

Energy Transition Climate Resilience Advisory Committee

2019 and 2020 Annual Reports and 2021 Work Plan

Recommendation

That the May 5, 2021, Office of the City Manager report CR_8088, be received for information.

Executive Summary

Stepping Up to The Challenge of Global Climate Change

The need for urgent action to put Edmonton and the world on a path aligned with a 1.5 degree carbon budget becomes clearer by the day. Along with growing evidence comes growing anxiety. The Energy Transition Climate Resilience Committee (ETCRC) reminds Council that all decisions are climate decisions and should incorporate consideration of climate impacts from both mitigation and adaptation perspectives. Along with the COVID-19 pandemic and the economic crisis, the climate emergency needs urgent action. There is ability for climate mitigation measures to also address COVID-19 and economic challenges.

Report

Recent progress in Edmonton offers some hope:

City Council's leadership

Council approved the revised Community Energy Transition Strategy and Action Plan (CETSAP), outlining measures required for Edmonton to live and thrive in a near zero emissions world, on April 19, 2021. The decision was consistent with prior Council decisions, including commitment to the Edmonton Declaration and the declaration of a climate emergency. Council has made clear its dedication and commitment to addressing climate change. As citizens and parents, grandparents, aunts and uncles of the generations most affected, your leadership is a comfort and a relief.

City Administration's action

You should be proud, as we are, of the dedication and determination with which the Administration has taken up this challenge. The CETSAP has created an opportunity to move past the elusive ambitions of the past. It includes a funding strategy and the

implementation of a carbon accounting system. In order to help Council determine which actions to prioritize and when to prioritize them, Administration has identified Big Wins and Quick Wins.

Citizen engagement

As the depth of our climate crisis becomes clear, an increasing number of Edmontonians are beginning to understand the need for urgent measures. This particularly so among the generations that will be most affected by a failure to act now.

Expanded scope

Climate decisions are complex, as evidenced by the expanded mandate of our committee, which now includes climate adaptation as well as a just and equitable transition. Energy justice must be built into all decision making processes in Edmonton.

Continuity with Council's inspiring leadership is going to be challenging. The CETSAP must reshape how we move, live, work, and play for a better Edmonton. It has and will continue to shape every aspect of the City's work from the City Plan to Green Electricity Procurement, and the City Operations Greenhouse Gas Management Plan. The CETSAP envisions an Edmonton that is not just in alignment with a 1.5 degree world while adapting to a warming climate, but also an Edmonton that grows its economy increasing the prosperity, health and wellbeing of its citizens.

Although these are smart investments that will return dividends for decades, financing these initiatives will be a challenge. Can we afford this? The simple truth is that we can't afford business as usual.

The decisions you make in the coming months will affect Edmontonians for generations. While the issues that prompted you to throw your hat in the ring may not have included this one, unfortunately this buck now stops with you.

Background

The Energy Transition Climate Resilience Committee was first created out of Edmonton's Community Energy Transition Strategy (originally adopted by City Council in August 2015) with a mandate to provide advice to Council on the strategy's implementation and progress. On September 30, 2019, Bylaw 17431 (Attachment #5) which governs the ETCRC was updated and expanded the Committee's mandate to include the Climate Resilient Edmonton: Adaptation Strategy and Action Plan.

Committing to a 1.5 Degree World

In March 2018, alongside the Edmonton Intergovernmental Panel on Climate Change (IPCC) Cities Conference and the Global Covenant of Mayors for Climate and Energy meeting, Mayor Don Iveson called on mayors and cities around the world to sign the Edmonton Declaration. Adopted by Council in 2018, the Edmonton Declaration is a bold call-to-action for mayors to demonstrate leadership on climate change and recognize the immediate and urgent need for action that will limit global warming to 1.5 degrees Celsius.

The original Community Energy Transition Strategy (2015) established emissions reduction, energy efficiency and local energy generation targets for Edmonton and set in motion the beginnings of meaningful action to reduce emissions, increase efficiency, and transition our energy sources. *However, it did not contemplate the emissions reductions necessary to maintain a 1.5-degree world.* To live up to the Edmonton Declaration and avoid the most severe impacts of climate change, this gap must be addressed as quickly as possible.

