

Climate Resilient Edmonton: Adaptation Strategy and Action Plan

To Adopt the City's Climate Change Adaptation Plan

Recommendation

That Executive Committee recommend to City Council:

That Climate Resilient Edmonton: Adaptation Strategy and Action Plan, as set out in Attachment 1 of the November 30, 2020, Urban Form and Corporate Strategic Development report UFCSD00129, be approved, as the City of Edmonton's climate change adaptation plan.

Executive Summary

Establishing climate change mitigation and adaptation plans are requirements under the *City of Edmonton Charter, 2018 Regulation* (the "Charter"), which is a regulation to the *Municipal Government Act*. The Charter also requires that climate change mitigation and adaptation plans must be adopted by a resolution of Council. The City of Edmonton has undertaken two separate processes to establish a climate change mitigation plan and a climate change adaptation plan, and this report focuses on efforts underway in support of the adaptation plan requirements.

Administration presented the City of Edmonton's first ever climate change adaptation strategy (Climate Resilient Edmonton: Adaptation Strategy and Action Plan) in November 2018 to Executive Committee for information. Subsequently, Council approved funding for three FTEs and \$164,000 in consulting funding to implement the strategy through the 2019-2022 operating budget. Implementation of various initiatives is currently underway. Climate Resilient Edmonton: Adaptation Strategy and Action Plan will fulfill Edmonton's requirements to establish a climate change adaptation plan under the Charter. This report presents the strategy for Council adoption, as required by the Charter.

Report

The effects of a changing climate are impacting the country and communities. By taking action to build resilience, Edmonton can remain a vibrant, safe and healthy community, as well as an attractive place for investment for generations to come. The work to prepare for and adapt to the impacts of a changing climate is an important city building initiative. Council's Climate Resilient vision and leadership supports

Edmonton's long term liveability and prosperity as well as provincial and federal priorities on this file.

Organizations and governments worldwide are taking “mitigation” and “adaptation” actions in response to climate change. Mitigation actions address the causes of climate change, namely actions to reduce the concentration of greenhouse gases in the atmosphere. Adaptation actions address the impacts of climate change and respond to the local risks and opportunities resulting from climate change. The City of Edmonton's Energy Transition Strategy, currently being updated, is the path forward for Edmonton to mitigate climate change and reduce Edmonton's greenhouse gas emissions. The Climate Resilient Edmonton: Adaptation Strategy and Action Plan sets a path to prepare for and adapt to the impacts Edmonton will face from a changing climate.

Background

Establishing a climate change mitigation plan and a climate change adaptation plan before December 31, 2020, are requirements under the Charter. On November 16, 2020, City Council passed a motion that the Mayor, on behalf of City Council, write a letter to the Minister of Municipal Affairs, requesting an extension of the deadline for the mitigation plan to June 30, 2021. The Charter requires that the climate change adaptation and mitigation plans be adopted by a resolution of Council. The Charter also requires the plans to be reviewed every five years with public participation as per the City's public participation policy. Climate Resilient Edmonton: Adaptation Strategy and Action Plan fulfills Edmonton's requirements to establish a climate change adaptation plan under the Charter.

Climate change adaptation is a risk management approach to prepare for the impacts communities will experience as a result of climate change and position Edmonton as an attractive place to invest in and live. The Climate Resilient Edmonton: Adaptation Strategy and Action Plan is included with this report as Attachment 1, outlines courses of action that will support achieving the long term goals in City Council's strategic plan, ConnectEdmonton (2019-2028).

While ConnectEdmonton defines the transformational actions for the city, the City Plan identifies how Edmonton will grow and change. Embedded in the City Plan are policy directions and intentions related to adapting to climate change and making Edmonton more climate resilient. Climate Resilient Edmonton: Adaptation Strategy and Action Plan supports implementing those policies identified in the statutory City Plan.

Climate Resilient Edmonton: Adaptation Strategy and Action Plan was previously presented to Executive Committee on November 13, 2018, where it was received for

information. City Council then approved funding for implementation of the strategy through the 2019-2022 operating budget.

Climate Resilient Edmonton: Adaptation Strategy and Action Plan

Climate Resilient Edmonton: Adaptation Strategy and Action Plan was prepared with the support and input of Edmonton's academic and business communities, non-profits and public institutions. Climate scientists and adaptation planning experts were also engaged during the development of the strategy to provide external technical information and analysis, including an assessment of the exposure, risk and vulnerability of assets and services within Edmonton from climate change impacts over the short, medium, and long term and the identification of corresponding adaptation actions.

The development of the strategy was a major milestone in the City's journey towards creating a more climate resilient Edmonton, but it was only the first step. The strategy sets a path to prepare for and adapt to the impact Edmonton will face from a changing climate. To address these impacts, the strategy and action plan have the following five interconnected paths toward achieving the vision of a climate resilient Edmonton:

1. Science and Evidence Based Decisions
2. Preparing for Changing Temperatures
3. Preparing for Changing Precipitation
4. Preparing for Changing Weather Extremes
5. Preparing for Changing Ecosystems

Implementation and Funding

The climate adaptation strategy is a key city building initiative. This work positions the community and the corporation to be more prepared for and resilient to, the impact and risks of a changing climate. This work is transformative in nature and supports Edmonton's long-term goals.

