

CLIMATE AND INFRASTRUCTURE OPPORTUNITIES

Infrastructure Asset Management Alberta
(IAMA) Workshop

June 15, 2022

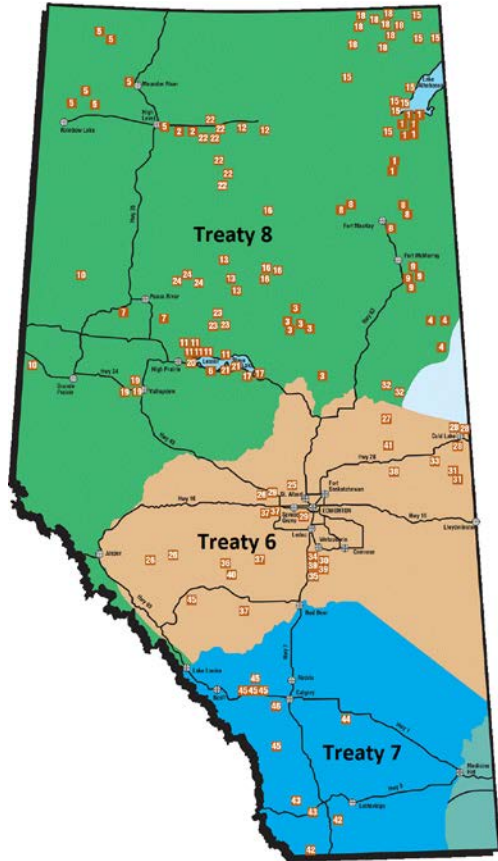


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Acknowledgement



This presentation is being delivered on Treaty 7 territory.

We would like to acknowledge the many First Nations, Métis, and Inuit whose footsteps have marked these lands for centuries, and whose presence continues to enrich our vibrant communities.



Agenda

- Introduction to Alberta Municipalities, the Action Centre, and CEIP
- National and International Context
- Responses and Infrastructure Impacts
- Benefits of Climate-Friendly Assets
- Municipal Context
- Programs
- Questions

About Alberta Municipalities



Alberta Municipalities works with municipal leaders to advocate for solutions to municipal issues and supports communities by providing services, helping them thrive and be more resilient. The Sustainability Services department supports municipalities in reducing emissions and creating resilient communities with two initiatives.



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Alberta Municipalities is the program administrator for the Clean Energy Improvement Program as designated under the Clean Energy Improvements Regulation.

Our Impact



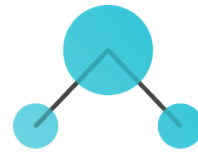
389 participants
completed 777 projects



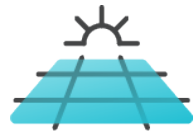
\$79M clean energy
investments catalyzed



748 full time jobs created



632,629 tonnes of CO₂e
greenhouse gas emissions
avoided over lifetime of the
projects



24 MW installed solar
energy capacity

Updated: June 7, 2022



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Climate Change in Canada



- Emissions from human activity largely determine how much warming Canada and the world will experience. This warming is irreversible.
- Effects of warming will continue to intensify with more extreme heat, less extreme cold, less snowfall and more rainfall, and rising sea levels.
- Increased risk of freshwater supply shortages in summer.
- Increased drought, wildfire, and inland flooding risks.