To fulfill the Edmonton Declaration, the ETCRC recommended that the city develop a plan to live within Edmonton's carbon budget based on IPCC recommendations. Speaking alongside the broader community on August 27, 2019, ETCRC encouraged Council to adopt a strategy aligned with the 1.5 degree world. That day, City Council declared a climate emergency and passed a motion to update Edmonton's Community Energy Transition Strategy to stay within a carbon budget consistent with the Paris Agreement. On April 19, 2021, City Council approved the CETSAP, which outlines the steps Edmonton must take to do its part in limiting global warming to 1.5 degrees.

Mandate of ETCRC

- a) Promote the "Energy Transition Strategy" with "Climate Change Plans and Energy Transition Strategy" to each member's professional and community networks;
- b) Share with, and receive from the City Manager, information regarding the implementation of the "Energy Transition Strategy" with "Climate Change Plans and Energy Transition Strategy";
- c) Provide broad independent advice to Council about the "Energy Transition Strategy" with "Climate Change Plans and Energy Transition Strategy"; and

- d) Assist Council in developing performance measures for the "Energy Transition Strategy" with "Climate Change Plans and Energy Transition Strategy".

Major Milestones Reached in 2019-2020

We have made a good start

As a committee comprised of 15 Edmonton leaders in energy and efficiency from private sector developers, utilities, academia, and energy management, ETCRC has brought diverse experience and expert knowledge together to promote an effective and thorough review of emerging policy and programs impacting Edmonton's energy transition and climate resilience.

In 2019, ETCRC reviewed and provided advice on the implementation of a number of elements of the Strategy designed to transition Edmonton's energy usage and reduce Edmonton's energy-related emissions. We took a deep-dive into the following four topics, providing written recommendations to Council via memos:

- **May 10, 2019 at Utility Committee**
E.L. Smith, Solar PV
Support for the E.L. Smith Solar Project as it aligns with Edmonton's Energy Transition goals.
- **September 17, 2019 at Urban Planning Committee**
City Plan and Edmonton Declaration
Recommended that emerging carbon reduction opportunities outlined in the Community Energy Transition Strategy be meaningfully integrated into the City Plan, reflecting the 1.5 degree Celsius commitment.
- **November 18, 2019 at Executive Committee**
Green Electricity Procurement Approach
Support of the City's Green Electricity Procurement, highlighting the positive environmental and economic benefits.
- **December 2, 2019 at Executive Committee**
Getting to 1.5 Degrees - Accelerated Actions Report
Immediate GHG reduction measures are advocated for, as it is predicted that Edmonton will surpass its 2050 carbon budget within 8 years.

In 2020, ETCRC took a deep-dive into the following eight topics, providing written recommendations to Council via memos:

- **April 15, 2020 at City Council**
Downtown District Energy Initiative - Public/Private Partnership Options
Provided support for the DDE project with certain qualifications, such as ensuring design flexibility and compatibility with a zero emissions future.
- **June 29, 2020 at City Council**
E-Bike Rebate Program
Recommended continued financial support for the electric bike rebate program.
- **September 14, 2020 at City Council**
Charter Bylaw 20000 - To adopt The City Plan (Edmonton's Municipal Development Plan)
Provided their support for the adoption of the City Plan, suggested increased accountability for targets and adding a strategic measure for the carbon budget.
- **October 6, 2020 at City Council**
EL Smith Solar Farm
Given new information since May 2019, they shared their concerns over the project and their uncertainty as to whether the potential benefits outweighed the potential negative impacts.
- **November 3, 2020 at City Council**
Adoption of the Edmonton Exhibition Lands Planning Framework
Provided their support for the framework, but advised increased alignment with the CETSAP for both buildings and transportation.
- **November 9, 2020 at Executive Committee**
Revised Community Energy Transition Strategy - Accelerated Actions and Draft Strategy
Provided general support for the draft, but made 10 specific recommended improvements such as setting interim targets, accelerating action and the integration of regulatory tools and advocacy.
- **November 9, 2020 at Executive Committee**
Electric Charging Equipment and EV Charging Rebate
Recommended continued financial support for the electric vehicle charger rebate program.

- **November 30, 2020 at Executive Committee**
Climate Resilient Edmonton: Adaptation Strategy & Action Plan - To Adopt the City's Climate Change Adaptation Plan
Provided their support for the plan and made recommendations such as taking a regional approach and ensuring on-going assessment.

