year and 30-year reductions scenario (goal setting in 2025 and 2035 respectively):

SCOPE 1

HEAT GENERATION

Utility bills were collected for direct consumption of natural gas.

EQUIPMENT

Petrol and diesel consumed in the operation of light and heavy onsite equipment.

REFRIGERATION

Coolant top-up purchased for building chiller systems, freezers, refrigerators and other cooling equipment.

SCOPE 2

ELECTRICITY PROCURED

Utility bills were collected for consumption of both interior and exterior metres.

TRANSPORTATION

The Edmonton EXPO Centre operates a small fleet of vehicles. Transportation emissions include GHG from business air travel and fleet vehicle usage.

SCOPE 3

SOLID WASTE

Waste collection for the property is tracked for both solid waste-to-landfill and paper consumption.



THE GREENHOUSE GAS PROTOCOL is the most widely used international accounting tool for government and business leaders to understand, quantify and manage greenhouse gas emissions. It provides the accounting framework for nearly every GHG standard and program in the world, including the Climate Smart data entry tool. Emissions are recorded as Scope 1, 2 or 3, depending on the level of control the organization has over the energy use or emission sources:

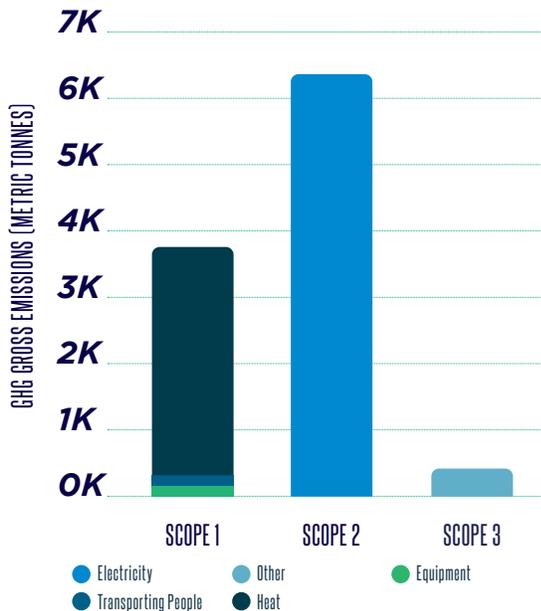
SCOPE 1: Direct GHG emissions - sources controlled by the company

SCOPE 2: Indirect GHG emissions - generation of purchased electricity consumed by a company

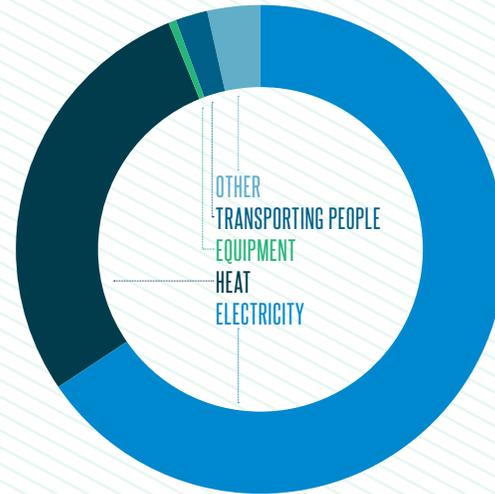
SCOPE 3: Other indirect GHG emissions - an optional reporting category that allows for the treatment of all other indirect emissions that exist either upstream or downstream in the supply chain

2018 INVENTORY BREAKDOWN Year Ending December 31, 2018

GROSS GHG EMISSIONS BY SCOPE (METRIC TONNES CO2 EQUIVALENT)



GROSS GHG EMISSIONS BY ACTIVITY TYPE (METRIC TONNES CO2 EQUIVALENT)



