

Edmonton's Community ENERGY TRANSITION STRATEGY



Annual Report 2016

2016 was the hottest year ever recorded (since records were first kept in 1880), beating the previous hottest year in 2015, which itself beat 2014. This run of three record years is also unprecedented and, without climate change, would be a one in a million chance.

[Professor Michael Mann, Penn State University]

This Report

This *Annual Report* provides an update on Edmonton's Community Energy Transition Strategy (*the Strategy*) including:

- Executive Summary
- Program Background
- Strategic Actions and Priorities - 2016
- Emerging Opportunities & Issues
- Budget Summary

Executive Summary

2016 was the first full-year of implementation of Edmonton's Community Energy Transition Strategy (*the Strategy*). With a mandate to lead Edmonton to an energy-sustainable future (as outlined in *the Strategy*), the City launched a number of initiatives, with the understanding that an energy-sustainable city will take decades to achieve and that successful implementation will require a strong accountability framework. Phase 1 of implementation (from mid-2015 to early 2016) focused on creating this framework, including:

- Establishment of City Policy C585 (i.e., a policy that entrenches City Council's commitment for an energy sustainable Edmonton along with key elements of *the Strategy*),
- City Council's approval of new operational funding to advance key initiatives in *the Strategy* (i.e., \$5.3 million was provided through the City's 2016-18 Operating Budget),
- Creation of a new City Council advisory committee to provide broad, independent advice on *the Strategy* to City Council,
- Creation of a new Council Initiative on energy transition and climate adaptation to ensure Council leadership and engagement,
- Including *the Strategy* in The Way Ahead Implementation Plan as one of the City's key strategic actions for the 2016-2018 timeframe, and
- Establishment of Corporate Measures and Targets (and regular feedback loops) to reduce greenhouse gas emissions in City (corporate) operations and the community.

Phase 2 of *the Strategy* (Gearing Up for Community Scale Programs) started in 2016, with a range of initiatives focusing on:

- Engaging and mobilizing Edmontonians to work individually and as a community to make Edmonton an energy sustainable city,
- Leading by example in corporate operations by applying best practices (re: energy transition), with learnings that could be used to inform and inspire the entire community,
- Piloting energy efficiency and clean energy programs, with the aim that they would grow to become community-scale programs,
- Continuing to refine *the Strategy* in areas where information and knowledge gaps remained and where more detailed action plans were needed, and
- Collaborating with other municipal, provincial and federal governments to share

knowledge, leverage resources and align strategies.

Under these general themes, the following projects were launched by the City in 2016 as part of Phase 2:

2016 Projects – To Engage Edmontonians

- **Energy Transition Marketing and Communication Campaign:** To establish an overarching marketing and communication strategy to engage/mobilize Edmontonians.
- **Sustainability Showcase Program:** To provide Edmontonians with hands-on opportunities to learn about and experience innovations that are essential for achieving Edmonton’s energy transition goals.
- **Green Leagues: EFCL Energy Efficiency and Solar Program:** To encourage the adoption of solar PV and energy efficiency upgrades in Community League buildings and raise awareness about the benefits of such improvements.
- **EcoCity Edmonton: Community Sustainability Grants:** To support community-based energy transition projects.
- **Property Assessed Clean Energy (PACE):** To explore the value-case for property assessed clean energy programs (PACE) in Alberta, and using it to advocate for provincial government action.

2016 Projects – To Advance Wise Energy Use in Buildings

- **EnerGuide Assessment and Labelling Program for Residential Buildings:** To inspire Edmontonians to improve energy efficiency in new and existing homes, using energy labels that provide information about home energy performance.
- **Large Building Energy Reporting and Disclosure Program:** To inspire Edmonton’s large building owners to improve the energy performance of existing large buildings through the expansion of energy reporting, benchmarking and disclosure practices.
- **Community Energy Consumption Information Platform:** To establish an information and analytical tool to help citizens understand their personal energy use and the actions they can take to conserve energy and use it more efficiently.

