

Growth Applications and Calgary Climate Strategy

Introduction and Overview

This attachment outlines the relationship between the redesigned Growth Application process and the Calgary Climate Strategy - Pathways to 2050. Evaluation of Growth Applications is one part of the broader Development Approvals Continuum, from the Municipal Development Plan through to Building Permit and post-occupancy. Calgary's Climate Strategy is a consideration across the continuum, with important actions under consideration across citywide and local area policy, as well as standards, regulations, and business practices. Although the evaluation of individual Growth Applications considers factors that relate to climate mitigation and adaptation, the new approach works across the continuum to leverage those parts of the approvals process that have the greatest potential for moving towards The City's objectives in relation to climate.

Impact on Climate and Greenhouse Gas (GHGs) Emissions from New Community Growth

Where and how Calgary grows has important implications for the mitigation and adaptation goals of the Calgary Climate Strategy, and the overall social, economic, and environmental sustainability of our city. Building new communities is the most GHG-intensive way to grow. Analysis indicates that our climate goals will not be met through current city-building practices where the majority of population growth occurs in new communities. Although policies in the Municipal Development Plan and Calgary Transportation Plan have made progress in terms of increasing densities, greater mix of uses and housing forms, and a wider range of mobility choices, additional action is needed to meet The City's Climate Strategy goals. Current growth patterns that favor predominantly low-density housing forms and new community development in more auto-oriented locations drive up emissions and climate risk.

Development of land at the urban edge consumes and alters natural assets, such as grasslands, forests and waterbodies. These assets typically help to manage overland and river flooding, reduce the urban heat island effect, increase biodiversity, maintain water quality, and offer other risk-reducing services. As supported by the Municipal Development Plan, growth and mobility improvements in the established area have the potential to reduce per capita GHG emissions and create a more resilient city. Regionally, enabling growth, even greenfield growth, within the City of Calgary can lead to more advantageous outcomes in terms of proximity to amenities, employment, and services, relative to dispersion of growth across the broader region.

Under the umbrella of the Climate Strategy, The City is developing guidelines so that future new growth can be built to a net-zero emissions standard. Until then, careful consideration on growth approvals must be applied, as all developments that are not built to net-zero energy standards now will have to be retrofitted. This is a substantial and partially avoidable expense to meet citywide emissions target of net-zero by 2050.

Growth Applications and the Planning Approvals Continuum

In response to Council direction, the evaluation of Growth Applications is shifting to focus primarily on whether growth in a given area represents the 'right place at the right time'. This is to be evaluated through a criteria-driven process that transparently and empirically assesses the merits of a given area in terms of ensuring growth is contiguous, access to amenities and services is as abundant as possible, and the most efficient use is made of capital infrastructure and operating investments.

While these considerations, particularly in terms of contiguity, accessibility, and efficiency, overlap with climate considerations, they are by no means the whole picture in terms of environmental resilience. With that in mind, the new process for Growth Applications explicitly relies on the broader Development Approvals Continuum to ensure that, in addition to growing in the ‘right place at the right time’, new communities also grow in accordance with ‘the right plan’.

From urban design to stormwater management, to the mix and locations of land uses and housing types, positive climate outcomes are in large part driven by policy (in both the Municipal Development Plan and applicable Area Structure Plans), development standards and guidelines (such as the Design Guidelines for Subdivision Servicing), business practices, approaches to risk and innovation in the development approvals process, and building and energy codes. At all these stages in the Development Approvals Continuum, The City sets out requirements to be met by new development, enforceable through various conditions and approvals.

The new process for Growth Applications (and predecessor Growth Management Overlay removal) differs from these in that it is a consideration of where City capital infrastructure and operating investment to enable growth makes sense from a social, environmental, and financial perspective, rather than a regulatory evaluation of proposed plans. This means that support for a Growth Application is fundamentally about making the decision to enable growth already contemplated and planned through the Municipal Development Plan and an Area Structure Plan. As such, climate enters into the analysis in terms of the suitability of the location relative to contiguity, accessibility, and efficiency. The new process for Growth Applications depends on these other processes to ensure that, beyond being in the ‘right place at the right time’ new development is also delivering the ‘right plans’.

Finally, beyond the Development Approvals Continuum, The City’s Service Plan and Budget process will be, more than ever, a critical venue for ensuring that decisions around allocation of limited resources to support growth citywide (as well as non-growth-related needs) align with Council’s priorities and The City’s key policy objectives with respect to social, environmental, and economic resilience and consider the pace and balance of citywide growth.

Calgary Climate Strategy and the Growth and Development Climate Framework

Although the Growth Application stage has limited influence as a decision point for climate action beyond focusing development in the most advantageous areas in terms of accessibility, Administration is implementing a comprehensive suite of actions to address the climate impacts of new community growth across the Development Approvals Continuum through the Calgary Climate Strategy and the Growth and Development Climate Framework.

