



UPE02206 Climate Resilience Planning and Development Action Plan

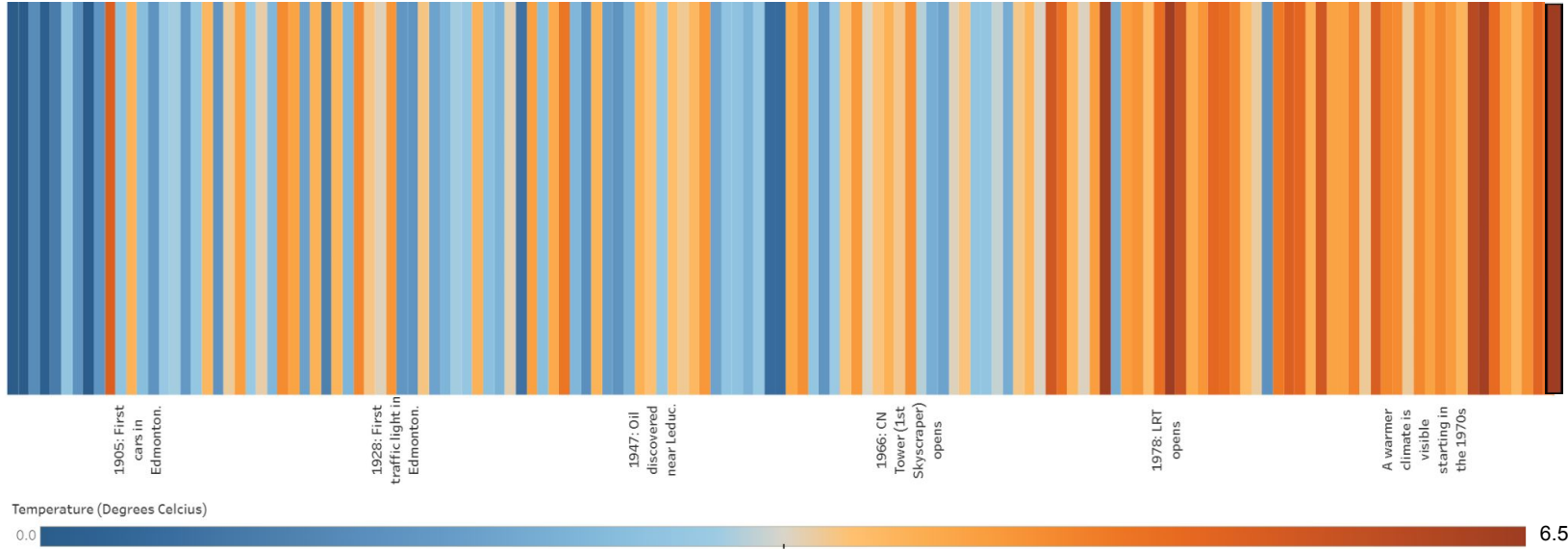
Edmonton

Urban Planning Committee Item 7.1

October 29, 2024



Edmonton's Changing Climate



Edmonton's Average Annual Temperature: 1880 - 2023



In 2024...

20

DAYS WITH
TEMPERATURES OF
29°C OR HIGHER

1,181

WILDFIRES IN ALBERTA
(up to Oct 7, 2024)