2016 Projects – To Advance Clean Electricity Generation

- **Streamlining the City’s Solar Panel Permitting Process:** To streamline the approval and permitting process for building-mounted solar panel systems, while providing clarity on building safety requirements, allowable impacts and allowable exemptions.

2016 Projects – To Advance Wise Energy Use in Local Industry

- **Eco Industrial Pilot Project:** To evaluate ways in which Edmonton’s industrial sector can improve individual and collective environmental performance (including reducing energy consumption and greenhouse gas emissions).
- **Anaerobic Digestion Facility (Edmonton Waste Management Centre):** To apply anaerobic digestion technology to decompose the organic fraction of municipal solid waste to produce biogas (a mixture of methane, carbon monoxide, and other gases).

2016 Projects – To Advance Energy Efficient Land-Use, Development and Transportation

- **Establishment of Edmonton’s Electric Vehicle Strategy:** To establish an evidence-based, action-oriented plan that will encourage a market-shift toward the purchase of battery electric and plug-in hybrid vehicles in Edmonton.

- **Valley Line LRT and other expansion projects:** To build an LRT system that is an efficient and environmentally friendly way to move Edmontonians.
- **Blatchford Redevelopment:** To transform 535 acres in the heart of Edmonton into one of the world's largest sustainable communities.

2016 Projects – To Lead-By-Example in Corporate Operations

- **Update of City Policy C532 – Sustainable Buildings:** To update the City's Sustainable Building Policy C-532 to ensure the City of Edmonton leads-by-example in establishing, implementing and maintaining sustainable building practices for the buildings it owns, leases and funds over the course of their entire lifecycle.
- **Update of the City (corporate) Operations GHG Inventory:** To establish ambitious, cost-effective plans for reducing greenhouse gas emissions in City (corporate) operations.
- **Electric Vehicle Charging Station Pilot Project:** To advance the uptake of electric vehicles within the City's municipal fleet and the provision of electric vehicle charging stations.
- **Community Greenhouse Gas Inventory:** To improve methodologies used to by the City to calculate Edmonton's community greenhouse gas emissions as per the *Global Protocol for Community Scale Greenhouse Gas Emission Inventories*.
- **Sustainable Building Practices:** Efforts led by Integrated Infrastructure Services in 2016 to advance sustainable building practices in City buildings.

As evidenced by this long list of projects, 2016 was an ambitious year for the start-up Energy Transition Program. The Energy Transition Unit doubled in size from five to ten practitioners; accountability frameworks were established; significant initiatives and projects were launched; and stakeholder engagement efforts were greatly expanded. While implementation efforts will continue to accelerate in 2017, the complexity of this undertaking will also increase in response to a number of emerging opportunities and issues, including.

- **Opportunity to align the City's energy transition efforts with those of federal and provincial governments:** In 2015 and 2016, federal and provincial governments expressed strong commitment for climate change action. As the year passed, more clearly defined directions began to emerge. On the provincial stage, the Alberta Energy Efficiency Agency was created along with government programs to provide:
 - direct, no-charge installation of low-cost energy efficiency products to Alberta residential properties
 - point-of-sale rebates through participating retailers for the purchase of energy-efficiency appliances/products,
 - incentives to business, nonprofit and institutional energy users to encourage high-efficiency products, and
 - funding to nonprofit and volunteer groups for a range of energy efficiency measures.

Similarly, the federal government was active on the climate policy front, releasing the *Pan-Canadian Framework on Clean Growth and Climate Change* in late 2016. It included four main pillars: pricing carbon pollution; complementary measures to

further reduce emissions across the economy; measures to adapt to the impacts of climate change and build resilience; and actions to accelerate innovation, support clean technology, and create jobs.

In 2017, the City will work to: align complementary efforts and resources to create synergies, avoid duplication of efforts, and capitalize on whatever program and funding opportunities might arise.

