

## IMPLEMENTING MANDATORY ENERGY LABELLING FOR NEW CONSTRUCTION

### Recommendation

1. That the February 27, 2024, Urban Planning and Economy report UPE01755, be received for information.
2. That Attachment 4 of the February 27, 2024, Urban Planning and Economy report UPE01755 remain private pursuant to section 27 (privileged information) of the *Freedom of Information and Protection of Privacy Act*.

<b>Requested Action</b>	Information Only		
<b>ConnectEdmonton's Guiding Principle</b>	<b>ConnectEdmonton Strategic Goals</b>		
<b>CONNECTED</b> This unifies our work to achieve our strategic goals.	<b>Climate Resilience</b>		
<b>City Plan Values</b>	LIVE		
<b>City Plan Big City Move(s)</b>	Greener as we Grow	<b>Relationship to Council's Strategic Priorities</b>	Climate Adaptation and Energy Transition
<b>Corporate Business Plan</b>	Transforming for the Future		
<b>Council Policy, Program or Project Relationships</b>	<ul style="list-style-type: none"> <li>• C627 - Climate Resilience Policy</li> <li>• Edmonton Community Energy Transition Strategy</li> </ul>		
<b>Related Council Discussions</b>	<ul style="list-style-type: none"> <li>• November 1, 2023, UPE01816 Executive Committee report, Annual Climate Strategies Update</li> </ul>		

### Previous Council/Committee Action

At the June 15, 2022, Executive Committee meeting, the following motion was passed:

That Administration provide a memo that outlines opportunities, challenges and options in implementing mandatory energy labelling for new construction.

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### Executive Summary

- The Community Energy Transition Strategy includes an action to explore mandatory energy benchmarking, disclosure and labelling bylaws. Achieving Edmonton's emissions reduction targets requires addressing building emissions, both for new and existing buildings.
- An energy label shows approximately how much energy a home uses based on standard operating conditions. The City of Edmonton has had a voluntary EnerGuide energy labelling program for new and existing homes since 2017.
- Edmonton has options to advance energy labelling in new construction, including:
  - regulating energy labelling through a bylaw; offering incentives,
  - partnering with stakeholders to find new ways to share energy labelling information and increasing the accessibility of Edmonton's Home Energy Map, and
  - increasing marketing efforts to promote energy efficiency educational resources.

### REPORT

Edmonton has set ambitious climate targets, as outlined in The City Plan and the Community Energy Transition Strategy. This includes reducing community greenhouse gas emissions 50 per cent by 2030 and reaching net zero emissions per person by 2050. Buildings are a significant source of energy consumption in Edmonton, making up approximately 36 per cent of community greenhouse gas emissions. The Community Energy Transition Strategy includes actions to support this transition related to energy labelling, disclosure and benchmarking. Administration previously provided a memo to Council in response to the motion, with the commitment to bring additional information back within a Council report.

### Energy Ratings and EnerGuide

An energy label provides information to consumers on how much energy a product uses. EnerGuide is Canada's energy rating and labeling system that certifies the energy efficiency of products and homes (new and existing). Many major appliances in Canada are required to have energy labels. The EnerGuide rating allows consumers to compare how much energy a major household appliance (such as a fridge or dishwasher) uses to inform purchasing decisions.

EnerGuide for Homes, developed by Natural Resources Canada, also provides a standard measure for a home's energy performance, showing approximately how energy efficient a home is while allowing consumers to compare it with similar homes. The home EnerGuide label shows the gigajoules (GJ) of energy per year that a house uses, and breaks down the energy used by source (natural gas and electricity), allowing a consumer to calculate the anticipated energy costs of the home. The label is created based on an assessment by a professional energy auditor. Unlike major appliances, there is no requirement for homes to have EnerGuide labels. As a result, the energy performance of buildings is not readily available and the estimated annual energy consumption of a building is not always known. EnerGuide for Homes is the most popular energy label in Canada, and is applicable to both new and existing homes, including single detached houses, duplexes, triplexes and row houses (Attachment 1).