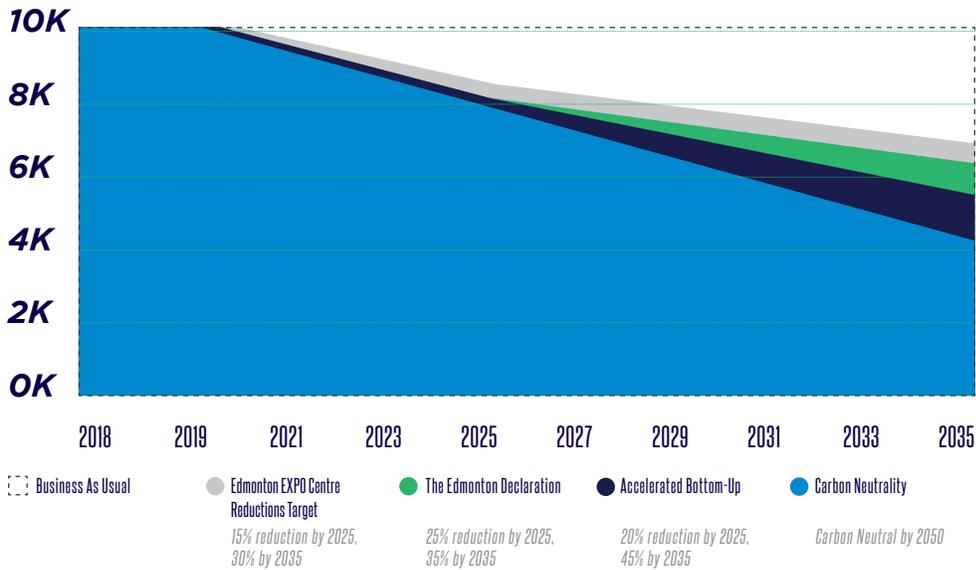
GROSS EMISSIONS		10,394.70
SCOPE 1		
SCOPE 1		3819.27
Heat		3,693.31
Generated		3,693.31
Transporting People		30.07
Road		30.07
Equipment		28.05
Light Equipment		3.34
Heavy Equipment		24.71
Other		67.83
Refrigeration		67.83
SCOPE 2		
SCOPE 2		6,432.04
Electricity		6,432.04
Purchased		6,432.04
SCOPE 3		
SCOPE 3		143.39
Transporting People		3.28
Road		0
Air		3.28
Rail		0
Staff Commuting		0
Equipment		0
Heavy Equipment		0
Other		140.12
Garbage		140.12
Paper Consumption		0
Purchased Reductions		0
NET EMISSIONS		10,394.70

GROSS EMISSIONS		10,394.70
Electricity		6,432.04
Purchased		6,432.04
Heat		3,693.31
Generated		3,693.31
Transporting People		33.35
Road		30.07
Road		0
Air		3.28
Rail		0
Staff Commuting		0
Equipment		28.05
Light Equipment		3.34
Heavy Equipment		24.71
Heavy Equipment		0
Other		207.95
Garbage		140.12
Paper Consumption		0
Refrigeration		67.83
Purchased Reductions		0
NET EMISSIONS		10,394.70

PATHWAYS



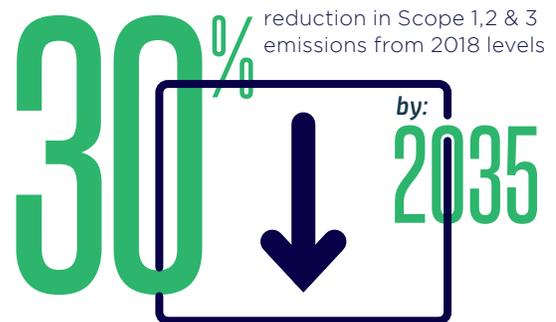
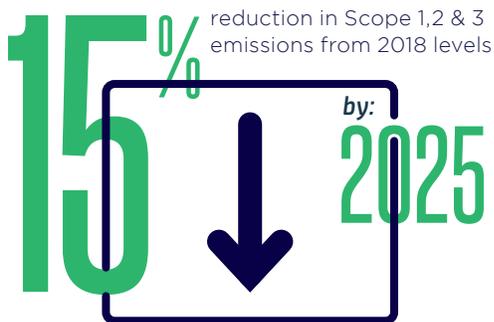
CARBON EMISSIONS SCENARIOS



The complete and most accurate benchmark year is calculated in 2018 and is used in emissions reductions target submissions for the Edmonton EXPO Centre.

