



A Community Energy
Transition Strategy Policy
Brief

Edmonton

**Mandatory Energy
Labelling & Disclosure
2019**

edmonton.ca/energytransitionupdate

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“In order for Edmonton to remain within its carbon budget all existing buildings must be net zero carbon by 2050.”

INTRODUCTION

On August 27th, 2019, Edmonton City Council declared a Climate Emergency and requested that Administration develop an updated Community Energy Transition Strategy with emissions targets and actions aligned with the Paris Agreement. Modelling results presented to Council demonstrated that Edmonton was not on track to limit its contribution to global climate change at a level aligned with 1.5 degree average global temperature increase. Administration modelled an illustrative pathway to achieve the level of emissions reductions necessary which included 23 measures divided into six climate shifts. Climate Shift 3, titled Emissions Neutral Buildings, demonstrated that in order for Edmonton to remain within its carbon budget all existing buildings must be net zero carbon by 2050¹. Clearly, transformational change within our existing homes and buildings is critical in order to achieve a low carbon future in Edmonton.

Achieving energy efficiency and greenhouse gas reductions in existing homes and buildings is a major challenge for many reasons such as asset diversity, low cost of energy and a market failure to value energy efficiency. Fortunately, for decades, governments world-wide have been working to solve this challenge, and energy labelling and disclosure policies are prominent and have demonstrated success.

Since 2006 all 28 European Union member states have required energy performance certificates for all buildings, the details of which must be provided to prospective buyers/tenants at time of construction, rental or sale.² A more recent phenomenon in North America, as of January 2019 more than 30 cities, ten states, one county, and one province have established energy benchmarking and transparency requirements covering public,

¹ City of Edmonton. “Getting to 1.5 C: A Discussion Paper”. July 2019. https://www.edmonton.ca/city_government/documents/PDF/GettingTo1-5DiscussionPaper.PDF

² Presentation: “Home Energy Labelling Program, Deep Dive: Part 1.” Home Energy Labelling Program for Cities. Rocky Mountain Institute. May 9, 2019. pp. 68. Online access restricted to certain users: <https://3.basecamp.com/3305044/buckets/12077969/uploads/1787227215>

commercial, residential, and/or multifamily buildings.^{3 4} In the United States more than 11 billion square feet of large building floor space undergoes mandatory benchmarking and disclosure annually⁵.

Specific to Canada, the Pan-Canadian Framework on Clean Growth and Climate Change was released by the federal government on December 9, 2016. The plan outlines actions to meet emissions reduction targets and grow a low-carbon economy. Included in the framework is a commitment to making building energy labelling mandatory nation-wide:

“Federal, provincial, and territorial governments will work together with the aim of requiring labeling of building energy use by as early as 2019. Labeling will provide consumers and businesses with transparent information on energy performance.”

While the Government of Canada convened a working group to help achieve this commitment, they are also actively identifying and addressing barriers to implementation. In the meantime, energy labelling programs are taking place in many Canadian jurisdictions and in 2016 Ontario began mandatory reporting of energy consumption for large buildings.

How does energy labelling and disclosure work?

Existing market-led energy efficiency and clean energy improvements are not happening fast enough to achieve the Paris Agreement’s target of limiting global average temperature change to 1.5 degrees. As a result, Edmonton’s Community Energy Transition Strategy employs a market transformation approach, where strategic action by governments is needed to encourage citizens and businesses to invest in energy efficiency, energy conservation and clean energy solutions. To this end, since its approval in 2014 the Strategy’s implementation has followed this four-stage market transformation approach:

³ United States Department of Energy. “Benchmarking & Transparency: Resources for State and Local Leaders”. Page 2. January 2019.

⁴ Cassidy, Alecia. “How Does Mandatory Energy Efficiency Disclosure Affect Housing Prices?” Page 2. https://www.dropbox.com/s/h5pcc0hym10hx5m/Cassidy_Alecia_JMP.pdf?dl=0, University of Alabama, 2019.