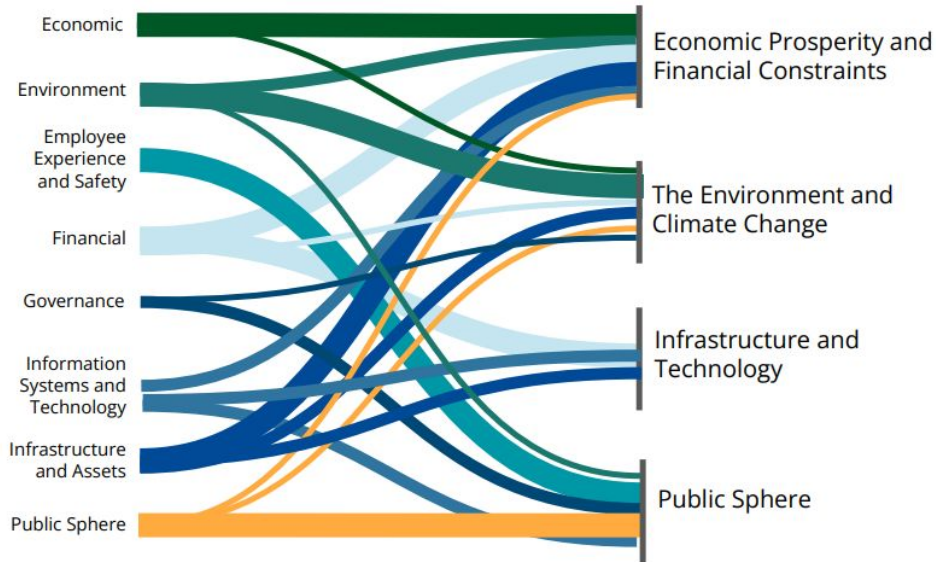
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DAYS WITH AQHI OF 7 OR
HIGHER

Edmonton



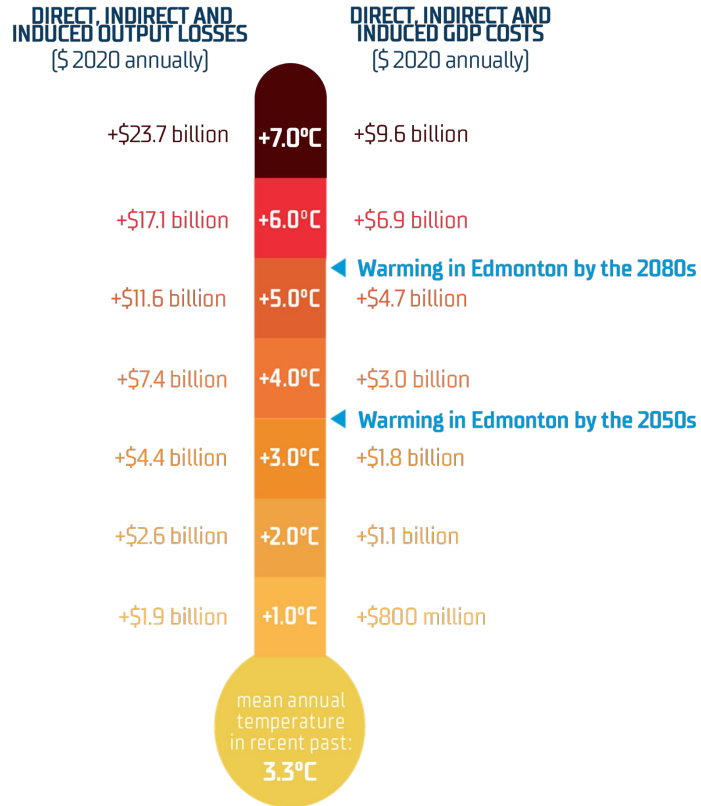
Corporate Strategic Risks



“Of all risks, it is in relation to the environment that the world is most clearly sleepwalking into catastrophe.”

*World Economic Forum
The Global Risks Report, 2019*

Social and Financial Risks



- Climate change could lower Edmonton's GDP by \$3.2 billion yearly, and \$7.4 billion as early as the 2070s.
- Social and GDP costs increase for every degree of warming.
- An additional **22,000 health incidents/year** are expected to occur by the 2050s.