International and National Goals

PARIS AGREEMENT TARGETS

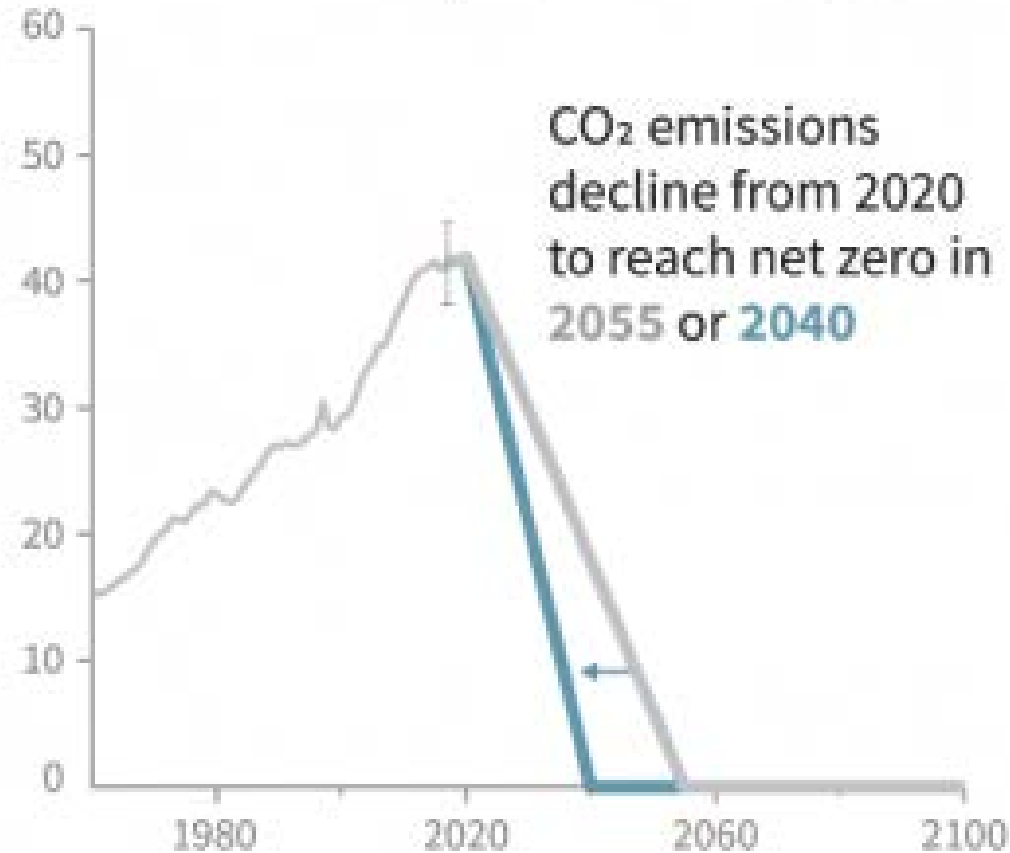
- Limit global temperature rise to 2°C above pre-industrial levels
- Pursue efforts to limit the increase even further to 1.5 °C above pre-industrial levels

CANADA'S TARGETS

- Emission reductions of 40-45% below 2005 levels by 2030
- Net-zero emissions by 2050
 - Enshrined in law (Canadian Net-Zero Emissions Accountability Act)

International and National Goals

Billion tonnes CO₂ per year (GtCO₂/yr)



Source: UN IPCC Special Report: Global Warming of 1.5°C, Summary for Policy Makers



Responses and Infrastructure Impacts

Climate Mitigation

- Actions to reduce greenhouse gas emissions (GHG) to limit warming
- Transitioning to a low/no emission future through climate mitigation will impact:
 - **Buildings**
 - **Transportation/fleets**
 - Electricity generating assets
 - Industry/agriculture
 - Waste

Climate Adaptation

- Actions to reduce the negative impacts of climate change
- Infrastructure impacts relating to:
 - Improving flood and drought resiliency
 - Limiting risk of wildfire
 - Securing water supply and wastewater treatment capabilities
 - Limiting health risks
 - Limiting risks to agriculture and food supply

Municipal Context: Corporate Emissions

- Direct municipal emissions from owned or controlled sources, including indirect emissions generated from purchased energy (electricity)
- Most MCCAC programs aim to support municipalities in reducing their **corporate** emissions

Figure 1. GHG Emissions By Sector

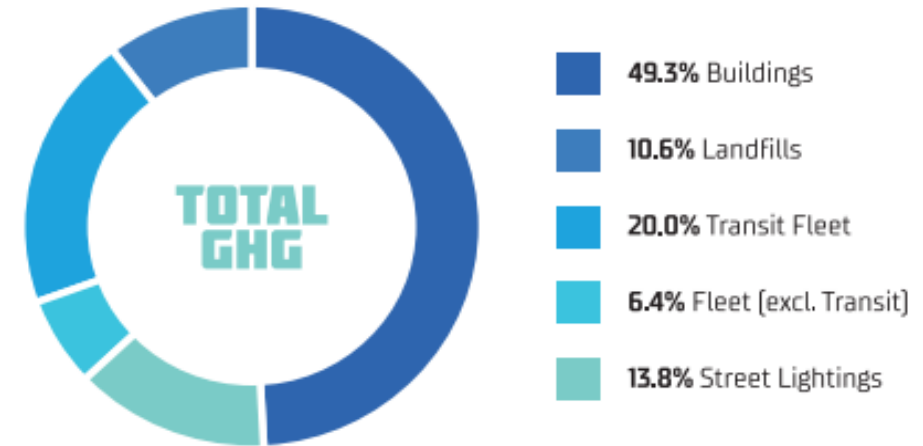
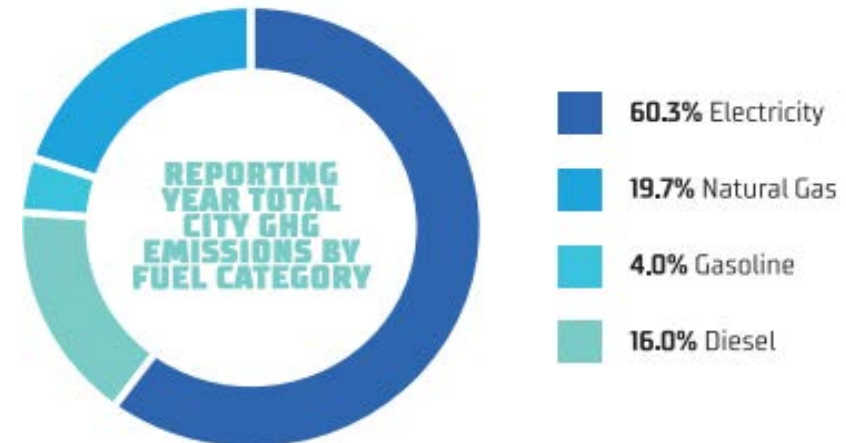