- **Opportunity to reduce GHG emissions in City (corporate) operations:** As previously noted, in 2016 the City launched a project to update its City (corporate) Operations Greenhouse Gas Management Plan (to establish ambitious, cost-effective plans for reducing greenhouse gas emissions in corporate operations). An update of the plan was necessary because it had become obsolete in a number of ways and because the City was not on track to achieve its 2018 Corporate Target (to reduce greenhouse gas emissions from corporate operations). This project will require the City to reexamine the value it places on carbon avoidance and the cost premium it is willing to pay for energy efficient infrastructure. As well, it will require the City to look more closely at its energy supply with an aim to reduce the carbon intensity of the electricity, heating fuels and transportation fuels it consumes (i.e., replacing high-carbon energy sources with low-carbon sources or renewable energy). Again, this discussion will require the City to determine the premium it is willing to pay for greener energy.
- **Opportunity for City Charter powers to advance energy transition in Edmonton:** *The Strategy* recommends a number of initiatives that require amendments to provincial legislation or the extension of new powers to the City through a City Charter (currently under negotiation with the Province of Alberta). These include: (1) new financing arrangements to assist citizens with energy efficiency and clean energy investments (including arrangements such as property-assessed clean energy financing programs (PACE) and (2) new powers that would allow the City to require energy labelling of residential buildings and require energy reporting, benchmarking and disclosure for large buildings. As the City Charters are developed further in 2017, the City will have opportunity to advance its thinking and rationale for these new powers.

Program Background

In 2011, Edmonton City Council approved *The Way We Green* describing the sustainable and resilient city we want Edmonton to become:

Edmonton is a sustainable and resilient city. Living within the limits of nature, we have become a leader in energy efficiency and energy conservation. A carbon-neutral city, Edmonton is prepared for disturbances that could result from climate change.

This vision was more deeply examined in 2012 with the development of *Edmonton's Energy Transition Discussion Paper* which concluded that:

A shift in energy sources and GHG emissions is possible, and most of the opportunities are currently either cost competitive with or less expensive than conventional energy systems.

In October 2012, a Citizens' Panel on Edmonton's Energy and Climate Challenges was established to understand whether a demographically and attitudinally representative sample of Edmontonians wanted Edmonton to become low-carbon, whether they considered the 2012 Discussion Paper to provide a good map for getting there, and how much they supported particular actions proposed in it. In its report to City Council in April 2013, the Panel's main recommendation (supported by 92% of panelists) was:

That the City of Edmonton take the measures needed to become a low carbon City by 2050.

With this rationale and community support, work was undertaken to develop Edmonton's Community Energy Transition Strategy (*the Strategy*) – a risk management strategy designed to make Edmonton an energy sustainable city, with actions that would:

- Reduce Edmonton's greenhouse gas emissions to levels consistent with limiting the long-term rise in average global temperature to 2°C,
- Increase energy efficiency and conservation in all sectors,
- Ensure Edmonton's energy delivery systems were resilient to shocks and disturbances from climate change, and
- Position Edmonton to participate in global economic opportunities as the world transitions to cleaner energy.

The Strategy described an energy-sustainable Edmonton, exemplified by:

- Energy literate citizens with energy conserving lifestyles,
- World-class energy efficiency in all types of buildings,
- World-class energy efficiency in industrial processes,
- A strong shift to active and public transportation as preferred modes of travel,
- An urban form that is carefully designed to avoid unnecessary energy use and optimize free energy from the sun,
- Greener electricity from Alberta's electricity grid and local generating facilities,
- A greater portion of electricity produced close to where it is used through district energy systems, combined heat and power systems and renewable and alternative energy technologies, and
- Increased electrification of Edmonton's transportation system with passenger vehicles, buses, light trucks and light rail transit powered by clean electricity.

