



# Climate Action through the Land Use Bylaw

Summary of Proposed Amendments

January 23, 2023



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January 23, 2023

# Project Background

The City of Calgary is committed to supporting Calgary's future as a healthy and green city. The recently updated Calgary Climate Strategy sets out The City's climate vision and targets to guide the overall objectives of our climate action. The Climate Strategy also provides strategic direction for climate-related programs and actions that are necessary to reduce greenhouse gas emissions and improve Calgary's climate resilience. The associated, Climate Implementation Plan prioritizes individual programs and actions to accelerate improving energy use and reducing climate risk.

Several of the prioritized action items refer to supporting and incentivizing climate innovation, energy efficient development, and deep energy retrofits through updates to key guiding legislation including the Land Use Bylaw. In response, Planning & Development Services is proposing an initial suite of climate mitigation -focused amendments to the Land Use Bylaw. The goal of these amendments is to improve the energy performance of Calgary's building stock by making it easier to retrofit existing buildings and offer incentives for new high-performance buildings. The amendments also include changes to the administrative section of the Land Use Bylaw and introduction several climate change-related terms and definitions

This work will bring forward "quick win" amendments that are relatively easy to implement, while at the same time advance the conversation about more complex amendments necessary to reduce greenhouse gas emissions and climate risks.

Planning & Development Services is excited to share **Climate Action through the Land Use Bylaw**.

# Highlights

## **We are committed to taking climate action to support Calgary's future as a healthy and green city**

- The City of Calgary's Climate Strategy includes a range of actions intended to establish requirements and deliver net zero and climate resilient community design in the future.
- One of the Climate Strategy action items is to incentivize and prioritize energy efficient development in all areas through the Land Use Bylaw.

## **Enabling climate action through the Land Use Bylaw focuses on finding tangible solutions, that are impactful, easy to implement, and beneficial.**

- The City recognizes there are opportunities to take climate action and help reduce GHG emissions by making buildings more energy efficient.
- The City will be proposing amendments to Land Use Bylaw 1P2007, to enable high performance, energy efficient buildings.
- With The City's future commitment to updating the Land Use Bylaw (LUB renewal) comes an opportunity to implement and test a range of climate-supportive amendments now.

## **The City is committed to supporting all building and development industry partners in their efforts to reduce greenhouse gas emissions**

- Our approach to onboarding industry is to introduce, test and implement new incentives, bylaws, policies and regulations at a pace they can absorb, from an economic and manufacturing perspective.
- We are currently developing and training our teams and subject matter experts in planning our urban environment and city through the lens of climate action and reducing climate risk. This next four-year period is our first concentrated effort to achieve net-zero emissions by 2050, as a corporation – the Climate Strategy is our guide; the Climate Implementation Plan is our direction.

# Proposed Amendments

# Development Permit Exemption for Energy Efficient/Insulation Retrofits

## Description

To unlock an existing building's energy saving potential, building envelope retrofits to enhance insulating capabilities are necessary to reduce heating and cooling demands.

The Land Use Bylaw currently exempts insulation (energy) retrofits from Development Permit requirement for buildings located in the Low Density Residential Districts (e.g., R-1, R-C2 Districts). This proposed Land Use Bylaw amendment will expand this exemption to all land use districts which may include the following building types: multi-residential, commercial, industrial and institutional buildings (in any mix of uses and building configurations).

A building permit ensuring compliance with the National Building Code of Canada 2019 (Alberta Edition) is still required for these types of building alterations.

## Anticipated Benefits

- Simplify the municipal permitting process and 'get out of the way' of people actively improving Calgary's building stock and implementing Council's climate objectives.

- Unlock Calgary's energy saving potential within its existing building stock.
- Promote and incentivize upgrades to existing building stock.
- Reduce the energy required to heat and cool a building, thus reducing greenhouse gas (GHG) emissions.
- Promotes extended building longevity and adaptive reuse, while reducing construction waste and GHG emissions generally associated with new construction.

## Questions

- How do we strike a balance between improving Calgary's energy efficiency while celebrating and respecting what makes our communities so great?
- Are there situations that would warrant additional design considerations? For example, character and heritage buildings?
- Should the City ensure that energy building retrofits meet a minimum efficiency standard to be eligible for a Development Permit exemption?
- What is the City doing regarding the Building Permit process and potential required variances, etc?



Figure 1.0 – The William Reid School removed the entire building exterior and replaced it with a high performing building envelope. *Photo courtesy of ACE*

# Gross Floor Area Exemptions for High Performance Wall Assemblies and Mechanical Equipment

## Description

High performance building wall assemblies and mechanical equipment often require additional space compared to traditional building systems and mechanical systems.