In addition, ETCRC also discussed and advised on the following topics as part of our committee meetings:

- a. City Plan
- b. District Energy City-Wide
- c. Council's Strategic Plan, ConnectEdmonton
- d. Green Electricity Procurement
- e. River Crossing Development
- f. Transportation- Electric Buses/Ridership
- g. Clean Energy Improvement Program
- h. Streamlining Permitting and policies for Green Buildings
- i. Greenhouse Gas Management Plan
- j. Indigenous Communities' Role in Edmonton's Energy Transition
- k. CitiesIPCC Legacy Research Grant Program
- l. Smart Transportation/ EV Strategy
- m. Solar PV on City Buildings
- n. Blatchford Utility
- o. Community programs: Home Energy Retrofit Accelerator & Building Energy Retrofit Accelerator
- p. Climate Resilient Edmonton: Adaptation Strategy and Action Plan
- q. Edmonton's Community Energy Transition Strategy Update

ETCRC met six times per calendar year as a committee and held more than two dozen meetings of our sub-committees. The commitment shown by committee members is remarkable.

Reflections and Strategic Recommendations for 2020/21

Staying the Course on Climate Leadership

In our 2018 annual report we provided three key recommendations:

- Establish a carbon budget for the City of Edmonton aligned with 1.5 degree recommendations from the IPCC and Actions noted in the CETS;

- Put carbon in the budget so that all projects are evaluated on their fiscal and emissions costs; and
- Fully integrate climate action and the carbon budget into all aspects of the City's work, particularly the City Plan.

We were pleased to see City Council's support for City Administration's plan to develop a Carbon Budget Office. By the fall of 2021, Administration has made a commitment that a baseline carbon budget will be developed, and in the first half of 2022 a carbon lens will be applied to create the next four year budget (2023-2026), and beyond that a carbon budget is to be fully incorporated. An internal task force is to be developed to guide Edmonton's transition to a carbon neutral city. As a committee, we believe that we are most effective at a bird's eye level. The task force will have access to confidential information that our committee cannot access, and will have the resources to dig into the details of the City's plans and actions. Thus, our committee's role will be complementary to the role of the task force, and we look forward to working closely together.

A cultural shift must occur within all City departments. All decisions, and particularly planning and infrastructure decisions, must be made with the climate emergency front of mind. **Poor planning and infrastructure decisions run the risk of locking in decades of unnecessary and unaffordable carbon emissions.** City Council has signalled its support for this cultural shift. It is now a personal responsibility of all City staff, in particular City Administration's senior management, to ensure that the carbon accounting framework results in meaningful results, rather than a superficial administrative procedure.

Edmontonians have become increasingly engaged and are looking to Council for leadership on climate action. For example, there was a full house and dozens of speakers at the Council meeting to declare a climate emergency and set Edmonton on a 1.5 degree pathway. Further, when public feedback was sought during the City Plan, Edmontonians indicated demand for active transport, denser neighbourhoods and preserved and expanded natural areas. This all serves as evidence that we are on the right track and have public support to keep building the right future.

Bold Climate Action Has Never Been More Important

The CETSAP is ambitious. There will be short term costs needed to unleash long term payoffs and uncertainties in technologies and pathways. We have seen the power of Canadian innovations that have lowered the costs and increased the returns of carbon reductions in electricity, buildings, and transportation surpassing the most optimistic of

predictions. We have no reason to believe these types of jaw-dropping advancements will not continue to materialise as the City of Edmonton sets out clear regulations and parameters within which industry and individuals can innovate and compete to deliver the best 1.5 degree Edmonton possible.

Looking forward to 2021, we would like to offer recommendations to help maintain the City's momentum and progress and to highlight new opportunities to expand efforts. Admittedly, at the time of the writing of this report, we are currently amidst our second year in an unprecedented global and local uncertainty as a result of the COVID-19 pandemic. In many ways, this poses several new challenges relating to long-term planning abilities, human and financial resources, and competing priorities. In spite of these challenging conditions, we still see a solid case to continue supporting energy transition and climate resilience. Recognizing that future conditions could change rapidly and make today's ideas seem obsolete or irrelevant, under the present state, we would like to make the following recommendations:

- 1) **Immediately** begin to implement the actions laid out in the CETSAP, with a focus on the Quick Wins and the Big Wins.
- 2) Establish **near-term targets** with regular reporting to ensure Edmonton achieves its **2025 target of a 35% reduction** and its 2030 target of a 50% reduction in emissions relative to 2005 levels. Regular reporting will reveal where and when legislation is required to achieve these targets, ensuring that legislation is used sparingly and only when necessary.
- 3) Seek opportunities to **co-align COVID-19 recovery with climate change efforts and economic stimulus**. At the time of writing this recommendation, it appears that significant municipal, provincial, and federal economic recovery strategies are being developed and resourced. In many ways, these economic initiatives could be shaped to simultaneously also support efforts to increase climate change resilience. Our Committee has created a new priority of highlighting new or emerging opportunities to align stimulus and recovery activities with climate change efforts and we encourage Council to engage with the Committee and allow us to support COVID-19 recovery in any way we can.
- 4) As the world transitions to a low carbon future, we have the opportunity and responsibility to **implement changes that reduce instead of exacerbate societal inequalities and vulnerabilities**. This starts by using energy efficiency as a jumping off point to eliminate energy poverty, but it must go beyond that and the City has a long way to go to meet community expectations around energy justice. To do business differently means working with a range of

communities and also engaging Indigenous communities and nations as equal partners and knowledge holders. Energy justice must be built into all decision making processes in Edmonton.

ETCRC Priorities for 2021-2022

Overarching Committee Priorities - DRAFT

- Reflect the urgency of action, and focus on implementation of strategies.
 - Deep and broad action is needed to address the climate emergency and enhance resilience.
 - Timely action is needed to achieve strategy targets, with ongoing commitment to increased action and ambition to achieve the 1.5 degree pathway.
 - Prioritize action with immediate and long lasting benefit.
 - Support the suite of tools for implementation (regulatory, incentives, awareness, etc.).
- As climate change mitigation and adaptation go hand and hand, ensure both lenses are consistently applied in all transition works and actions (buildings, transportation, energy, etc.).
- Consider just and equitable transition in all actions.
- Ensure that metrics are established and applied to inform, measure and communicate strategy implementation progress.
 - Clear indicators and metrics are needed to inform actions and measure progress to targets (greenhouse gas emission mitigation, resilience, costs, jobs, and other co-benefits and impacts).
 - Support embedding of metrics into City departments to ensure climate mitigation and adaptation are considered systematically in decision-making and operations.
 - Annual performance assessment and reporting should be established.
- Support shared accountability of all City departments as the transition depends on systematic and holistic implementation of the strategies.
 - Every decision is a climate decision, and all departments have accountability in achieving climate goals.

Sub-Committee Specific Priorities - DRAFT

- All subcommittees' priorities include the overarching ETCRC priorities.
- Each subcommittee works to ensure City targets reflect limiting global warming to 1.5-degree C and enhancing resilience, as related to the focus of the subcommittee (e.g., Clean Energy Subcommittee assesses energy-related targets). Each subcommittee works to ensure actions, tools and pathways to achieve targets are identified.
- Committee Co-Chairs are *de facto* members of all Sub-Committees

Each subcommittee has identified additional specific priorities to its committee.

Strategy and Planning Sub-Committee

- The City partners with and mobilizes communities (business, academia, residents, etc.) and other governments to meet climate mitigation and adaptation goals.
- The City aligns its decision making with the international target of limiting global warming to 1.5-degree C.
 - The City applies science and evidence-based approaches to its decision-making regarding climate.
 - The City embeds climate mitigation and adaptation considerations systematically into decisions and operations.
 - The City establishes annual performance reporting.
- Support the City in building awareness and consideration of emergent climate and energy-related issues (e.g., scope 3 emissions) and areas of action not addressed in established strategies (e.g., waste management, carbon capture use and storage).

