

CLIMATE RESILIENCE PLANNING AND DEVELOPMENT ACTION PLAN

Recommendation

1. That the October 29, 2024, Urban Planning and Economy report UPE02206, be received for information.
2. That Attachment 3 of the October 29, 2024, Urban Planning and Economy report UPE02206 remain private pursuant to section 27 (privileged information) of the *Freedom of Information and Protection of Privacy Act*.

Requested Action	Information Only		
ConnectEdmonton's Guiding Principle	ConnectEdmonton Strategic Goals		
CONNECTED This unifies our work to achieve our strategic goals.	Climate Resilience		
City Plan Values	LIVE		
City Plan Big City Move(s)	Greener as we Grow	Relationship to Council's Strategic Priorities	Climate Adaptation and Energy Transition
Corporate Business Plan	Transforming for the Future		
Council Policy, Program or Project Relationships	<ul style="list-style-type: none"> • Edmonton Community Energy Transition Strategy • Climate Resilient Edmonton: Adaptation Strategy and Action Plan • C627A - Climate Resilience Policy • District Planning • Growth Management Framework • Zoning Bylaw 20001 		
Related Council Discussions	<ul style="list-style-type: none"> • February 27, 2024, Urban Planning and Economy report UPE01754, Implementing and Enforcing Advanced Energy Codes • February 27, 2024, Urban Planning and Economy report UPE01755, Implementing Mandatory Energy Labelling For New Construction • February 27, 2024, Integrated Infrastructure Services report IIS02148, Implementing Edmonton's District Energy Strategy • November 1, 2023, Urban Planning and Economy report UPE01816, Annual Climate Strategies Update • October 16, 2023, Urban Planning and Economy report UPE02036, Charter Bylaw 20001, To adopt a new Zoning Bylaw for the City of Edmonton and repeal Bylaw 12800 (the current Edmonton Zoning Bylaw) 		

Previous Council/Committee Action

At the October 16-20/23, 2023 City Council Public Hearing, the following motion was passed:

That Administration provide, as part of the report on Climate Resilience Planning and Development Framework, as identified in Attachment 8 of the June 20, 2023, Urban Planning and Economy report UPE01636, an outline of scope of work, including specific timelines, for integrating climate action throughout the planning continuum and should include how climate adaptation and mitigation can be further embedded in the Zoning Bylaw as part of the post Zoning Bylaw Renewal Workplan, including but not limited to solar and electric vehicle readiness, in alignment with the Community Energy Transition Strategy and Climate Adaptation Strategy and Action Plan.

Executive Summary

- Edmonton's climate is changing and there is an urgent need for continued action to build resilience and reduce greenhouse gas emissions. It is imperative to act now to integrate climate resilience into the way the City's transportation systems and infrastructure and energy networks are designed and built.
- Building on the City's existing climate change initiatives, the Climate Resilience Planning and Development Action Plan identifies the first 15 priority actions to incorporate climate resilience measures into the planning and development continuum.
- Future action plans will identify opportunities to continue to embed climate resilience within planning and development processes, allowing for actions to be adapted and built upon to support the City's emissions reduction targets and resilience goals.
- The 15 priority actions are intended to be implemented from 2024 to 2026 to lay a strong foundation for ongoing climate resilience city building.

REPORT

There is an urgent need for continued action to build resilience as Edmonton is one of the fastest warming regions in the world. Science shows Edmonton's climate is expected to change even more significantly into the future¹. For every degree of warming, there are significant economic and social costs for Edmonton². Growing climate risks have clear implications for City resources and assets, the local economy and the safety and well being of residents. The Canadian Climate Institute's report on the costs of climate change³ highlights the need for immediate action to reduce emissions and pursue proactive adaptive measures to mitigate the costs associated with climate impacts.

Climate resilience is one of four strategic goals in ConnectEdmonton (Edmonton's Strategic Plan). It is also a key component in The City Plan, which outlines a strategy for future growth as the city welcomes one million new residents. The Big City Moves outlined in The City Plan identify the

¹ City of Edmonton, Climate Resilient Edmonton: Adaptation Strategy and Action Plan, December 2020.

² City of Edmonton, Climate Resilient Edmonton: Adaptation Strategy and Action Plan, December 2020

³ Canadian Climate Institute, Under Water: The costs of climate change for Canada's Infrastructure, September 2021

CLIMATE RESILIENCE PLANNING AND DEVELOPMENT ACTION PLAN

need for a shift in how Edmonton grows to sustain a healthy, urban and climate resilient city, to achieve the target of net zero per-person greenhouse gas emissions by 2050.

Edmonton's two climate strategies go further to define the City's climate goals and outline the actions necessary to achieve them. Goal two of the Climate Resilient Edmonton: Adaptation Strategy and Action Plan (2020) states that "Edmonton is planned, designed, developed and built to be climate resilient today for future Edmontonians". As well, one of the goals of Edmonton's Community Energy Transition Strategy (2021) states that "Edmonton is planned, designed and built to be a vibrant carbon neutral city". The Climate Resilience Planning and Development Action Plan (the Action Plan) serves to implement the direction provided by these climate strategies, as it relates to planning and development, and leverages various levers of change to take deliberate action towards planning, designing and building a vibrant and resilient city.