The City of Edmonton has had a voluntary EnerGuide home energy labelling program since 2017, resulting in the participation of more than 10,000 new and existing homes of which 6,039 labels

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have been made public on Edmonton's Home Energy Map.<sup>1</sup> EnerGuide evaluations are required for participants in Edmonton's recent climate programs, such as the Clean Energy Improvement Program (CEIP), as well as those receiving Canada Greener Homes grants or loans. The City has also published a checklist of questions for potential buyers to ask their realtors when buying a home, including asking for an EnerGuide label. Administration estimates that more than 25 per cent of new homes currently receive an EnerGuide label; however, about 80 per cent of new homes built in Edmonton conduct energy modelling, which is one of the steps required for producing the EnerGuide label, and makes up the majority of the label cost. The City's voluntary EnerGuide labelling program offered financial incentives (to home builders and home retrofitters) and non-financial incentives in some years such as awards and recognition benefits, such as being featured on the City's Champion Builder website.

Other jurisdictions have implemented programs related to energy labelling (Attachment 2). Most notably, the City of Calgary is planning to implement mandatory EnerGuide labelling for new homes in 2024; Calgary had a voluntary version of the program over 2023. The Town of Canmore has had a mandatory EnerGuide labelling program since 2020, which also includes both incentives for higher performance and penalties for lower performance.

### Opportunities

The primary opportunity for using EnerGuide in a mandatory program is for single detached homes, duplexes, triplexes, row houses, and multi-unit residential buildings that are less than three stories tall and less than 600 metres squared (m<sup>2</sup>). Non-residential and large residential buildings do not have an EnerGuide option.

Implementing mandatory energy labelling on new home constructions supports energy literacy and provides consumers with information on the expected energy usage of their home. Energy efficiency improvements are often "invisible" from an occupant's perspective, and energy labelling provides a way to share information about a building's performance. Energy labelling is an information tool for home occupants, as well as policymakers. The EnerGuide rating provides a basis for Natural Resources Canada to assess the estimated greenhouse gas emissions of buildings and offers data to track progress on emission reduction trends and changes in the home building industry.

A mandatory energy labelling program would directly support the energy advisor industry, creating more "green" jobs in Edmonton. Increased energy advisor capacity and energy modeling expertise in Edmonton would also help prepare for the increased energy performance requirements that are anticipated to come in future building codes. Energy labels also offer a promotional tool for builders to market their more energy efficient homes.

### Challenges

The primary challenge for implementing a mandatory energy labelling program for new construction is the cost. The cost of an EnerGuide assessment for a new home is estimated to cost a maximum of \$500, but includes energy modelling and blower door testing that may

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<sup>1</sup> Edmonton's Homes Energy Map. <https://homes.changeformclimate.ca/energy-mapping/>

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already be performed as part of energy code compliance. Administration has estimated that about 80 per cent of new home construction applications are completing energy modelling today, as they follow the performance pathway of the energy code.

Stakeholders have flagged that housing affordability is a concern. There is a potential challenge that the cumulative cost from multiple climate actions could impact upfront construction affordability. Work is still needed to identify climate actions, impacts and cost implications in the planning and development continuum, energy labelling could be included in the framework for consideration with other actions. Not all climate actions have the same impact, some actions have direct greenhouse gas (GHG) reduction potential, while others (such as energy labelling) have indirect or enabling impacts. Some stakeholders have raised challenges regarding the accuracy of the label, its “point in time” limits, and that the label does not identify fuel switching technology opportunities that would support net zero pathways.

There are also potential awareness and timing challenges. Lack of awareness and understanding of energy labelling, how it works, and the value it brings, could limit support for the program. Energy labels on new construction homes are provided after the home has been constructed, at which point energy efficiency improvements are less common. However, the label would then be available for future homebuyers to understand the home’s energy efficiency. Some stakeholders identified that there could be a challenge related to delaying occupancy, due to the energy assessments needing to be completed on the finished buildings. This could be exacerbated if there is a shortage of qualified energy advisors to deliver the EnerGuide program. This challenge could be overcome with intentional program design.

### Options

Administration identified several preliminary options for implementing mandatory energy labelling for new construction, based on The City Plan’s levers of change. These options are detailed in Attachment 3.