⁵ BuildingRating.org. “U.S. Building Area Covered Annually”. February 2019. <https://www.buildingrating.org/graphic/us-building-area-covered-annually>

“Existing market-led energy efficiency and clean energy improvements are not happening fast enough to achieve the Paris Agreement’s target of limiting global average temperature change to 1.5 degrees.”

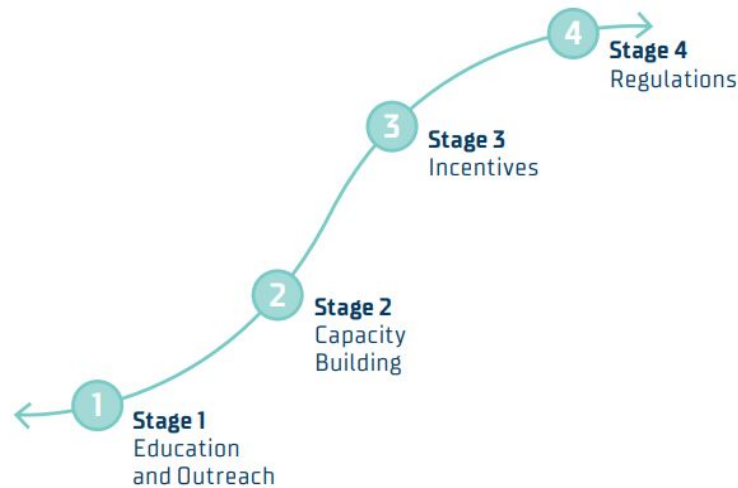


Figure 1: Market Transformation Approach

The approach seeks to transform markets by strategically moving through four stages: education and outreach, capacity building, incentives, and finally regulations. Given that the current marketplace does not accurately value energy efficiency, there is a demonstrated need to stimulate market transformation to properly value energy efficient homes and buildings. Energy disclosure and labelling is intended to be a tool to transform the market by providing clear information; allowing market actors to better assess and compare the energy performance of buildings. Disclosure and labelling can do two things:

1. Reward better performing buildings in real estate transactions, by highlighting differences between buildings, and
2. Provide comparisons to inform homeowners, building owners and operators on benchmark performance of similar archetypes, which can drive building improvements by showing what is possible.

Past work conducted by Dunskey Energy Consulting on behalf of the City has found compelling evidence that disclosure and labelling programs can help transform markets and encourage energy efficiency⁶ ⁷. This is done in the residential market by increasing the value of energy efficient homes and encouraging energy efficiency improvements as illustrated in Figure 2.

⁶ Dunskey Energy Consulting & The Delphi Group. “Program Design Manual: Large Building Energy Reporting & Disclosure Pilot”. May 2017.

⁷ Dunskey Energy Consulting. “Home Energy Performance Labeling: Pilot Program Manual”. May 2017.

