EDMONTON CONVENTION CENTRE

Greenhouse Gas Reduction Plan

2020–2035

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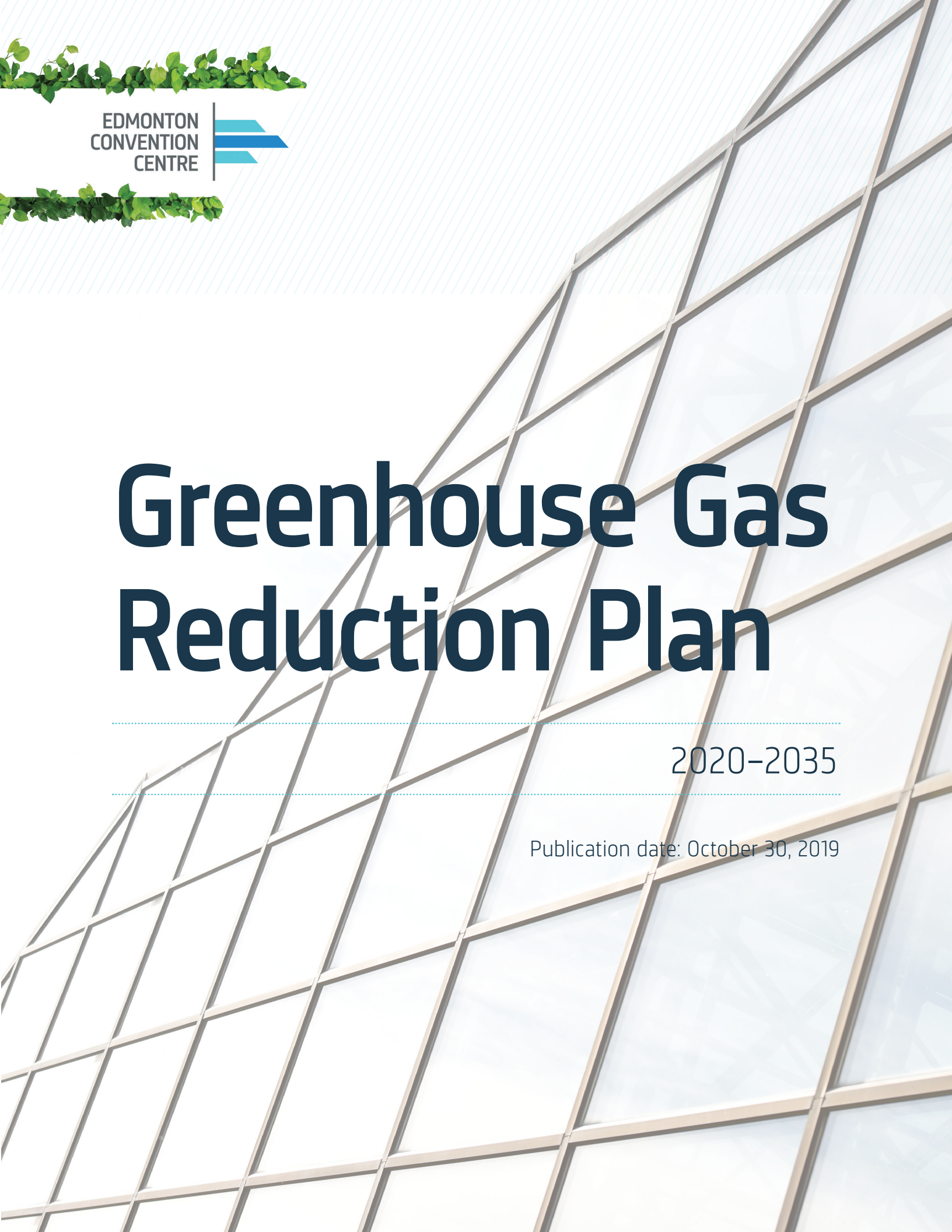


Background and rationale context

The Corporate Climate Leadership Program (CCLP) is an initiative by the City of Edmonton to encourage and empower 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 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 Convention 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 Convention Centre

Over its 36 years in operation, the Edmonton Convention Centre has maintained a strong culture of sustainability among its staff. Our sustainability policy aligns with the venue's five organizational values: public stewardship, selfless approach, lead the way, make an impact and caring for one and other.

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 affecting business directly. Extreme weather threatens supply chains and operations and global action on climate change is shifting the views of policymakers.

The top performing convention centres in the 21st century are positioning themselves as early implementers of sustainable planning and recognize carbon emissions planning as a fundamental piece of this.

Rising expectations from customers require companies to tell a better story about their products and services.

Project Scope

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

The Edmonton Convention 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 be shared with partners and the public. Implementation will begin January 2020 with reduction strategies continuing to be implemented year-after-year to reach the Centre's targets.