Moreover, *the strategy* included an Eight-Year Action Plan identifying more than 150 actions in seven opportunity areas:

- Energy use in buildings
- Generation of electricity and heat
- Energy use in industry
- Land-use, transportation and development
- Water and wastewater
- Waste reduction and recycling
- Leadership in City (corporate) operations

The strategy explained that significant new sources of government funding would be needed to advance energy transition programs, including funding for education and awareness, capacity building, financial incentives and program administration. For the period 2018-2021, it was estimated that government funded costs would total approximately \$25-30 million a year in Edmonton. While noting that the cost of these investments was significant, the strategy determined that their benefits were even greater. By 2035, *the Strategy* was expected to deliver a net present value of approximately \$2.5 billion more than their investment cost. This figure was even greater (i.e., \$3.4 billion) when the social cost of carbon was assigned a value.

A three-phase approach was adopted to implement *the Strategy*:

- **Phase 1:** Establishing an Accountability Framework (2015-2016)
- **Phase 2:** Gearing-Up for Community-Scale Programs (2016-2018)
- **Phase 3:** Delivering Community Scale Programs (2019 and beyond)

Strategic Directions & Priorities: 2016

Phase 1: Establishing an Accountability Framework

In developing *the Strategy*, it was understood that an energy-sustainable Edmonton would take decades to achieve. Similarly, it was recognized that this long-term journey called for a strong accountability framework.

Phase 1 of implementation (from mid-2015 to early 2016) focused on creating this framework, with the following key initiatives:

- **New City Policy C-585:** On August 25, 2015, City Council approved City Policy C-585 (Edmonton's Community Energy Transition Strategy) entrenching City Council's commitment for an energy-sustainable Edmonton.
- **Additional Funding:** In December 2015, as part of the 2016-2018 Operating Budget, City Council approved a service package titled Energy Transition Strategy. The package provided \$5.3 million in new funding over the 2016-18 timeframe for initiatives to be undertaken in Phase 2.
- **New City Council Advisory Committee:** On April 19, 2016, City Council approved the Energy Transition Advisory Committee Bylaw 17431 – establishing an advisory committee with a mandate to:
 - Promote *the Strategy* to each member's professional and community networks,
 - Share with, and receive from the City Manager, information regarding the implementation of *the Strategy*,
 - Provide broad independent advice to Council about *the Strategy*, and
 - Assist Council in developing performance measures for *the Strategy*.

The fifteen-person committee was recruited in early 2016 and its first meeting was held April 28, 2016.

- **New Council Initiative:** Recognizing the importance of *the Strategy* and climate adaptation, City Council established this topic as one of its 24 Council Initiatives. The two desired outcomes of Initiative are: (1) Council leadership and engagement in the implementation of *the Strategy* and 2) Council leadership and engagement in the development of Edmonton's community climate change adaptation plan.
- **The Way Ahead Implementation Plan:** The Way Ahead Implementation Plan (approved by City Council in January 2016) identified 23 initiatives that will drive the City's strategic actions for the 2016-2018 timeframe. One of these initiatives was implementation of *the Strategy*.
- **Corporate Measure and Target:** City Council has established a set of corporate outcomes, measures and targets for the City's six, 10-year strategic goals. Corporate outcomes describe how City Council defines success in the journey to achieving the 10-year strategic goals. Measures provide evidence that the City is making progress in achieving the outcomes. Targets identify how far and how fast the City will proceed to deliver on the corporate outcomes within a specified time horizon. Two of the City's Corporate Measures relate directly to energy transition including: Measure 8.1 City Operations GHG Emissions (2018 Target 179,228 tonnes) and Measure 9.1 Community

Greenhouse Gas Emissions (downward trend).