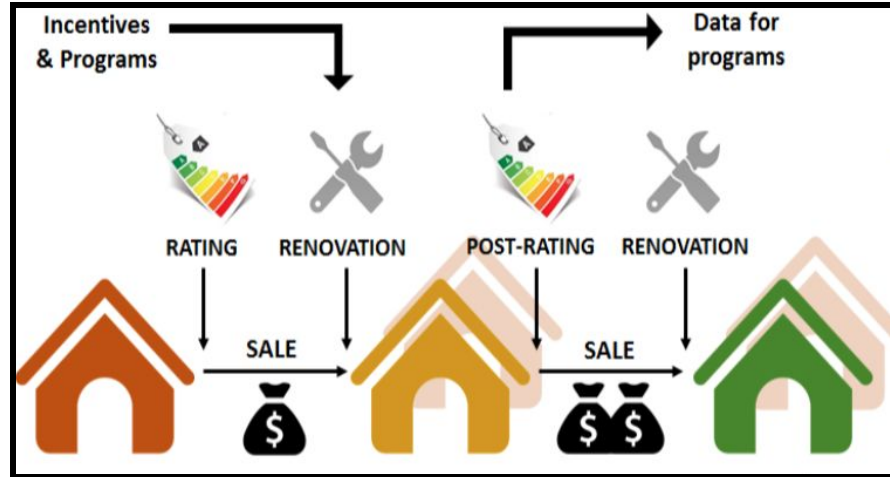


Figure 2: How Energy Labelling Stimulates Home Renovations

With respect to commercial, industrial and institutional buildings, energy benchmarking and disclosure programs can work in a similar fashion. According to Dunsky Energy Consulting, “energy benchmarking and disclosure for large buildings is intended to reveal the “hidden” value of energy efficiency performance. Building energy performance is benchmarked against similar buildings and disclosed to market actors. This helps building owners identify buildings that may have significant energy saving opportunities, and encourages them to make improvements to capture these benefits, and improve their property’s performance relative to its peers. As a result building owners benefit from reduced energy bills and improved property values, while supporting reduced greenhouse gas emissions. Over time, the information supports market transformation that values energy efficiency and rewards high performance buildings”.

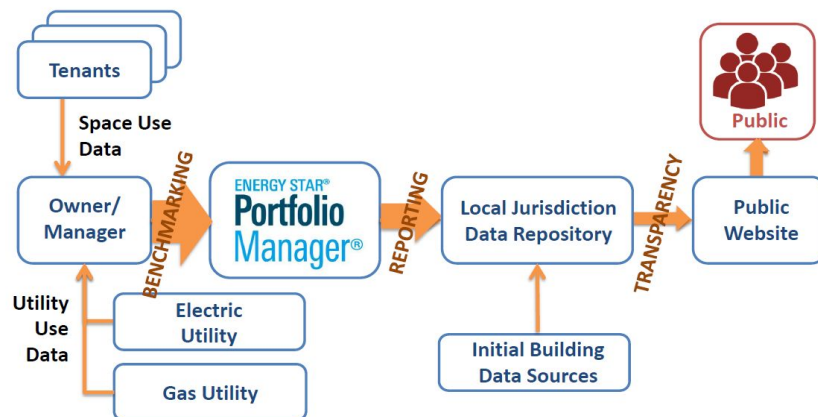


Figure 3: Building Energy Benchmarking Process

“Residential and commercial buildings account for nearly 40% of greenhouse gas emissions. As such, you cannot take meaningful action on climate change without addressing buildings and homes”

Since 2017, the City of Edmonton has operated voluntary energy labelling programs that have included education and outreach, capacity building and incentives. Given this history, Edmonton’s market has been preparing for mandatory energy labelling and disclosure and is primed for regulation, to be integrated within an ecosystem of strategically designed programs and incentives that trigger market transformation.

THE CHALLENGE

Residential and commercial buildings together account for nearly 40% of greenhouse gas emissions and 42% of energy use in Edmonton.⁸ As such, we cannot take meaningful action on climate change without addressing buildings and homes. Without complete and comparable information on energy use performance across the market, it is very difficult to factor energy efficiency into everyday decision making and it is impossible for the market to correctly price the attributes. This market failure is due in part to a lack of information, a challenge intensified by the fact that energy efficiency is invisible to most people.

Further, building owners are not required to be made aware of the expected costs of operating and maintaining their buildings at the time of sale, including expected energy costs. This would be akin to buying a car without a miles per gallon estimate. Worse, doing so in the building market is even riskier, as predicting energy use is much more challenging for the consumer. For example, you cannot easily see the airtightness or insulative quality of a home or building. These energy costs can be a substantial amount of the total cost of ownership over the lifetime of the building⁹. It is also likely that this problem will intensify as utility prices fluctuate and carbon pricing increases over time.

There are significant barriers to renovating homes and buildings to become more energy efficient. There is a lack of awareness of energy efficient

⁸ City of Edmonton. Edmonton’s Energy Transition Strategy. Page 12, 15. Accessed online: https://www.edmonton.ca/city_government/documents/EnergyTransitionStrategy.pdf

