
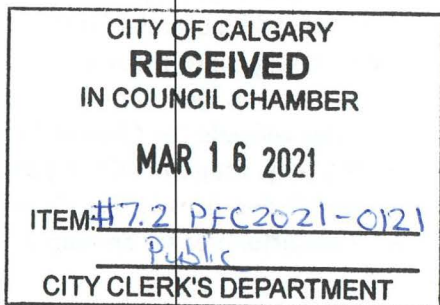








Growth and Development Climate Framework - Actions



The following actions are being undertaken as part of the Growth and Development Climate Framework and are aligned with the Calgary Climate Resilience Strategy Mitigation and Adaptation Action Plans.



Planning Continuum	Areas of focus	Actions taken
Policy 	Calgary Municipal Regional Growth Plan	Integration of climate policies with focus on a regional approach to managing and mitigating the impacts of climate change. Currently in draft.
	Municipal Development Plan	Integration of climate policies and approved climate targets as part of Part 2.6 "Greening the City". Completed.
	Guidebook for Great Communities	Encourages local area plans to incorporate climate change policies specific to community context and to include a climate risk assessment and identify strategies to mitigate those risks. Guidebook development complete and will be before Council for final approval on March 22, 2021.
	Local Area Plans	<p>The <i>Community Climate Risk Index</i> will create a Risk Profile for each community which will provide a baseline understanding of the climate-related risks most relevant to that community. The Risk Profile will inform decision-making to reduce climate-related risks within a variety of City programs and processes. For example, when a given community has a higher-than-average extreme heat risk score, insights about the drivers of that high risk score would be included in the Risk Profile (e.g. percent of paved surface area, area of tree canopy, or proportion of elderly people in the community). This would aid Planners in making informed decisions about intervention options. This tool will be piloted in 2021 on the Westbrook and Heritage Multi-Community Plans.</p> <p>Application of the <i>Integrated City Energy Map: (Energy Map)</i> The purpose of the Integrated City Energy Map (the Energy Map) is to visualize community greenhouse gas (GHG) emissions and</p>



		<p>energy use from buildings and transportation. The tool is in the design phase, with expected completion in 2021 Q1. It will generate a model that forecasts community GHG emissions out to 2050. Through scenario generation it can help identify and assess opportunities for GHG reduction. The Energy Map will have the ability, at a high level, to assess the economic viability of decarbonization scenarios and provide an indication of the best options to reduce CO2 emissions using a cost per tonne of CO2 abated metric. As with the Community Climate Risk adaptation tool outlined above, this tool will also be piloted on the Westbrook and Heritage Communities local area plan in 2021.</p>
	<p>Downtown Plan</p>	<p>The five 'Strategic Moves' within the draft plan are designed in part to support the goals and objectives of the Climate Resilience Strategy. The draft plan includes significant short-, medium-, and long-term actions to reduce vulnerability to high-risk climate hazards and long-term climate impacts, and to improve energy use and reduce GHG emissions in buildings and infrastructure. The Plan is still in the development stage.</p>
<p>Growth Strategy</p> 	<p>Citywide Growth Strategy – New Community Growth</p>	<p>Update to the <i>Business Case Evaluation Template</i> incorporating MDP 2020 climate policies and the use of the <i>Integrated City Energy Map</i>. In 2021, Administration will assess the potential for the Energy Map to model energy performance requirements and emissions of new communities and developments. This will help the Climate Team understand how the Energy Map can inform policy development and growth decisions in established areas and advise on opportunities for emissions reductions.</p> <p>Explore the climate-related risk assessment process for new community development in 2021.</p>
<p>Public Realm Implementation</p>	<p>Citywide Growth Strategy – Established Areas Growth</p>	<p>Opportunities exist to incorporate climate considerations. Future work.</p>