Purpose

The objective of the Climate Resilience Planning and Development Action Plan, as presented in Attachment 1, is to identify and implement strategic, regulatory, and procedural changes to support the integration of energy transition and adaptation action throughout the City's land use planning and development continuum, where feasible and effective. The intent is to provide a coordinated approach to growth and development that reduces greenhouse gas emissions (mitigation) and increases resilience to the impacts of changing climate conditions (adaptation).

Planning and development is a complex process that implements land use policy and encompasses land at various stages, from raw land to finished development. There is a continuum of various planning tools, such as statutory plans, policies, standards, guidelines, bylaws, codes, etc., that work together to determine where and how development occurs throughout the city. Each stage of the planning and development continuum represents a juncture at which climate resilience strategies should be considered and incorporated into decision-making.

Decisions made on the design and building of the City's transportation systems, energy networks and infrastructure will set the course for its future climate resilience. In 2022, more than half of the greenhouse gas emissions in Edmonton were produced by transportation (vehicle fuel consumption) and building (electricity and natural gas consumption) sectors. Based on The City Plan growth projections, at least 400,000 additional housing units will need to be built to accommodate an additional million people. The City Plan introduces a shift towards 15-minute communities that will support targets for 50 per cent of trips made by transit and active transportation and 50 per cent of new units added through infill city-wide. These shifts in development and mobility create a significant opportunity to transform future growth in Edmonton and create a more climate resilient city.

The Actions

The Action Plan outlines 15 interdependent actions (Attachment 1) that are intended to be completed concurrently between 2024 to 2026. This Action Plan takes a holistic approach to integrate climate action across the entire planning and development continuum. The 15 actions were prioritized based on equity, cost, impact, ease of implementation and critical timing in

CLIMATE RESILIENCE PLANNING AND DEVELOPMENT ACTION PLAN

relation to the climate emergency. These actions lay a strong foundation for ongoing climate resilience city building while remaining within the City's community carbon budget target of 176 million tonnes of carbon dioxide equivalents (CO₂e). Additional action plans in future years will ensure continued progress as this work is completed and further opportunities for change are identified. The 15 priority actions are:

1. Streamline the permitting process for climate resilient development
2. Incorporate electric vehicle-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

The implementation of the actions is targeted to take place over two and a half years (Q3 2024 to Q4 2026). The groundwork for some of the actions has already begun and others will begin soon, as indicated in Attachment 1. Various business areas in Administration will be responsible for implementing the action items.

Action scoping will be supported by a legal review and identification of budget implications, metrics, and completion measures. Further research and engagement will be conducted, as needed, to inform the specific components of each action. Administration will bring forward the actions that will require either City Council approval, or further direction (e.g. Zoning Bylaw 20001 text amendments). Some actions will be able to proceed without further direction, such as those related to education or exploring options to inform the next stage of climate action.

As the actions are implemented, Administration will monitor and evaluate their impact. Future action plans will identify opportunities to continue to embed climate resilience within planning

CLIMATE RESILIENCE PLANNING AND DEVELOPMENT ACTION PLAN

and development processes, allowing for actions to be adapted and built upon to support the City's emissions reduction targets and resilience goals.

Affordability

Climate change impacts can have significant financial, economic and social implications. Communities are increasingly facing a wide range of direct and indirect impacts of climate change, with many implications for the built environment, human health, economies and natural systems (e.g. increasing energy rates, increased instances of extreme weather, increased insurance costs). At the same time, Council has declared a housing and homelessness emergency. These two issues of housing need and climate change must both be addressed to ensure resilient and affordable housing in the face of a changing climate.

Components of the Action Plan will have financial implications for Edmontonians and the development industry, some costs may increase in the short term while other expenses like utility costs may be reduced in the long term. The impacts of climate change on health, ecosystems, property and economies should be considered alongside the costs of adaptive actions. The cost of incorporating climate resilience into planning and development will need to be balanced against the cost of inaction, and the potential for operational and life-cycle savings to ensure housing is not cost prohibitive to own and maintain. A summary of the costs of climate change, climate inaction and action can be found in Attachment 2.

Budget/Financial Implications

In the June 15, 2022, Community Energy Transition Strategy - Annual Update (UPE00604), Administration identified that one of the corrective actions needed to achieve the City's climate goals is the development of a climate change planning and development framework. The actions will be implemented using existing funds within the approved 2023-2026 operating and capital budgets.

Legal Implications

The actions contemplated by the Action Plan are supported by powers granted to The City of Edmonton under the *Municipal Government Act*, RSA 2000, c M-26 (the "MGA"), and the *City of Edmonton Charter, 2018 Regulation*, Alta Reg 29/2018 (the "Charter Regulation"). Any bylaw or amendment contemplated by an Action should be drafted to ensure it does not conflict with the *Safety Codes Act*, RSA 2000, c S-1 (the "Safety Codes Act") and its regulations. In addition to the Safety Codes Act, the City's Action Plan should consider the possible impacts of the *Municipal Affairs Statutes Amendment Act* (Bill 20 of Legislature 31, Session 1).