The Role of Cities & Guiding Policy

GREENER AS WE GROW

- Two million new urban trees planted
- Achieve total community-wide carbon budget of 135 megatonnes
- Net per-person greenhouse gas emissions are zero



Emissions Reduction Targets

Achieve total community-wide carbon budget of 135 megatonnes

2025

- Reduce community-based net greenhouse gas emissions by **35%**

2030

- Reduce community-based net greenhouse gas emissions by **50%**
- Reduce energy consumption by 35% per person
- Generate 10% of Edmonton's electricity locally

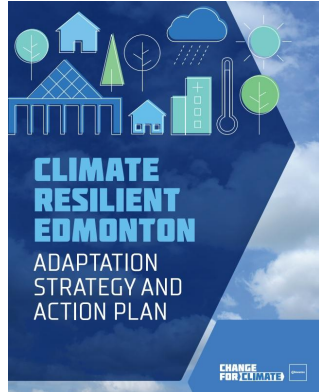
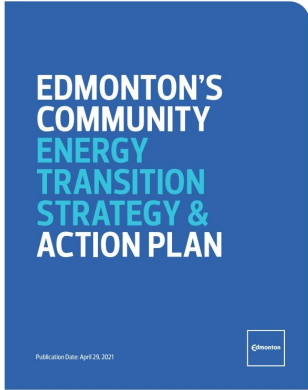
2050

- Achieve **net zero** per person greenhouse gas emissions

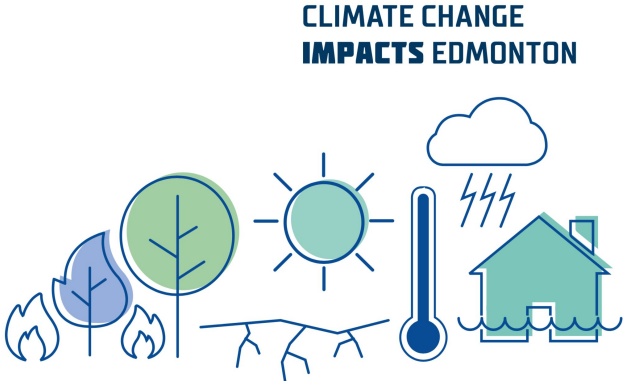
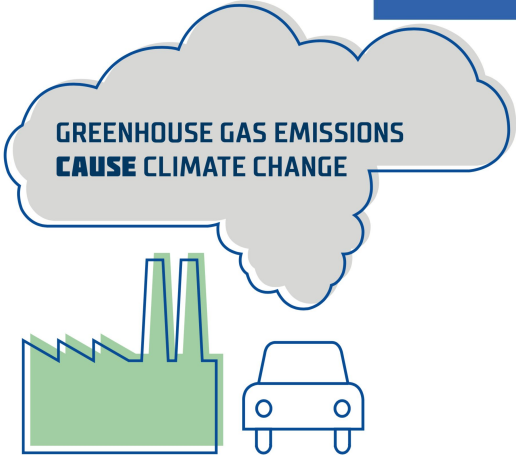