	<p>and Change; Transit Oriented Development; Main Streets</p>	
<p>Land Use</p> 	<p>Land Use Bylaw</p>	<p>Integrating a climate lens in the re-write of the Land Use Bylaw (ie. targeted interventions such as renewable energy requirements, Electric Vehicle infrastructure requirements and climate resilient landscaping requirements). The Land Use Bylaw review is in the scoping stage with a target completion date of 2025. Future work.</p>
	<p>Land Use applications</p>	<p>Continuing the pilot of the <i>Climate Resilience Inventory Form</i>. This process, which was piloted in 2020 will help socialize concepts, communicate best practices, and provide an understanding of targets and expectations for the reduction of GHGs and climate-related risks. This is a 'self-assessment' process built into the applications process. The pilot will continue through 2021. Refer to this link for more information: Building and Development lists and forms (CARLs) (calgary.ca)</p>
<p>Outline Plan</p> 	<p>Outline Plan applications</p>	<p>Piloting of the <i>Climate Resilience Inventory Form</i></p> <p>Investigate the use of the <i>Integrated City Energy Map tool</i> at the application stage. Future work.</p>
<p>Subdivision</p> 	<p><i>City's Design Guidelines for Subdivision Servicing</i></p>	<p>Opportunities exist to incorporate considerations such as factoring projected climate change into infrastructure design. Future work.</p>
<p>Infrastructure</p> 	<p><i>Public Infrastructure and Climate Risk and Resilience Assessments</i></p>	<p>Assessment processes developed in 2020 for Public Infrastructure Projects over a \$10 million threshold. In 2021, The City will explore its integration into Infrastructure Calgary's 2022 Capital Infrastructure Investment process (2023-2026 cycle) and will continue to develop a comprehensive set of Triple Bottom Line (TBL) and Resilience criteria for submissions requirements for Investment Funding. Climate change considerations, related to GHG emissions and reducing climate-related risk, are included. As the testing and use of the tool progresses through 2021, Administration will understand better how it could potentially be</p>

		utilized in growth and development decisions. Future work.
Development 	Development Permit Applications	Piloting of the <i>Community Climate Resilience Inventory</i> form on all Stream 4 applications. Ongoing.
Building 	Energy Performance	<ol style="list-style-type: none"> 1. Improve building performance requirements beyond current building code: <ul style="list-style-type: none"> – Support the implementation of energy step codes for new buildings – Prepare Calgary for the implementation of a retrofit building code 2. Investigate incentives: <ul style="list-style-type: none"> – Investigate policy approaches to provide monetary and non-monetary incentives to improve building performance 3. Enable innovative financing mechanisms: <ul style="list-style-type: none"> – Enable innovative financing mechanisms to fund improved energy performance. <p><i>Sustainable Building Policy</i> This policy ensures all City-owned and City-financed facility planning, designing, constructing, managing, renovating, operating, and demolishing is carried out in a sustainable manner, considers triple bottom line impacts, enhances The City’s reputation as a fiscally responsible municipal government and addresses the health and well-being of occupants. In 2021, The City will integrate specific climate considerations into the Policy, including requirement for Public Infrastructure Climate Assessments. Calgary's Sustainable Building Policy. On-going.</p> <p><i>Green Building Standards</i> In 2021, Administration will be scoping a <i>Green Building Standard</i> for new building and existing buildings. This would take the form of a comprehensive and consolidated program of performance standards and incentives. This type of program typically begins with a voluntary phase to help the development industry transition for when more stringent regulations come from other levels of government.</p>

		Further scoping is required before determining detailed resource impacts. Engagement with the building industry and internal stakeholders will be included in the scoping and development work. Future work.
Occupancy 	Energy Performance	In the residential sector, <i>Energy Labelling</i> is a key foundational action that is required to improve energy performance. It is intended to assist home-owners understand their energy use and requirements. Engagement will start in 2021.
Post Occupancy 	Energy Performance	<i>Commercial and Institutional Energy Benchmarking Program</i> : Educates and prepares building owners for future mandatory reporting and performance standards (ie. Green Building Standard); and identifies poor performing buildings for energy efficiency improvements. Building owners are invited to participate in exchange for access to energy data on how their building performs compared to other. As of January 2021, there were 212 buildings signed up to the program from 16 different participants. Seventy-three of those buildings are City-owned. Refer to the following link for more information: City of Calgary - Commercial and Institutional Building Energy Benchmarking Program Ongoing.

Other Supporting Initiatives		
Citizen Education and Outreach	Building Energy Performance & Climate Adaptation Information	<p><i>Climate Resilience Home Handbook</i>: Purpose is to educate home-owners on how to make their home more resilient to climate-related hazards for retrofits and new builds. This program will be launched publicly spring of this year and will be accompanied by a robust communication campaign. Ongoing.</p> <p><i>Solar Potential Map</i>: A resource for citizens to view the solar potential on existing buildings to help inform investment decisions in solar photovoltaic. This tool was launched in 2020. Refer to the following link for more information. Ongoing https://maps.calgary.ca/SolarPotential/</p>

Next Steps

The development of the above programs, processes and tools continues to evolve with new technologies and advancements in climate science, and new federal and/or provincial legislation. Administration will be bringing forward a five-year update to the Calgary Climate Resilience Strategy in 2022. As part of that update, new climate targets will be established that align with the federal direction towards net-zero ready by 2030 and net-zero by 2050. As a result, more aggressive actions will need to be taken to meet those targets.