Please see Private Attachment 3 for detailed legal implications.

Community Insight

Engagement was an important part of the development of the Action Plan and additional engagement will be needed to implement the Action Plan. Phase I of external engagement involved two workshops (one virtual and one in person) with stakeholders representing organizations related to real estate and development; utilities and energy; community and social

CLIMATE RESILIENCE PLANNING AND DEVELOPMENT ACTION PLAN

services; education; and environment and sustainability. The workshops focused on the opportunities and challenges for climate action within the City's planning and development continuum. These stakeholders were invited to participate as they represented different perspectives on climate change and development in Edmonton. Through this work, ideas were generated for integrating climate resilience across the planning and development continuum. The Phase I engagement results are found in Attachment 4.

Phase II of external engagement was conducted after the project team developed and refined the list to 15 draft actions. It included an in-person workshop with stakeholders and an Engaged Edmonton webpage which hosted an online survey, question and answer, bookings for one-on-one meetings with the project team and essential materials to understand the draft Action Plan. The engagement opportunities were shared with Edmontonians through social media, public service announcements, the Engaged Edmonton platform, emails to key stakeholders and directly with organizations serving marginalized and equity-deserving communities. The results of engaging with the community were used to further adjust and prioritize the draft actions and inform the development of the Action Plan. The Phase II engagement results are found in Attachment 5.

Throughout the development of the Action Plan, Administration had regular touchpoints with the Energy Transition Climate Resilience Committee (ETCRC), presenting project updates three times between January and June 2024. ETCRC provided guidance on key climate action priorities and feedback on the list of 15 draft actions; they were generally supportive of the proposed action plan and expressed continued interest in informing the detailed scoping of each action.

GBA+

While climate change affects everyone, it does not impact everyone in the same way, and there are some people and neighbourhoods in Edmonton who are more vulnerable to its effects. Systemic discrimination and past policy decisions, including urban and land use planning policies have contributed to the continuing marginalization of Indigenous people, racialized and other disproportionately impacted communities. As a result, certain communities are more impacted by issues of poverty, lack of services and unequal opportunities. These inequities within Edmonton's population result in varying degrees of vulnerability to the impacts of climate change. Historically marginalized communities are disproportionately exposed to climate risks, often with the least resources to prepare adequately for and withstand climate impacts.

To ensure that the actions outlined in this Action Plan represent an equitable approach to climate action, Administration sought feedback from diverse stakeholders who can provide insights from varied lived experiences. The resulting Action Plan seeks to incorporate actions that can benefit marginalized communities most vulnerable to climate impacts.

Administration is committed to incorporating GBA+ into the development and implementation of the Action Plan. To support equality of outcomes with the development and implementation of actions, Administration will:

- Continue to work with the GBA+ Centre for Excellence;

CLIMATE RESILIENCE PLANNING AND DEVELOPMENT ACTION PLAN

- Conduct GBA+ assessments for each of the developed actions;
- Report on GBA+ indicators during evaluation and monitoring;
- Ensure that the teams responsible for implementing the actions consider the impacts to vulnerable and marginalized populations such that the planning and delivery of actions address equity challenges; and
- Continue to engage a diverse range of stakeholders to include perspectives from a wide range of Edmontonians, businesses and industries.

Environment and Climate Review

The Action Plan is intended to align with the City's energy transition and climate resilience goals and objectives. Therefore, climate resilience is inherent in the planned actions. In addition, although not explicitly stated, the planned actions include broader environmental and social considerations beyond climate impacts and opportunities. The prioritization of the actions help to focus on activities that the City believes will be most impactful in achieving its goals and mitigating climate impacts.

In addition to the identified actions, Administration could consider the following actions to support or enhance the Action Plan, as well as future climate related actions. They reflect the importance of Edmonton's natural infrastructure and the role it plays in air quality, climate change mitigation and adaptation (17 per cent of emission reductions in the Energy Transition Strategy), biodiversity, ecosystem services and the health of Edmontonians:

1. Complete a study to estimate the value of the ecosystem services provided by the City's natural infrastructure; such a study could be used to inform and support actions 4, 9 and 11, as well as decisions related to new neighbourhood design, landscaping requirements, preservation of natural spaces, as well as public education and outreach initiatives.
2. Ensure attention and resourcing is in place to enforce current and future landscaping requirements in support of a climate resilient landscape (action 4) and 20 per cent tree canopy (Urban Forest Management Plan) goals.

To continue to make progress in climate resilient planning and development:

3. Establish a plan and timeframe for the next budget cycle to develop the next Climate Resilience Planning and Development Action Plan to ensure that climate resilience work continues beyond this initial Action Plan. There are a number of items that were not addressed in this Action Plan that may be important for climate resilience in the future and there may be others not yet considered.

Attachments

1. Climate Resilience Planning and Development Action Plan
2. Costs of Climate Change
3. PRIVATE - Legal Advice
4. What We Heard - Part 1 of 2
5. What We Heard - Part 2 of 2