Edmonton's Climate Change Strategies

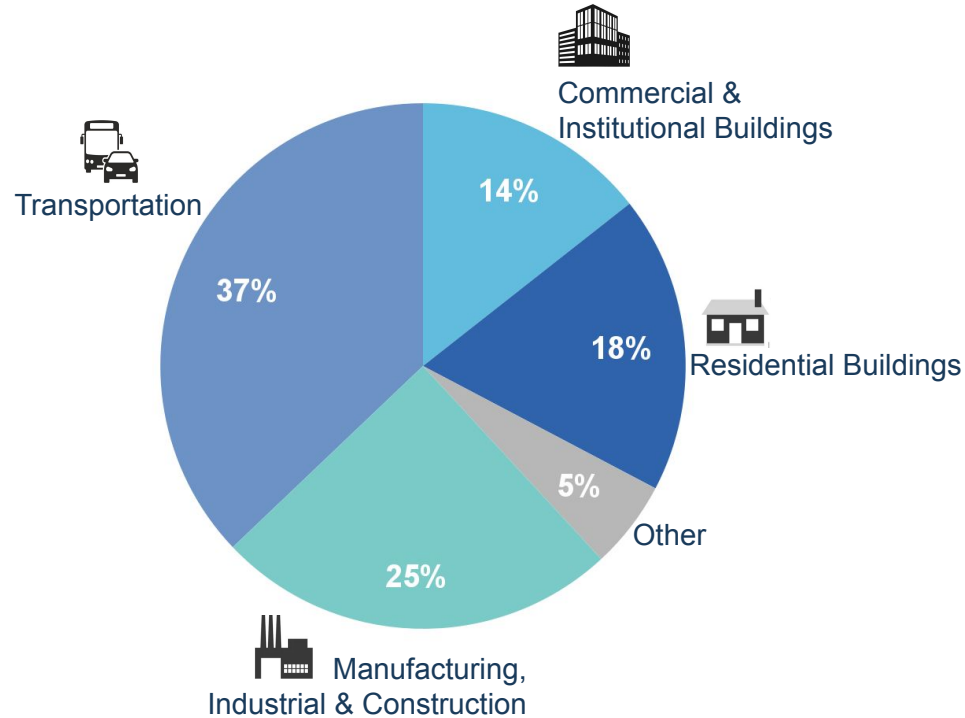
MITIGATION
action to reduce emissions that cause climate change



ADAPTATION
action to manage the risks of climate change impacts

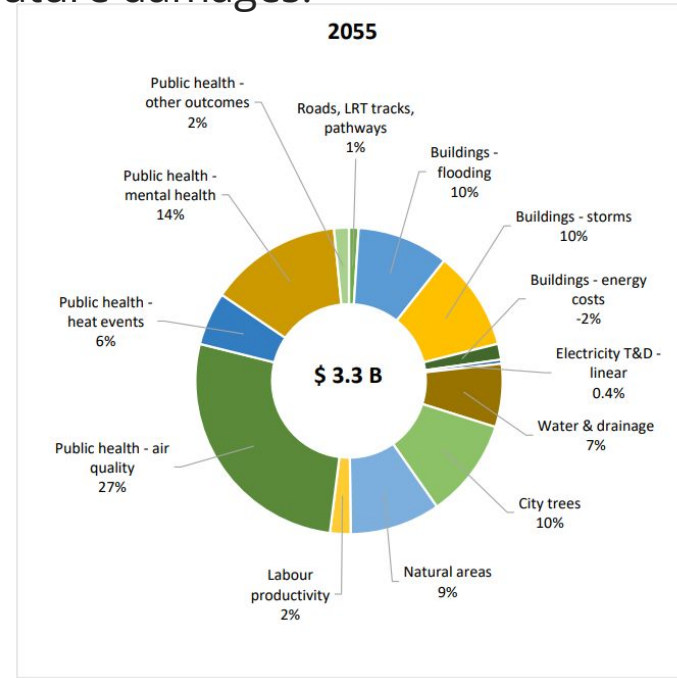
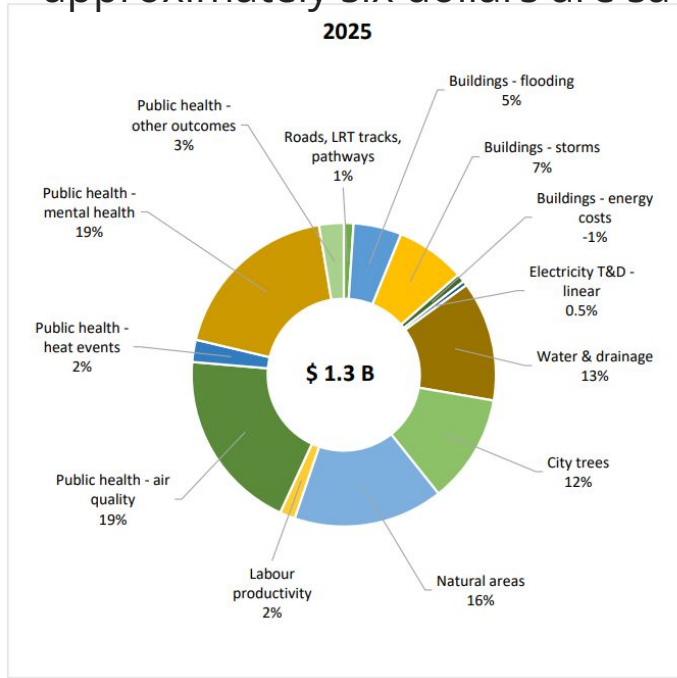