To incentivize the construction of high-performance buildings, this proposed Land Use Bylaw amendment is intended to exempt building floor area dedicated to high efficiency building systems and utilities from a gross floor area definition and floor area ration calculations.

This exemption is expected to be particularly beneficial to larger developments where the potential for gross floor area exemptions is greater.

## Anticipated Benefits

- Remove an existing Land Use Bylaw barrier
- Incentivize the development of high-performance buildings in Calgary.
- Reduce Calgary's GHG emissions and improve buildings' resilience.

## Questions

- How do we determine what utilities and building systems are energy efficient and eligible for the proposed exemption?
- Are there other development incentives or exemptions that we can explore for future work?



*Figure 2.0 – The Central Public Library achieved a LEED GOLD designation*  
**Photo Source: The City of Calgary**

# Development Authority Discretion & Bylaw Definitions

## Description

Land Use Bylaw, Section 35, directs the Development Authority to take into account a range of legislative, planning, and technical considerations when making decisions on discretionary development permits. This suite of bylaw updates is intended to clarify the Development Authority's role with respect to considerations of climate mitigation and adaptation measures during reviews and decisions on discretionary development permits.

Administration would also like to engage external partners regarding similar updates to Section 38 which provides guidance on applying conditions to individual discretionary development permits.

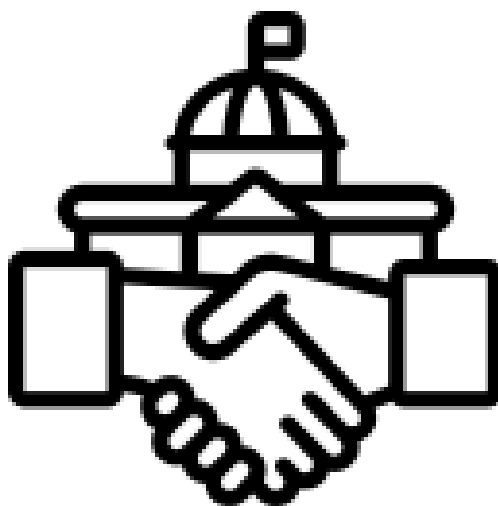
Concurrently, Administration would like to introduce several climate change-related definitions into the Land Use Bylaw required to support the above noted amendments as well as future land use bylaw work.

## Anticipated Benefits

- Promote climate mitigation and resiliency through the Land Use Bylaw by introducing climate related language and rules into Land Use Bylaw 1P2007.
- Provide clarity on the Development Authority's role in making decisions and conditioning discretionary development permit applications on matters related to climate resiliency and GHG reduction.

## Questions

- What development matters should the Development Authority be able to consider?
- Will additional focus on climate mitigation and resilience increase the cost of land development? What is the potential impact on housing affordability?
- Should similar development authorities be applied to Land Use Bylaw 1P2007, Permitted Uses?





# High Performance/Energy Efficient Mechanical Screening Review

## Description

Mechanical screening for high performance buildings often requires flexibility in the type, location, and size of the utility. Certain building types such as rowhousing or townhomes, present limited options with respect to the placements of this type equipment.

The Land Use Bylaw requires all exterior mechanical systems and equipment to be appropriately screened in all multi-residential and mixed-use land use districts. Although many types of mechanical units and their screening typically do not trigger Land Use Bylaw relaxations at the time of Development Permit approvals, some minor challenges have been recently identified during inspections of energy efficient development projects.

There are often relatively simple site and building design solutions available (e.g. fencing, landscaping) that allow exterior mechanical equipment to perform per manufactures specifications, while conforming to the existing screening requirements of the Land Use Bylaw. Notwithstanding, Administration would like to

engage with external and internal partners to identify potential improvements to the existing Bylaw rule and/or development approvals process.

## Anticipated Benefits

- Promote the use of energy efficient mechanical equipment.
- Provide clarity on Development Permit requirements for mechanical screening and allow for flexibilities on location and screening requirements.
- Reduce conflicts between Development Permit approvals and Development Inspections and occupancy requirements.

## Questions

- Does creating flexibilities for mechanical utilities require an amendment to the Land Use Bylaw or can this be achieved through Development Permit process improvements?
- Are there situations where energy efficient mechanical equipment does negatively impact the use and enjoyment of a property?



*Figure 3.0 – Electric heat and cooling pumps are energy efficient mechanical solutions. However, unlike a more conventional gas-powered furnaces, electric heat pumps require access to fresh air and therefore need to be located outside.*  
**Photo courtesy of City Manager's Office**