GHG REDUCTIONS TARGET SUBMISSION

The Edmonton EXPO Centre executive team submits the following emissions reductions goals:



The Edmonton EXPO Centre Emissions Reductions scenario is a commitment to reduce emissions from 2018 levels by 30% by 2035. While there is not enough historical data to measure reductions since 2005, these reductions from 2018 levels will represent substantial progress towards, if not surpassing, the goals outlined in the Edmonton Declaration to reduce citywide emissions by 35% in 2035 (from 2005 levels).

IMPLEMENTATION CONSIDERATIONS

ENERGY

Energy use is identified as the emissions source with the highest potential for GHG emissions reductions.



BEHAVIOURAL MEASURES

- Identify inefficiencies through ongoing check-ins on power saving initiatives that are in place. This includes implementing a building Lights-Out program, standby setting standards, regulating working lighting levels in the Lighting and HVAC Policy (for event shoulder days) and power saving measures for office-based on non-office-based equipment.

STRUCTURAL MEASURES

- In 2020, we are active in pursuing renewable energy generation options that could be suitable for the Edmonton EXPO Centre which will include conducting a commercial energy audit.
- Investments outlined in the 2019-2022 capital-plan also include continued replacement of incandescent lightbulbs and fluorescent lightbulbs with LEDs in service areas and event spaces.
- Ongoing installation of variable frequency drives (VFDs) in mechanical systems.

HEAT

Heat is identified as the second largest source of GHG emissions across the business.



BEHAVIOURAL MEASURES

- Ongoing enforcement and monitoring of the Lighting and HVAC Policy for appropriate temperature controls during event load-in and tear-down days.
- Development and implementation of a policy to ensure bay doors in workspaces and workshops are close when not in use.

STRUCTURAL MEASURES

- Ongoing installation of faucet aerators and insulated piping.
- Assessment of the condition of weather-stripping and replacement as needed. weather-stripping and replacement of double-pane glass with triple-pane glass for increased heat efficiency. A plan to install high-efficiency hot water tanks is underway.

TRANSPORTATION

- Electric vehicle charging ports for installation within Edmonton EXPO Centre parking lots.
- The Edmonton EXPO Centre continues our employee public transit program, where employees are offered a reduced rate on public transportation passes.
- In future years the Edmonton EXPO Centre will also expand reporting to include the collection of employee commuting data and looking at lower-carbon alternatives for the company vehicle fleet.



WASTE

- In 2019, the Edmonton EXPO Centre in began tracking waste diversion rates with the goal of year-over-year increases. This includes the expansion of our recycling, compost and reuse program to capture a greater volume of items.
- An exhibitor waste guide will be developed to help reduce waste from show set-up and tear-down and extend waste management responsibilities to stakeholders and show managers.
- To reduce emissions from office paper use, an internal paper audit in planned in 2020 alongside a “go paperless” campaign.



COMMUNICATIONS

- The Edmonton EXPO Centre’s Sustainability Committee was formed in 2019 to solicit ideas from employees on how to be more sustainable in our operations. They also share monthly education about the importance of sustainability as a brand pillar and post important operational updates in relation to sustainability work. The committee will conduct an employee sustainability feedback survey in quarter one of 2020.
- Important sustainability data and milestones will be shared in a public sustainability report that will be published in 2020 and shared on the Edmonton EXPO Centre’s webpage.



FUTURE CONSIDERATIONS

In consideration of the age of our building, energy efficiency and building rehabilitation has been identified as a significant initiative to further reduce our GHG emissions. Although building capital investments have been determined for the next five years, there is the potential beyond this timeframe to prioritize projects that introduce innovative energy efficient measures such as: lighting deep retrofits, mechanical upgrades and electricity generation and electricity storage solutions through alternative measures. Our focus moving forward will be to expand our Scope 3 benchmark to include other data sources not currently tracked.



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SIGN-OFF

This target submission is prepared by:

Melissa Radu, Venue Sustainability Manager, EEDC and Tyson Jeffery, Director of Facility Operation,
Edmonton EXPO Centre and signed off by:



ARLINDO GOMES

Vice President, Venue Management, Edmonton Economic Development