⁹ For example, a Manitoba case study showed the Total Cost of Building Ownership over a 60 year period to be 38%, or \$375,000 higher for a Minimum Code Compliant Home than a High Performance Home. SRP Canada, “Manitoba Case Study R101.18”. Accessed online: <https://seefar-valuation.com/wp-content/uploads/2019/07/Case-Study-v3-final.pdf?189db0&189db0>

equipment and limited understanding of what upgrades to prioritize. Generally, there is a lack of knowledge about the technologies available and a lack of confidence in choosing contractors to complete the work. Also, energy in Alberta has been relatively inexpensive meaning that energy savings achieved through efficiency upgrades result in relatively small short term cost savings (especially for homes). With homeowners changing homes every 5 to 7 years, and commercial building sales sometimes even more frequent, the often long term paybacks for energy efficiency upgrades may be viewed as unfavourable. Despite being a sound investment, lengthy simple payback periods discourage home and business owners from undergoing retrofits.

Lastly, there is excellent industry leadership within every building sector, with individuals and organizations who are committed to energy efficiency and excellent greenhouse gas management practices. These leaders actively seek and take advantage of system optimization, renovation and retrofit opportunities. However, these industry leaders are a relatively small proportion of the market and their behaviours are not the norm. Unfortunately, action by leaders alone is insufficient to achieve local and global climate goals. Action by all market actors is needed. Energy management and efficiency upgrades are necessary in every Edmonton building and home in order to realize the opportunities across our existing building stock.

THE CASE FOR REGULATION

Mandatory energy labelling and disclosure programs have emerged as an effective policy response to these challenges. Once established they lay the foundation for an ecosystem of policies and programs working to achieve energy efficiency and greenhouse gas emissions reductions in buildings. The following benefits of energy labelling and disclosure help demonstrate why it is such a common approach.

Financial Savings & Consumer Protection

With mandatory energy labelling and disclosure in so many American cities, studies are emerging that examine the impacts of these policies. There is evidence that mandatory labelling and disclosure stimulates sustained

energy savings, which results in utility cost savings. The United States Department of Energy highlighted some of the research findings for large buildings¹⁰:

- U.S. Environmental Protection Agency found an average annual energy savings of 2.4% in an analysis of 35,000 buildings.
- A Resources for the Future analysis of four programs showed a 3% decrease in utility expenditures for office buildings.
- A study of New York City's benchmarking and transparency program found that it led to 6% and 14% cumulative reductions in building energy use intensity after three and four years, respectively.

Disclosure is a critical element of these policies because it creates visibility which offers consumer protection by providing the market access to fair and consistent information on building and home energy performance. Energy disclosure and labelling is like the fuel efficiency sticker for cars or a nutritional label for food; it allows consumers to be informed about the actual product and make necessary comparisons to similar products. In a market that does not provide energy efficiency information, the buyer of the product is often at a disadvantage as the seller may have information that they do not have. Also, in many cases, the seller will not even possess this information to pass along to the buyer.

Access to Performance Data that Drives Improvement

Energy benchmarking and disclosure and comparative labels (like the EnerGuide label for homes and ENERGY STAR score for buildings) provide information on a particular building's relative energy performance compared with similar buildings. This apples-to-apples comparison of buildings to their peers is essential in order to have a fair benchmark, and the energy labelling tools mentioned are sophisticated in achieving this. For example, ENERGY STAR scores take into account a buildings occupancy and operating hours while the EnerGuide evaluation compares a home to a modelled version of itself (a reference house) as if it had been built to code today.

Comparison ratings/labelling catalyzes action by showing building owners how their energy use compares with a standard and how much it can be

¹⁰ United States Department of Energy. "Benchmarking & Transparency: Resources for State and Local Leaders". Page 2. January 2019.

improved. This encourages building and home owners to pursue energy efficiency upgrades and renovations, the results of which are verified through subsequent energy labelling. The fact that energy labelling is an iterative process helps measure performance by ensuring that projected savings from renovations are actually achieved. During a real estate transaction this information, if there is universal participation and disclosure, allows buyers (or potential renters) to compare between buildings, allowing them to make an informed decision on the purchase or potential occupancy.