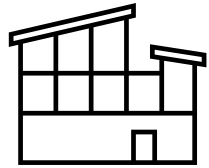
Figure 2. GHG Emissions by Fuel Source



Benefits of Climate-Friendly Assets

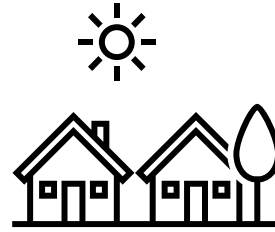
- Emission reductions
- Increased efficiency and reduced operating costs
- Carbon tax savings
- More resiliency to fuel fluctuations
- Improved climate resilience
- Maintains or improves quality of life
- Funding could be available

Emission Reduction Programs for Municipalities



Corporate

- Recreation Energy Conservation Program
- Electric Vehicles for Municipalities
- Electric Vehicle Charging Program (both corporate and community)
- Alberta Municipal Solar Program
- Municipal Energy Manager Program



Community

- Clean Energy Improvement Program
- Solar For Schools

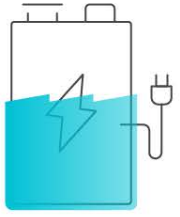


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CLEAN ENERGY
IMPROVEMENT
PROGRAM

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RECREATION ENERGY CONSERVATION PROGRAM

Funding 75 per cent of equipment and installation costs

- 194 completed and in-progress projects
- Participation from 23% of AB municipalities
- Est. 9,472 tCO₂e/year reduction
- **Waitlisting new projects**



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City of Leduc: Leduc Recreation Centre Lighting Retrofit

\$605,000

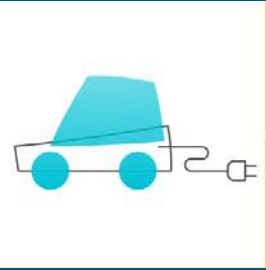
In funding from the Action Centre

- Saves 726,000 kWh and \$80K annually
- Reduction of 413 tCO₂e/year
- 55% GHG reduction from lighting, 8% reduction facility-wide



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ELECTRIC VEHICLES FOR MUNICIPALITIES PROGRAM

\$7,000 to \$14,000

per EV, stackable with federal funding for up to \$19,000 per EV

- Up to 30% for heavy-duty and non-road vehicles
- Feasibility studies
- 40 completed and in-progress projects
- EV savings calculator available at mccac.ca



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ELECTRIC VEHICLES FOR MUNICIPALITIES PROGRAM

City of Medicine Hat
Hyundai Kona
& Chevy Bolt

\$28,000

In funding from the Action Centre

- Est. 80% fuel cost savings, 45% maintenance savings
- Est. 7 tCO₂e saved per year (66%) even when charging via Alberta grid
- Received an additional \$10,000 in federal funding at point-of-sale with the dealer



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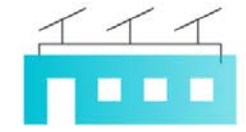
ELECTRIC VEHICLE CHARGING PROGRAM

**100% funding up to:
\$20,000 for Level 2 stations
\$150,000 for Level 3 stations**

- Launched in January 2022
- Significant demand and uptake
- In-progress projects include 75 connectors province-wide, filling network gaps
- New stream offers 46% funding to businesses, non-profits and other organizations