Community Greenhouse Gas Emissions by Sector



Costs of Climate Change

Adaptation Matters: For every dollar invested in mitigation measures, approximately six dollars are saved in future damages.



Projected direct annual tangible and intangible costs of climate change for Edmonton in 2025 and 2055 by climate-sensitive systems (Boyd, 2023)



Climate Resilience Planning and Development

Action Plan

Project Context

**DECISIONS MADE TODAY ABOUT HOW WE DESIGN
AND BUILD OUR CITY, TRANSPORTATION
SYSTEMS, INFRASTRUCTURE AND ENERGY
WILL SET THE COURSE FOR OUR FUTURE
CLIMATE RESILIENCE.**



Climate Resilience Planning and Development Action Plan

Objective: Integrate climate adaptation and mitigation action throughout the City of Edmonton's land use planning and development continuum.

Approach: Outline critical actions that can be implemented in the 2023-2026 budget cycle and lay a strong foundation for ongoing climate resilience building.



CLIMATE RESILIENCE PLANNING AND DEVELOPMENT ACTION PLAN

The CRPD Action Plan lays a strong foundation for ongoing climate resilience building.

15 critical actions integrate climate **adaptation** and **mitigation**;

	Neighbourhoods	Buildings	Site Design & Landscaping	City Building Processes
1. Streamline the permitting process for climate resilient development	☑			☑
2. Incorporate EV-ready requirements into the Zoning Bylaw	☑		☑	
3. Incorporate solar-ready requirements into the Zoning Bylaw	☑			
4. Pursue options for resilient landscaping practices on private property			☑	
5. Update the Floodplain Protection Overlay in the Zoning Bylaw	☑	☑	☑	
6. Introduce new regulations for wildfire risk areas in the Zoning Bylaw	☑	☑	☑	
7. Incorporate climate resilient standards into the City's Design and Construction Standards	☑			☑
8. Pursue opportunities to bolster climate action through policy, regulatory and other planning tools	☑	☑	☑	☑
9. Incorporate climate resilience into the Terms of Reference that guide new neighbourhood design	☑			☑
10. Identify and pursue opportunities to enable development of low-carbon district energy systems	☑	☑		
11. Pursue options for preserving natural areas through neighbourhood design	☑		☑	
12. Develop a Climate Risk Index for Edmonton neighbourhoods	☑			
13. Foster awareness of climate resilient development through public education and outreach	☑	☑	☑	☑
14. Pursue opportunities to leverage incentives for climate resilient development		☑		☑
15. Build organizational change within administration through education and collaboration				☑



Neighbourhoods

Buildings

Site Design & Landscaping

City Building Processes



Levers of Change

Regulatory Changes

- Amendments to the Zoning Bylaw to guide resilient development

Standards Updates

- Incorporate climate resilience into Design and Construction Standards

Policy Changes

- Update policy direction to support transformational climate action

Procedural Changes

- Build capacity and foster knowledge sharing to ensure long-term integration of climate resilience into planning and development process

Incentives

- Support Edmontonians in building resilience to climate change

Next Steps

- Project funded within the approved 2023-2026 budget
- Detailed Action Scoping and Development
 - ◆ Action leads identified within UPE and IIS
- Internal and External engagement
 - ◆ Stakeholder feedback on how actions are implemented
- Council updates, and approval when needed



Thank you.