Higher Market Value & Economic Benefits

Dunsky Energy Consulting summarized the direct and indirect economic benefits of energy labelling, and they found that investments in energy efficiency have been shown to lead to an increase in rental fees and that energy efficient buildings attract higher rentals fees than less efficient buildings¹¹. For example, an analysis of data from a single portfolio of more than 100 office buildings from 2004 to 2013 found that ENERGY STAR certified buildings experienced 9.5% higher occupancy rates and 2.5 % higher rental rates than conventional buildings¹². Dunsky also found a growing body of evidence that the competitive advantages of green buildings translate into higher overall value in the marketplace as well as higher sales prices, and that energy savings can have both direct and indirect benefits to job creation.

Specific to homes, modelling completed in 2017 showed that the benefits to homeowners of taking part in mandatory energy labelling are greater than the costs.¹³ Moreover, a recent Edmonton study showed a positive correlation between energy efficiency features and selling price in the Edmonton residential market.¹⁴

¹¹ Dunsky Energy Consulting & The Delphi Group. "Program Design Manual: Large Building Energy Reporting & Disclosure Pilot". May 2017.

¹² Devine, Avis and Nils Kok. "Green Certification and Building Performance: Implications for Tangibles and Intangibles." *The Journal of Portfolio Management*. Special Real Estate Issue, 2015.

¹³ Dunsky Energy Consulting. "Edmonton Home Energy Performance Labelling: Pilot Program Manual", Page 68-69. 2017.

¹⁴ Boyd, Richard. Ryan, Justin. Cuell, Charles. "Hedonic Property Price Analysis: Energy Home Labelling Program". May 20, 2019. Accessed online: <https://homes.changeformclimate.ca/wp-content/uploads/2019/08/City-of-Edmonton-Hedonic-Price-Analysis-Energy-Efficiency-Final.pdf?5f4561&5f4561>

Cost-effective Climate Action for Cities

Understanding the energy performance across Edmonton's building stock provides valuable information that enables the City of Edmonton to implement the most cost-effective, evidence based policies and programs possible. The data collected enables the City to refine priorities to ensure that limited resources go where they will have the greatest impact which ultimately improves the cost-effectiveness of energy transition programs.¹⁵

Voluntary Programs & Climate Targets

In 2017, the City of Edmonton launched building energy benchmarking and home energy labelling programs in the residential and large building markets. Both programs are voluntary (with mandatory disclosure for all participants) and continue to operate as of the writing of this brief.

Despite being voluntary in nature, Edmonton's energy labelling programs have seen significant participation and have added value for those involved. There have been many benefits to operating these programs, which have been foundational for making progress on Edmonton's Community Energy Transition Strategy.

The residential energy labelling program has seen over 3,600 EnerGuide home energy evaluations conducted in the new and existing homes market. In this program certified energy advisors complete a household assessment and provide an EnerGuide label and renovation roadmap to the homeowner. A rebate is provided by the City of Edmonton ensuring that all labels are made public on an interactive map, found at changeformclimate.ca/homes.

The large building energy labelling program, known as Edmonton's Building Energy Benchmarking Program, has nearly completed year 3 with participation from more than 340 of Edmonton's largest buildings. This program invites commercial, institutional and multi-family buildings over 20,000 square feet to enter their utility data into ENERGY STAR Portfolio Manager. Once benchmarking is complete, participants share their energy data with the City of Edmonton and receive a building-specific scorecard highlighting their performance.

¹⁵ Institute for Market Transformation. "Using Monthly Energy Data from Benchmarking Programs: Insights for Better Buildings and More Effective City Programs". 2019.

Edmonton's Voluntary Labelling Programs	Participating Buildings (#)	Size of Eligible Building Stock	Participating Buildings (% of building stock)
EnerGuide Home Energy Evaluation Rebate Program (3 years)	3,600 homes	>380,000 homes ¹⁶	0.95 %
Building Energy Benchmarking Program (3 years)	340 buildings* 4.7 million SQM*	~ 29 million SQM ¹⁷	16.2 %

**Total building participants, using estimated numbers for Year 3.*

Although these voluntary programs are showing some success, participation rates suggest that the only way to ensure market-wide participation is through regulation accompanied by appropriate and fair enforcement mechanisms. In the absence of a high level of participation, the market will not be informed enough to achieve the desired outcome of valuing efficiency and higher performance buildings. Voluntary programs are excellent at building community readiness and industry capacity, but experience from other jurisdictions supports the conclusion that for disclosure and labelling programs to be effective market transformation tools they require universal participation.