To support implementation, Council approved a bylaw change on September 30, 2019 to expand the mandate of the Energy Transition Advisory Committee to include adaptation and resilience. The expanded Energy Transition and Climate Resilience Committee has recruited new members to broaden expertise to include climate resilience.

To support implementation of the strategy, Council approved \$500,000 in ongoing operating funding (which includes funding for 3 FTEs and \$164,000 in consulting) in the 2019-2022 budget. Administration applied for additional external funding, and was awarded \$538,000 in grant funding from different organizations in 2019 and 2020 to support implementation. Additionally, a key implementation partner, EPCOR has

advanced significant pieces of work related to flood resilience, a key pillar of the strategy. EPCOR has advanced a Stormwater Integrated Resource plan through Utility Committee with \$1.9 billion in capital expenditures over the next 20 years for flood mitigation efforts. EPCOR applied for and received \$84.3 million in grant funding from the federal government to support flood resilience, including \$30.3 million from the New Building Canada Fund, and \$54 million from the Disaster Mitigation and Adaptation Fund. As well, EPCOR recently received \$6.8 million in grant funding from the Alberta Community Resilience Program (ACRP) for its flood mitigation efforts, to top up previous ACRP funding of \$21.7 million dating back to 2015. Implementation of the adaptation strategy will continue, as well as ongoing work to identify additional grant funding.

Recognition of and support for municipal climate change efforts continues to evolve through the actions of other orders of government. For example, provincial and federal government initiatives previously aimed at investing in adaptation projects that help protect communities from natural disasters and reduce long-term costs, are now becoming more attractive in how they can also create jobs and drive future economic growth. The City's ability to nimbly tap into these and other emerging provincial and federal interests will help leverage future government support to enable successful implementation.

The plan will be reviewed every five years and updated as Council considers appropriate. To support this requirement, Action 2 in the plan identifies the City of Edmonton will develop and implement a vulnerability risk assessment, resilience and adaptation planning, measurement and reporting program (see Attachment 1). This will include opportunities for public review in alignment with the City's engagement framework. This work is supported through the funded FTEs and consulting budget.

Legal Implications

Section 615.5 of the Charter outlines the requirements for Edmonton to establish a plan for the purposes of adapting to the effects of climate change. Specifically, section 615.5(2) requires the City to establish a climate change adaptation plan, section 615.5(6) requires that the climate change adaptation plan must be adopted by a resolution of the council and 615.5(11) requires the City to establish its first climate change adaptation plan on or before December 31, 2020. Once adopted, the climate change adaptation plan must be published on the City's website under section 615.5(10).

Public Engagement

Over 50 organizations (a list of which is included as Attachment 2) provided input into the Climate Resilient Edmonton: Adaptation Strategy and Action Plan. Public open

houses at six locations engaged over 750 citizens in conversations about a climate resilient Edmonton. Since the development of the strategy, engagement on the City Plan and the update of the Energy Transition Strategy have taken place. Through these engagement opportunities, Edmontonians have shared their interest in a climate resilient future and more climate action.

Corporate Outcomes and Performance Management

Corporate Outcome(s): Edmonton is an environmentally sustainable and resilient city			
Outcome(s)	Measure(s)	Result(s)	Target(s)
Advance a thriving, resilient, sustainable economy and environment	Climate Change Adaptation Indicator (under development as part of ConnectEdmonton indicators)	N/A	To be developed

Risk Assessment

Risk Element	Risk Description	Likelihood	Impact	Risk Score (with current mitigations)	Current Mitigations	Potential Future Mitigations
Legal/Regulatory	If the Climate Change Adaptation Plan is not adopted by Council in 2020, the City may be in breach of its obligation to establish the Climate Change Mitigation Plan on or before December 31, 2020.	1 - rare	2 - moderate	2 - low	Strategy and action plan have been developed to fulfill charter requirements.	
Reputational/Political	If the Climate Change Adaptation Plan is not adopted by Council in 2020, the City could face negative reputational issues for not	1 - rare	2 - moderate	2 - low	Strategy and action plan have been developed to fulfill charter requirements.	

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	being able to comply with the Charter Regulation requirements.					
Natural Disaster	Increasing frequency and severity of weather extremes.	3 - possible	3 - major	9 - medium	Implementing the Climate Change Adaptation Plan, a risk management plan, will help Edmonton be better prepared to respond to, and recover from natural disaster events such as extreme weather. This will help reduce costs (including insurance) as well as the severity of other impacts, such as social well being, from disruptive events in the long term.	Updating and further implementing the Climate Change Adaptation Plan.
Political Influences	There is the potential that new provincial government legislation, policies or future directions can influence the advancement of any City climate change implementation plans.	3 - possible	3 - major	9 - medium	Monitoring policy and funding changes.	Advocating or adjusting implementation.

Attachments

1. Climate Resilient Edmonton: Adaptation Strategy and Action Plan
2. Contributing Organizations

Others Reviewing this Report

- M. Persson, Chief Financial Officer and Deputy City Manager, Financial and Corporate Services
- C. Owen, Deputy City Manager, Communications and Engagement

- G. Cebryk, Deputy City Manager, City Operations
- J. Meliefste, Acting Deputy City Manager, Integrated Infrastructure Services
- K. Armstrong, Deputy City Manager, Employee Services
- R. Smyth, Deputy City Manager, Citizen Services
- B. Andriachuk, City Solicitor