- *Policy and Regulation* - The City could develop a bylaw to require energy labelling for new construction. Further research would be necessary to determine the form a bylaw of this type would take, the impacts regulation would have on stakeholders, and the limits of the City’s authority and risks of passing a bylaw in this space.
- *Incentives* - The City could provide more comprehensive financial and non-financial incentives to support energy labelling for new construction, and for sharing energy labels publicly via Edmonton’s Home Energy Map. EnerGuide incentives for new homes have been available since 2017 through City of Edmonton programs. However, new home participation has dropped significantly since 2021 given that the primary focus of Home Energy Retrofit Accelerator (HERA) program marketing efforts focused on existing homes.
- *Partnerships and Advocacy* - The City could work with the Realtors Association and other local governments to share energy labelling information to promote energy efficiency in the region and increase the amount of information available at time of sale.
- *Activation* - The City could increase marketing efforts to better share information and resources to increase the public’s knowledge about energy efficiency, as well as make educational

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materials available in accessible formats, including for people with first languages other than English.

### Legal Implications

The City has authority to pass bylaws for the well-being of the environment within a municipal scope, including programs that deal with climate change adaptation, greenhouse gas emission reduction and the conservation and efficient use of energy. However, further work is needed to identify the effects that the regulation of energy labelling through bylaw would have on stakeholders, and to determine the form a bylaw should take to ensure that regulations are justified and will lead to the intended effects. See Private Attachment 4 for details.

### Community Insight

Administration conducted targeted engagement to collect preliminary feedback from stakeholders including meetings with the Emission Neutral Building Industry Advisory Group (ENBIAG), the Energy Transition and Climate Resilience Committee (ETCRC) and public surveys (Attachment 5).

The City of Edmonton's 2023 Climate Change and Energy Perceptions Report included responses from 1,004 Edmonton residents and found that 54 per cent of respondents were aware of the EnerGuide program (including 61 per cent of homeowners and 40 per cent of renters)<sup>2</sup>. Seventy-nine per cent of respondents agreed that having an EnerGuide evaluation would be useful when renovating their home and 74 per cent agreed that they would like to see an EnerGuide label or evaluation when buying a home.

Unlike the survey results, targeted stakeholder feedback was mixed. Many industry stakeholders believe that a mandatory labelling program for new homes will have a low cost, but also have a limited impact on achieving climate goals. Industry stakeholders did not actively support or resist mandatory labelling. Some stakeholders indicated that enhancing consumer awareness and information could lead to more energy-efficient construction. Stakeholders identified challenges related to costs, potential time delays, and the market misalignment that building owners might prioritize lower initial costs where tenants pay utility costs. ETCRC suggested that the City could fund EnerGuide evaluations for people who could not afford them and they also encouraged outreach with the public on the value of energy efficiency, including publishing materials in multiple languages. Additional engagement would be required prior to implementing a mandatory energy labelling program.

### GBA+

The main equity consideration of implementing mandatory energy labelling is how the shift towards increased energy efficiency in the market could potentially impact housing affordability and property values. This includes both increased costs for new homes which are more likely to be built more efficiently, and a loss in value for older, less efficient properties whose owners do not have the means to pay for energy efficiency upgrades. Increased capital costs may be offset

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<sup>2</sup> Narrative Research for the City of Edmonton "2023 Climate Change and Energy Perceptions Report", July 2023.

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by reduced utility costs, but this may not translate into savings for tenants. Implementing a mandatory energy labelling program should be done alongside equity-focused work such as energy poverty reduction programs.

The value of energy labelling requires education and understanding on what the labels mean and how to apply the information in decision making. Educational materials should be made available in accessible formats and consider the needs of people with first languages other than English.

Vulnerable populations and low-income people and families are disproportionately impacted by climate change. Actions undertaken by the City should collectively aim to address increased energy poverty during the winter, less adaptability of vulnerable populations and low income people to extreme temperatures, and higher overall costs to retrofit buildings at a later date.

### **Attachments**

1. EnerGuide Technical Information
2. Jurisdictional scan
3. Options for Implementing Mandatory Energy Labelling for New Construction
4. PRIVATE Confidential Legal Advice - Legal Implications of Mandatory Energy Labelling
5. Stakeholder Feedback