Not only is the value case strong for regulating energy labelling and disclosure, but regulation is the most effective way to achieve universal participation which would lay the necessary foundation to achieving energy efficiency and greenhouse gas emissions reductions consistent with the Paris Agreement.

MUNICIPAL LEVERS

Despite the policy direction provided by the Pan-Canadian Framework on Clean Growth and Climate Change, little progress has been made towards a

¹⁶ Number of Residential Dwellings Excluding Apartments with Fewer than 5 Stories - Edmonton Alberta [Census metropolitan area], Census Profile, 2016 Census, Accessed online: <https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/prof/details/page.cfm?Lang=E&Geo1=CMACA&Code1=835&Geo2=PR&Code2=48&SearchText=Edmonton&SearchType=Begins&SearchPR=01&B1=All&GeoLevel=PR&GeoCode=835&TABID=1&type=0>

¹⁷ Building stock analysis completed by Dunsky Energy Consulting & The Delphi Group. "Program Design Manual: Large Building Energy Reporting & Disclosure Pilot". May 2017.

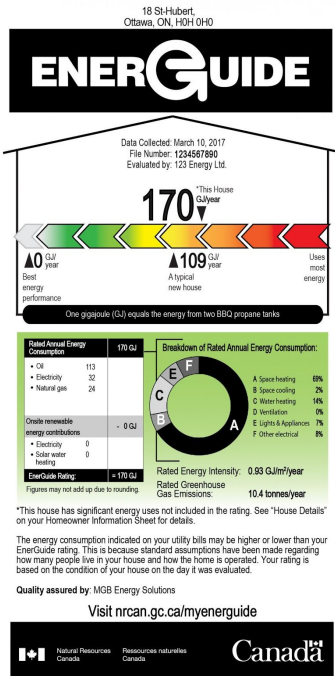
mandatory energy labelling framework nationally. While ample research and development has taken place to support efforts by Canadian jurisdictions, there is uncertainty with regards to the launch of a national policy. Given the urgency of climate change and the level of ambition necessitated by the Paris Agreement, it is recommended that the City of Edmonton pursue bylaws to implement mandatory energy labelling and disclosure for homes and large buildings as soon as possible.

While the benefits and importance of mandatory energy labelling are clear, effort is still needed in order to design a regulatory framework appropriate for Edmonton. Given the popularity of these programs, hundreds of resources are available online summarizing the best practices and key learnings from other jurisdictions. For example, organizations like the City Energy Project and the Institute for Market Transformation have sample bylaw language, detailed decision frameworks and design considerations to ensure high-impact policies. While Edmonton's voluntary programs have played an important role in preparing the market for regulation, the findings from extensive stakeholder consultation combined with identified best practices would be necessary to design mandatory energy labelling and disclosure bylaws for Edmonton.

Municipal Ability to Regulate

While more than 30 mandatory energy labelling policies exist in the United States, Ontario is the only jurisdiction with such a regulation in Canada. In 2017, the Government of Ontario amended their Electricity Act to integrate mandatory reporting of energy and water use for large buildings. In addition, many other Canadian jurisdictions, such as the province of British Columbia and several municipalities within, have made significant progress towards regulation.

The Edmonton City Charter and Alberta's Municipal Government Act may independently provide the City of Edmonton authority to regulate mandatory energy labelling and disclosure. In 2018 the City Charters Regulation came into force, providing the City of Calgary and the City of Edmonton additional



Sample: EnerGuide Label for Homes

authorities and flexibility to support their needs as growing urban centres. The City of Edmonton Charter¹⁸ regulation amends the Municipal Government Act to include the authority to regulate for “the well-being of the environment, including bylaws providing for the creation, implementation and management of programs respecting any or all of the following: ... (ii) climate change adaptation and greenhouse gas emission reduction; ... (v) the conservation and efficient use of energy”. In addition to the City Charter, Alberta’s Municipal Government Act¹⁹ describes one of the purposes of a municipality being “to foster the well-being of the environment” which may also provide the authority to regulate. These regulatory pathways would both need to be explored further through a comprehensive legal review prior to bylaw development.