Calgary Climate Strategy

The Calgary Climate Strategy identifies that rapid suburban growth and the associated removal of natural and agricultural landscapes for development significantly increases Calgary’s GHG emissions and results in loss of key ecosystem services that buffer communities from the impacts of climate change. To help mitigate these impacts, specific actions are planned or underway include:

1. Update the Municipal Development Plan and the Calgary Transportation Plan to incorporate the next zero emissions targets and support the relevant actions of the Mitigation Plan.
2. Incorporate climate mitigation and adaptation into new Area Structure Plans.

3. Use modelling to determine the necessary growth split to achieve 2030 and 2050 net zero targets.
4. Ensure climate and energy planning are strategic priorities in decisions that initiate new community growth.
5. Develop and implement Net Zero Emissions and Climate Resilient Design Guidelines for new communities.
6. Align the buildout of new communities with the provision of active mobility infrastructure and transit services in each built-out phase and prioritize transit-oriented development in all phases.
7. Prioritize climate mitigation and adaptation in the review of outline plan applications.
8. Incentivize and prioritize energy efficient development in new communities through land use bylaw rules and policy direction.

Growth and Development Climate Framework

The Growth and Development Climate Framework is a set of Council-adopted actions to integrate climate mitigation and resilience measures into the planning approvals continuum. The Framework reflects Calgary's climate goals of achieving net zero emissions by 2050 and the reduction of climate risks through our city building processes. Specific initial actions relevant to new community growth that are planned or underway include:

1. Infrastructure standards review.
2. GHG reductions and climate resilience through community design.
3. Incentives to support climate design innovation.
4. Land use bylaw updates.
5. Climate Resilience Inventory forms for development applications.
6. Streamlining development reviews and approvals for high-performance developments.

Using Climate Analysis Tools to Influence Growth and Investment Decisions

Given that the evaluation criteria for each Growth Application is moving towards being threshold based and empirical (Attachment 6), the climate analysis tools currently available are not positioned to meaningfully evaluate whether or not an individual Growth Application should proceed at a given time. Rather, Administration is considering the continued use of the following tools to gather information at the Growth Application stage for purposes of:

- education and awareness;
- providing transparency;
- supporting climate-oriented implementation actions at subsequent stages of the Development Approvals Continuum (e.g., Outline Plan, Land Use, Subdivision, Development Permit, Building Permit, etc.);
- decisions on a balanced approach to citywide growth; and
- prioritizing decisions within the corporate Service Plans and Budgets process.

1. GHG Modelling

GHG modelling includes operational emissions from buildings and emissions from transportation at full buildout of each new community. Growth Applications are also modelled based on the adoption of a standard recommended package of clean energy building technology (including installation of solar panels and utilization of 100 per cent of the average solar potential of the typical Calgary residence, substituting natural gas fired heating systems with electric heat pump technology, and improving energy performance of homes to align with the R2000 standard), which typically shows an improvement of approximately 30% lower GHG emissions. These improvements may be considered at subsequent stages of the development approval continuum, in particular at building permit.

2. Climate Risk Statement

The Climate Risk Statement is a standardized template that assists proponents in recognizing and self-identifying which climate hazards a Growth Application area is exposed to and what measures may reduce climate risk. All areas in Calgary are exposed to extreme heat, drought, shifting seasons, heavy precipitation, severe storms and winter storms, and some areas may be exposed to wildfire and river flooding. Administration can share with applicants a rating for the integration of proposed risk reduction measures for each specified climate hazard, as well as an overall Climate Risk Sensitivity Score. This may lead to revisions of the Growth Application or be used at subsequent points in the development approvals continuum.

Ratings for Growth Applications may range from 'poor' (indicating that the applicant has made unspecific references to climate adaptation measures that may be considered for some climate hazards) to 'very good' (indicating a strong intention to respond to all hazards that a Growth Application area is exposed to with specific climate adaptation practices that exceed requirements and expectations). Proponents can also receive advice from Administration on how to improve their Climate Risk Sensitivity Score, such as use of climate-resilient infrastructure design standards that account for projected climate change. These statements may be used to inform decision making and designs during subsequent phases of development.

3. Natural Assets Valuation

Natural assets provide valuable ecosystem services that mitigate some risks associated with climate change, such as stormwater absorption, urban heat reduction, carbon sequestration, and support for biodiversity. The Natural Assets Valuation template accounts for the natural assets (such as wetlands and grasslands, but excluding lands used for food production purposes) that are present predevelopment and proposed to be protected as land develops. The percentage loss of natural assets can be calculated for each Growth Application based on disclosures provided by the applicants, and recommendations may be provided by Administration to help inform subsequent stages in the development approvals continuum.