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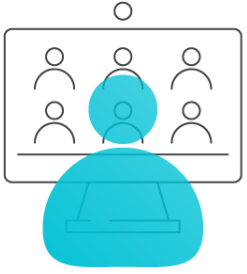


ALBERTA MUNICIPAL SOLAR PROGRAM

Funding 30 per cent of equipment and installation costs

- Over 100 projects completed totaling 20 MW
- Est. \$1.47M annual energy savings
- Est. 12,627 tCO₂e/year reduction
- **CLOSED to new applicants**



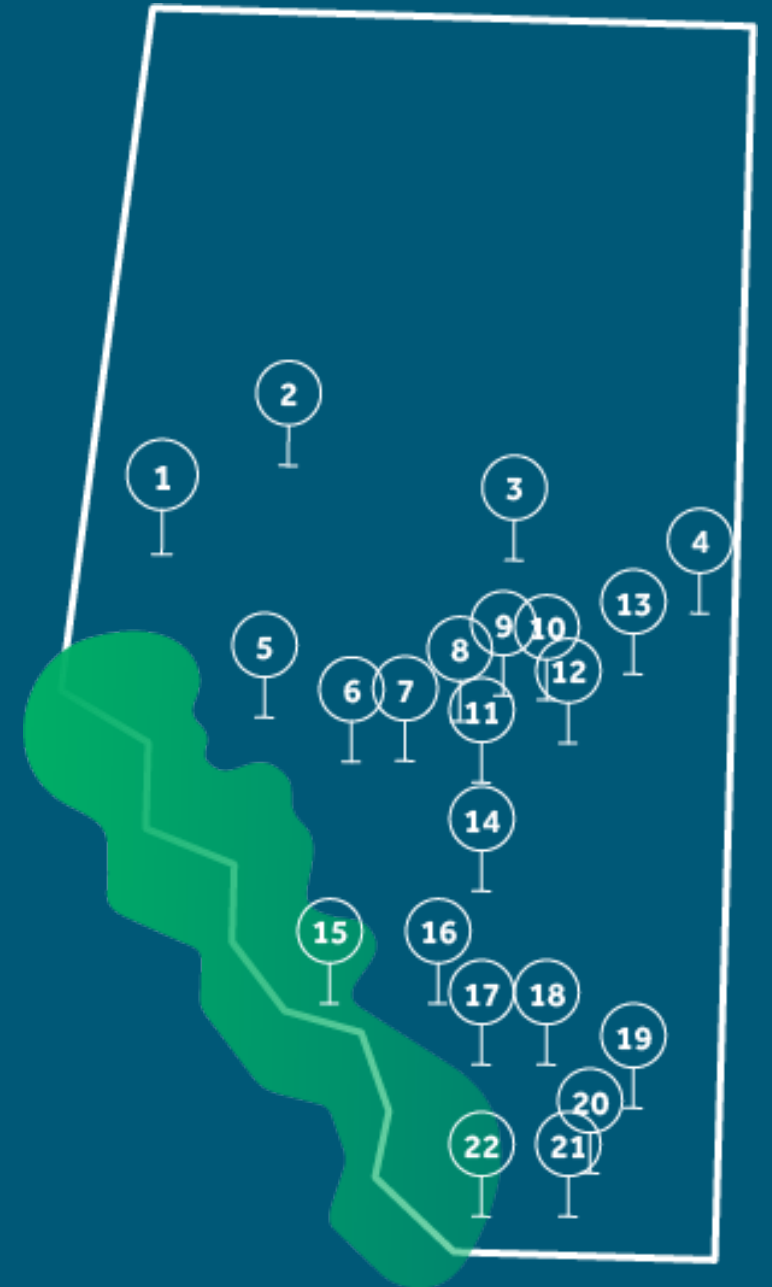


MUNICIPAL ENERGY MANAGER PROGRAM

Funding 80 per cent

of annual salary values to a maximum of \$80,000 per year

- 26 MEMs hired representing 37 municipalities across Alberta
- 17 active MEMs
- 620 in-scope facilities
- **CLOSED to new applicants**



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RESULTS

AVERAGE GHG
REDUCTION TARGET

7.2%

COMPLETED PROJECTS
TO DATE

552

ANNUAL GHG REDUCTIONS
ACHIEVED TO DATE (tCO₂e)