Home Energy Labelling Bylaw Considerations

There are several key design decisions necessary for a home energy labelling bylaw for which some best practices have emerged. The most common approach requires homeowners to disclose their energy label when listing their home for sale. It is anticipated that an Edmonton bylaw would require all homes that fall under Part 9 of the Alberta Building Code to undergo an EnerGuide home energy evaluation prior to selling their home. Home EnerGuide labels resulting from the evaluation would be posted on the listing site (e.g. MLS) in addition to an online disclosure map (such as the energy map found at changeformclimate.ca/homes) to ensure the labels are available publicly in perpetuity. Involvement of key stakeholders would be critical for the bylaw to achieve its intended outcomes; the advice of REALTORS, home builders, industry associations (such as CHBA and UDI) and energy advisors would be integrated into bylaw design and implementation.

Evidence from other jurisdictions shows that compliance can be low for mandatory home energy labelling policies, for example in Austin, Texas compliance rates are around 60%.²⁰ Balancing the desires to minimize

¹⁸ Province of Alberta. “City of Edmonton Charter, 2018 Regulation”. Published by Alberta Queen’s Printer, Current as of June 18, 2019, Page 2. Accessed online: http://www.qp.alberta.ca/documents/Regs/2018_039.pdf

¹⁹ Province of Alberta. “Municipal Government Act”. Published by Alberta Queen’s Printer, Current as of September 1, 2019, Page 39. Accessed online: <http://www.qp.alberta.ca/documents/acts/m26>

²⁰ Erica Myers, Steven L. Puller, Jeremy West. “Effects of Mandatory Energy Efficiency Disclosure in Housing Markets.” E2e Working Paper 044. November 2019. Accessed online: https://people.ucsc.edu/~jwest1/articles/Myers_Puller_West_MandatoryDisclosure.pdf

disruption to the market, while maximizing participation rates will require a thoughtful and strategic approach. A variety of tactics can be applied in order to increase compliance rates, such as marketing and education campaigns, collaboration with stakeholders and integrating energy labelling into energy efficiency programs and financing tools. Enforcement mechanisms would be available within the bylaw, but would be considered as a last resort.

The City of Portland's Residential Energy Performance Rating and Disclosure serves as an excellent sample regulation as it integrates many best practices and key learnings from other jurisdictions.²¹ This ordinance is not only helpful for bylaw design, but also implementation. For example, Portland has enabled "one click" listing of energy scores on MLS, by connecting the MLS with the energy labelling database.

Large Building Energy Labelling Bylaw Considerations

Given the prominence of mandatory building energy labelling policies, a sophisticated analysis of best practices is available. Bylaw design options and their implications are well-studied, and the results are available to share with Edmonton stakeholders to ensure that the most appropriate and effective regulatory mechanism is designed. Moreover, evaluation results from Edmonton's Building Energy Benchmarking Program suggest industry readiness for a mandatory program. It is anticipated that an Edmonton bylaw would require all owners of commercial, multi-family and institutional buildings over 20,000 square feet to annually benchmarking each of their buildings using ENERGY STAR Portfolio Manager and share their building energy performance with the City of Edmonton. Certain details about each building's energy performance would be shared publicly through a published annual report and via an online data visualization tool. Involvement of key stakeholders would be critical for the bylaw to achieve its intended outcomes; the advice of building owners, property managers, energy utility companies, industry associations (such as BOMA Edmonton and NAIOP) and energy advising firms would be integrated into bylaw design and implementation.