Chair: Kate Rich

Members: Sheena Wilson, Peter Amerongen, Geoffrey Wagner, Marc Huot, Grant Pearsell, Chelsea Donelon

Clean Energy Sub-Committee

- Edmonton is a thriving city powered by low carbon energy
- Edmonton is a hub for low carbon energy innovation and investment
- Edmonton uses waste as a resource
- Edmonton has resilient energy systems

Chair: Peter Amerongen

Members: Gregory Caldwell, Geoffrey Wagner, Chris Vilcsak, Sheena Wilson, Daniel Grist, Chelsea Donelon

Action on Buildings Sub-Committee

- The buildings that Edmontonians live, work and play in are emissions neutral and improve personal wellness
- Eliminate energy poverty
- Catalyze the local green building and energy efficiency industry
- Edmonton is planned, designed, developed and built to be climate resilient today and for future Edmontonians

Chair: Jacob Komar

Members: Gregory Caldwell, Peter Amerongen, Sheena Wilson, Chris Vilcsak

Transportation Sub-Committee

- Edmonton is planned, designed and built to be a vibrant carbon-neutral city
- Safe and accessible zero-emissions mobility
- Edmontonians reduce consumption-based emissions by supporting local businesses

Chair: Daniel Grist

Members: Jacob Komar, Klaas Rodenburg, Geoffrey Wagner, Michael Fleischauer

Adaptation Sub-Committee

- Edmonton is full of nature to support healthy people, emissions reductions, communities and carbon sequestration
- Expand carbon technology investment/opportunities and business in the Edmonton Metropolitan region
- Edmonton's communities, businesses and institutions are aware, connected, and prepared for climate change
- Edmonton's communities and urban environment are resilient to changing temperatures
- Edmonton is proactive in drought management to minimize social, economic and environmental impacts
- Edmonton's water supply is secure and safe for current and future Edmontonians
- Edmonton is a flood resilient community
- Edmontonians with regional partners are informed, prepared for, can respond to and recover from increasing frequency and severity of extreme weather events
- Edmonton's natural ecosystems continue to provide essential ecosystem goods and services such as clean air, clean water, and biodiversity
- Edmonton's food systems are resilient, reliable and secure

Chair: Grant Pearsell

Members: Klaas Rodenburg, Marc Huot, Kate Rich

Membership:

Terms of Reference for the ETCRC are included in the updated Bylaw 18881 document (Attachment #4) with additional details in the original Bylaw 17431 (Attachment #5).

At the first meeting of 2020, Shafraaz Kaba was elected and became Co-Chair with Chelsea Donelon. Chelsea stepped down voluntarily at the first meeting of 2021 and Camille Jasper-Faiyi was elected to replace her.

As of January 2021, current members were:

- Peter Amerongen,
- Gregory Caldwell,
- Michael Fleischauer,
- Marc Huot,
- Shafraaz Kaba,
- Klaas Rodenburg,
- Chris Vilcsak,
- Geoffrey Wagner,
- Sheena Wilson,
- Chelsea Donelon, and
- Jacob Komar.

The term for all existing members listed above ended April 30, 2020, however they were all recommended for additional 2 year terms.

Three members resigned in 2019: David Dodge, Kalen Pilkington and Ahsan Ahmed and recruitment was completed in early 2020 for a total of 4 new members. The new members selected were:

- Camille Jasper-Fabiyi,
- Daniel Grist,
- Grant Pearsell, and
- Kate Rich.

Corporate Outcomes and Performance Management

Corporate Outcome(s): The City of Edmonton’s operations are environmentally sustainable			
Outcome(s)	Measure(s)	Result(s)	Target(s)
Advance a thriving, resilient, sustainable economy and environment	City operations Greenhouse Gas Emissions	447,000 tonnes of carbon dioxide equivalent (2019) An increase of 5.5 percent over 2005 levels	50 percent reduction below 2005 levels (213,000 tonnes of CO2e) by 2030)

Advance a thriving, resilient, sustainable economy and environment	Community Greenhouse Gas Emissions	17,200,000 tonnes of carbon dioxide equivalent (2019) A decrease of 5.5 percent over 2005 levels	35 percent below 2005 levels (11,871,000) by 2035% reduction below 2005 levels
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Attachments

1. Sample Memo from ETAC re: City Plan and Edmonton Declaration, September 16, 2019
2. Sample memo from ETCRC re: CR_7754 Downtown District Energy Initiative, April 11, 2020
3. Sample memo from ETCRC re: CR_7576 Energy Transition Strategy November 9, 2020
4. Bylaw 18881 - Energy Transition Advisory Committee Bylaw Amendment No. 2
5. Bylaw 17431 - Energy Transition Climate Resilience Committee Bylaw