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

Reporting Methodology

The Edmonton Convention Centre selected January 1, 2018 – December 31, 2018 as the baseline year for emissions data collection. The 2005 emissions levels were retrieved in Scope 1 (direct emissions) to determine a 20-year and 30-year reductions scenario (goal setting in 2025 and 2035 respectively). The following categories and assumptions were considered to develop the Edmonton Convention Centre emissions inventory and documented in the Climate Smart software:

SCOPE 1

Electricity Generated
Diesel consumed by back-up generators.

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.

SCOPE 3

Transportation
The Edmonton Convention Centre does not own or operate a company fleet. Transportation emissions include GHG from business travel (air and road) and employee commuting.

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

The Greenhouse Gas Protocol (GHG 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:

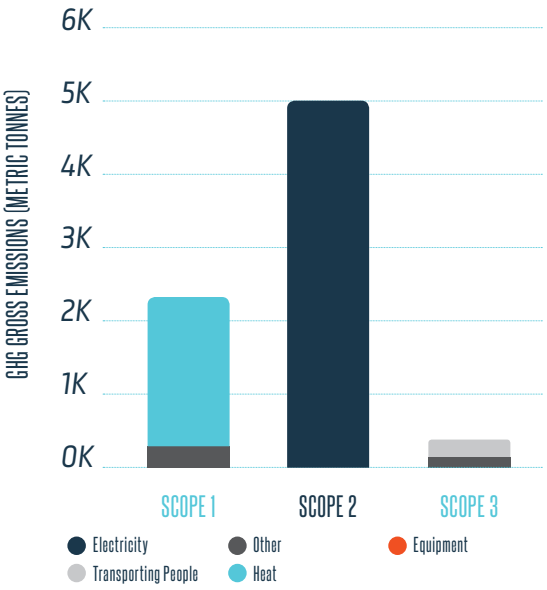
Scope 1: Direct GHG emissions - sources controlled by the company

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

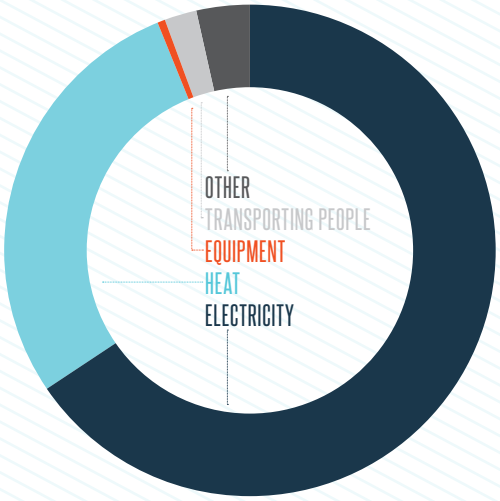
Scope 3: Other indirect GHG emissions - an optional reporting category that allows for the treatment of all

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	***7,579.69***
SCOPE 1	2,304.33
Electricity	3.64
Generated	3.64
Heat	2,116.75
Generated	2116.75
Equipment	0.51
Light Equipment	0.15
Heavy Equipment	0.36
Other	183.43
Refrigeration	183.43
SCOPE 2	5020.02
Electricity	5,020.02
Purchased	5,020.02
SCOPE 3	255.34
Transporting People	153.59
Road	40.04
Air	15.87
Staff Commuting	97.68
Other	101.75
Garbage	39.92
Paper Consumption	61.83
Purchased Reductions	***0***
Net Emissions	***7,579.69***

Gross Emissions	***7,579.69***
Electricity	5023.66
Purchased	5020.02
Generated	3.64
Heat	2,116.75
Generated	2116.75
Transporting People	153.59
Road	40.04
Air	15.87
Staff Commuting	97.68
Equipment	0.51
Light Equipment	0.15
Heavy Equipment	0.36
Other	285.17
Garbage	39.92
Paper Consumption	61.83
Refrigeration	183.43
Purchased Reductions	***0***
Net Emissions	***7,579.69***

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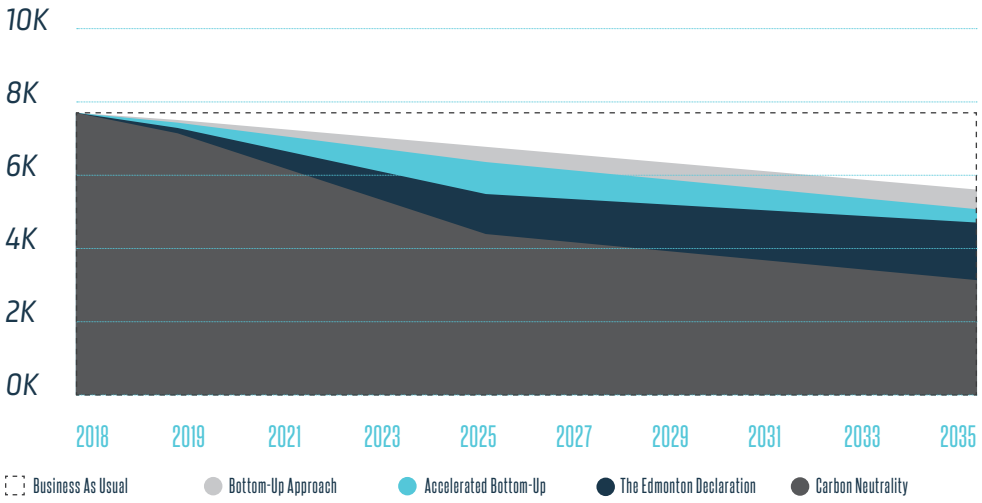
Pathways