Jurisdictional research demonstrates that compliance rates higher than 90% are common when a series of best practices are applied to policy design. This

²¹ City of Portland's Residential Energy Performance Rating and Disclosure. Accessed online December 2019: <https://www.portlandoregon.gov/citycode/76074>

includes a systematic approach to the identification of a covered buildings list and annual communication of reporting expectations to all those buildings included within. Comprehensive benchmarking support services are made available to all building owners in order to support the data collection and submission process. Building scorecards are developed for all participants that communicate benchmarking results, and provide building-specific recommendations for energy and money saving opportunities. Most of these practices are already integrated into Edmonton's voluntary program, but the demand would be much more significant for a mandatory program.

First passed in 2009, the City of New York's Local Law 84: Energy and Water Benchmarking is an excellent sample regulation as it integrates many best practices and key learnings from other jurisdictions²². Most notably, the year-over-year impacts of New York's energy labelling law are well studied and the annual energy savings are documented for all asset types. Moreover, the New York law exists within an ecosystem of supportive and complementary regulations that drive building assessments and improvements to achieve ambitious efficiency outcomes.

Equity Considerations

While this policy ultimately protects consumers, through correcting market failures of incomplete and asymmetric information, it is important to consider Climate Shift #5: A Just and Equitable Transition. Mandatory home energy labelling does require time, effort and payment for an energy advisor to deliver the EnerGuide home evaluation. These resources can be a burden, especially for individuals and families living in energy poverty. A recent backgrounder on energy poverty in Canada found that diverse households with a range of incomes can experience high home energy cost burdens and be living in energy poverty²³. With so many households struggling to meet their home energy needs, energy labelling and disclosure policies must be designed to be sensitive to these individuals and accommodate their needs.

²² City of New York's Local Law 84: Energy and Water Benchmarking: https://www1.nyc.gov/assets/buildings/local_laws/ll84of2009.pdf

²³ Canadian Urban Sustainability Practitioners. "Energy Poverty in Canada: A CUSP Backgrounder". October 2019.

Canadian Urban Sustainability Practitioners caution that “clean energy programs in cities seeking to achieve the deep emissions reductions matching their climate emergency declarations... must be designed to address the barriers many households have in gaining access to these technologies. Without addressing these constraints and increasing broad participation in these programs, Canada will not achieve the necessary GHG emissions reductions nor realize a just transition”²⁴.

With this in mind, there are several design considerations that would help integrate justice and equity into these policies. For example, exemptions can be made for individuals who are in financial distress or have other extenuating circumstances. While rebates for EnerGuide evaluations will not be available for everyone, low income households can qualify in order to alleviate the financial burden. Lastly, offering a household energy efficiency program tailored to low income families can provide the necessary support to alleviate energy poverty and achieve energy efficiency upgrades. With sensitive design, mandatory energy labelling and disclosure can provide consumer protection for vulnerable populations, build their capacity and include them within the transition to a low carbon future.

CONCLUSION

The benefits of reducing energy use in buildings and homes are clear and as a result energy efficiency is a foundational component to achieving Edmonton’s climate targets. Specifically, energy efficiency makes the scale-up of renewable energy more feasible, makes climate action more cost effective for both city governments and citizens and stimulates the local economy²⁵. Mandatory energy labelling and disclosure is an effective tool for stimulating energy efficiency improvements in buildings, an essential step for transforming our building stock.

Energy labelling and disclosure policies alone will not sufficiently trigger the changes needed to stay within Edmonton’s carbon budget. It is anticipated that these policies will provide the foundation for further energy transition

²⁴ Canadian Urban Sustainability Practitioners. “Energy Poverty in Canada: A CUSP Backgrounder”. October 2019.

²⁵ Institute for Market Transformation. “Energy Efficiency in Buildings: The Key to Effective and Equitable Clean Energy Action for Cities”. 2019.

initiatives focused on buildings, that when done together will effectively stimulate market transformation. Data from energy labelling and disclosure policies in other jurisdictions has proven incredibly valuable to inform policy evolution and the design of future programs that ultimately drive deeper greenhouse gas reductions. Program data also provides detailed information on the existing building stock which allows decision-makers to take an evidence-based approach to achieving climate targets. As a result, mandatory energy labelling and disclosure combined with complementary energy transition policies/programs have the potential to stimulate the transformational changes necessary within our existing homes and buildings to ultimately realize Edmonton's goals for a low carbon future.