8,468

ANNUAL COST SAVINGS
ACHIEVED TO DATE

\$1.4M



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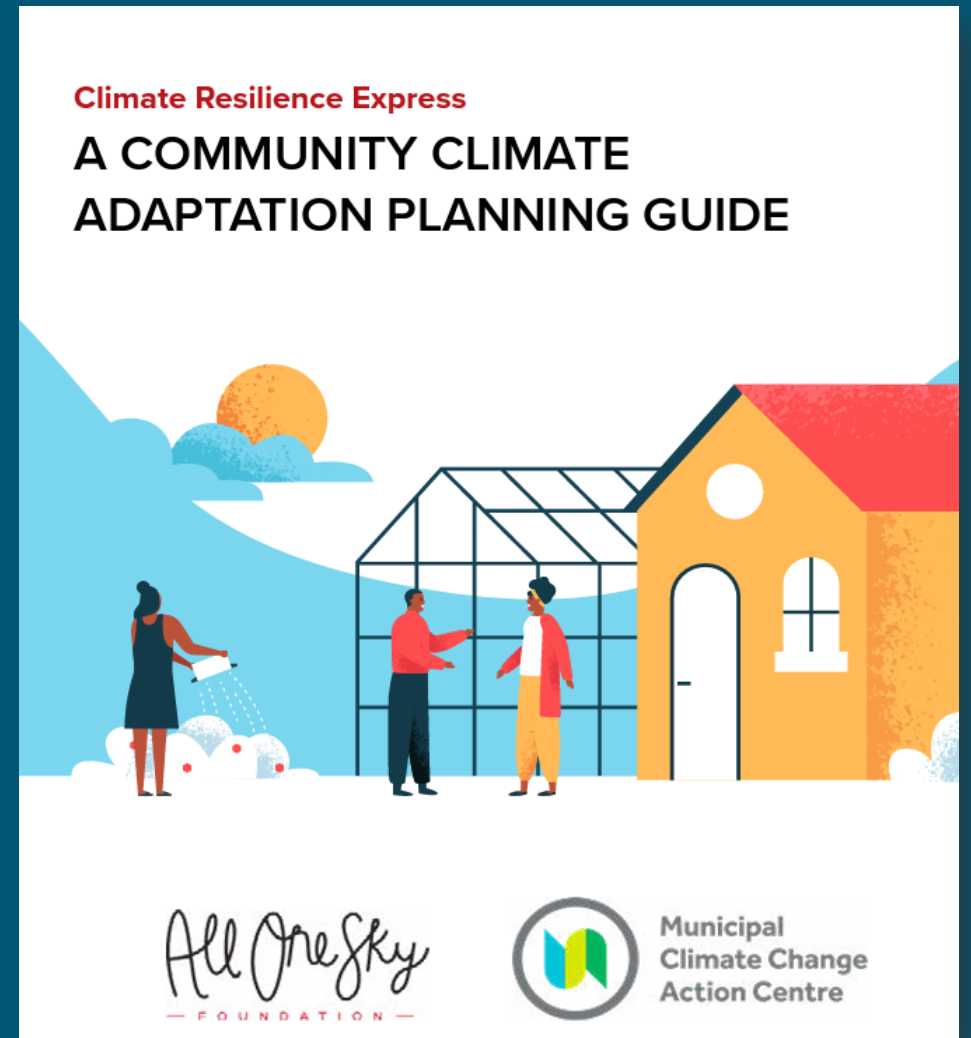
CLIMATE RESILIENCE CAPACITY BUILDING PROGRAM

**Funding up to \$80,000 per project
up to \$160,000 per community**

- Planning stream to assess risk and create an adaptation and resilience plan
- Strategies and initiatives stream to research and assess the feasibility of adaptation measures
- Indigenous stream to build community capacity for climate resilience



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CLEAN ENERGY IMPROVEMENT PROGRAM



Administered by Alberta Municipalities

What is CEIP?

- The Clean Energy Improvement Program (CEIP) is Alberta's Property Assessed Clean Energy (PACE) program
- CEIP is a market-based financing tool to increase the uptake of energy efficiency and renewable energy installations
- It is different than other financing instruments; financing is tied to the property, not the property owner
- CEIP makes it easier for customers to do more extensive and more ambitious projects

WHERE WILL CEIP BE OFFERED IN ALBERTA?



Design Stage

- Canmore
- St. Albert
- Lethbridge
- Calgary
- Sturgeon County
- Drayton Valley
- Grande Prairie
- Athabasca
- Westlock



Program Launch

- Rocky Mountain House
- Devon
- Edmonton (residential)
- Edmonton (commercial)
- Leduc

THANK YOU



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Questions?



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