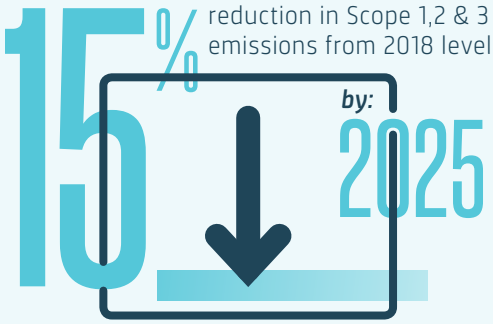
CARBON EMISSIONS SCENARIOS

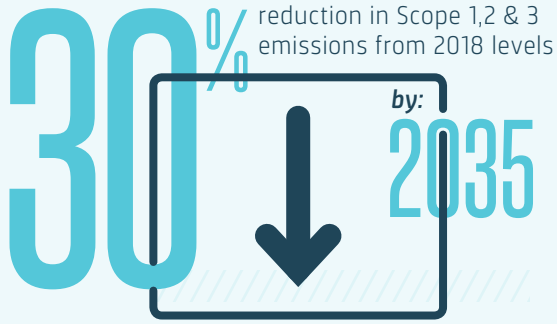


The complete and most accurate benchmark year is calculated in 2018 and is used in emissions reductions target submissions for the Edmonton Convention Centre. In order to compare pathways, similar to those in the Edmonton Declaration, data for Scope 1 and 2 (accounting for an estimate 97% of total emissions) was back-casted to 2010, which was the last year that reliable data was available. Emissions from 2010 to 2018 were interpreted this way using respective emissions factors and business intensity measures.

GHG Reductions Target Submission

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





The Accelerated Bottom-Up scenario is a commitment to reduce emissions from 2018 levels by 30% by 2035. When considering the Edmonton Convention Centre's actualized emissions reductions between 2010 and 2018, this ambitious goal, once achieved, will surpass the goals of the Edmonton Declaration; achieving a reduction of over 50% by 2035 from 2010 levels.

Energy

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

Behavioural measures

Identify inefficiencies through ongoing check-ins on power saving initiatives that are in place. This includes our building Lights-Out program, standby setting standards, Escalator Operations Policy, 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, installation of a building-integrated solar photovoltaic system will be completed. This will mean that an estimated 227,000kwh of solar energy will be produced annually at the Edmonton Convention Centre. Investments outlined in the 2019-2023 capital-plan also include continued replacement of incandescent lightbulbs and fluorescent lightbulbs with LEDs in service areas and meeting spaces. This initiative is also paired with the addition of lighting sensors in low-usage, back-of-house spaces. Although most of the mechanical systems have been equipped with variable frequency drives (VFDs), the Edmonton Convention Centre has identified the major fan and fluid pumps as a target for replacement.

Heat

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

Behavioural measures

Implement and develop a procedure for doors in the loading bay and other service areas to be closed when not in use. Ongoing enforcement and monitoring of the Lighting and HVAC Policy for appropriate temperature controls during event load-in and tear-down days.

Structural measures

Ongoing installation of faucet aerators and insulated piping. Assessment of the condition of 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 Convention Centre parking lots. Installation of idle-reduction signage in the public and employee parking areas and regular monitoring by the venue security staff to enforce. The Edmonton Convention Centre continues our employee public transit program, where employees are offered a reduced rate on public transportation passes.

Waste

The Edmonton Convention Centre has identified a long-term waste diversion goal of 80%. This includes the expansion of our recycling and reuse program to capture a greater number of items. Our Environmentally Preferred Purchasing Policy is refined on an annual basis and will include a greater focus on minimization of packaging and single-use items. An exhibitor waste guide will also be developed to help reduce waste from show set-up and tear-down and extend waste management responsibilities to stakeholders and show managers. The Edmonton Convention Centre is also working on a partnership with in-house show service providers to use a recyclable signage product that will replace non-recyclable alternatives. Other building print, including concession signage and brochures, are being offered in digital form or using Near-Field-Communication technology.

Communications

The Edmonton Convention Centre's Sustainability Committee helps 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. Training manuals and job descriptions are being revised to include a portion on sustainability and GHG reduction initiatives.

The Edmonton Convention Centre has launched a Responsible Meetings Program that will serve as a tool to extend low-carbon options to clients who are hosting their events at our venue.

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 energy efficient measures such as: lighting deep retrofits, mechanical upgrades and electricity generation supplementation 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:

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Arlindo Gomes

Vice President, Venue Management, Edmonton Economic Development