Phase 2: Gearing-Up for Community-Scale Programs

Phase 2 of *the Strategy* (commenced in 2016) spans a three-year period (2016-2018) and is focused on:

- Engaging and mobilizing a majority of Edmontonians to work individually and as a community to make Edmonton an energy sustainable city,
- Leading by example in City (corporate) operations by applying best practices (re: energy transition) that can be used to inform and inspire the entire community,
- Piloting energy efficiency and clean energy programs that could potentially grow to become community-scale programs,
- Continuing to refine *the Strategy* in areas where information and knowledge gaps exist and where more detailed action plans are needed, and
- Collaborating with other municipal, provincial and federal governments to share knowledge, leverage resources and align strategies.

The following is a summary of the Phase 2 projects that were pursued in 2016:

2016 Projects – To Engage Edmontonians

- **Energy Transition Marketing and Communication Campaign:** The objective of this project is to establish and implement an overarching marketing and communication strategy that will engage a majority of Edmontonians, creating: (1) widespread awareness amongst Edmontonians that Edmonton's Energy Transition Campaign is underway, (2) a sense of strong community leadership and purpose, (3) excitement and optimism that individual and collective actions will be successful, (4) a sense that wise energy use is a valued social norm and (5) a sense of positive urgency.

In Q4, 2016, a project to establish the marketing and communication campaign was commenced with the hiring of a Marketing Strategist (staff) and the contracting of a marketing advertising agency.

Next Steps: The four-phase project, leading to the rollout of the marketing and communication campaign in summer 2017 will include: (1) *Phase 1:* Market research will be conducted to drill deeper on how to engage Edmontonians in climate change mitigation and adaptation efforts, (2) *Phase 2:* A comprehensive marketing and communication strategy will be formulated including full articulation of the strategy, target market identification, key messages, campaign branding, detailed year-one action plan and targets, (3) *Phase 3:* Creative tools and materials will be developed to support the strategy, and (4) *Phase 4:* Implementation of Year-One of the campaign (July 2017 to June 2018). As well, work is underway to develop a series of good news videos/stories that will inform Edmontonians about the energy transition successes happening in Edmonton today. Distribution will begin in late March 2017.

- **Sustainability Showcase Program:** The objective of this program is to provide Edmontonians with opportunities to learn about and experience the types of innovations that are essential for achieving Edmonton's energy transition goals. Work conducted in 2016 included: (1) conducting literature reviews to understand the role

and importance of showcase initiatives and identifying best practices, (2) compiling a comprehensive inventory of Edmonton's existing energy transition showcase initiatives, (3) assessing the effectiveness of these existing initiatives and (4) recommend improvements.

Next Steps: Based on this analysis, the City's showcasing program will be expanded in 2017, including:

- The City will sponsor an Energy Efficiency Pavilion at the 2017 Edmonton Home and Garden Show (called the GREEN SCENE!). It will feature energy efficiency and renewable energy contractors along with City booths promoting the City's Green Home Guide and Green Living Guide. If deemed effective, the model will be replicated at other home and renovation shows (target once a quarter).
- The City will deliver a *green stream* at the upcoming Residential Construction Industry Conference. Various sessions at the conference will be designed and sponsored by the City, featuring industry leaders who will speak about the new energy code, EnerGuide Version 15, solar photovoltaics, and how to market a high-performance home. The [Conference](#) is the largest of its kind in Alberta.
- A Green Building Signage and Education Program will be implemented in 2017 for both City-owned and private buildings. Various education tools (signs, posters, dashboards, displays, videos, audio tours) will be used to inform buildings users and visitors about innovative energy efficiency and clean energy features in Edmonton's green-leading buildings.
- The City will establish an audio tour, showcasing green buildings located downtown, along 104th Avenue (the Walk of Green).
- The City intends to provide funding for the Eco-Solar Tour in 2017, allowing it to accommodate a much larger audience.
- The City and the Solar Energy Society of Alberta intends to deliver 4 Solar PV 101 Workshops to the public.
- The City intends to sponsor Green Energy Doors Open, Drive Electric Week and the SESA Solar Trade Show in 2017.
- The City will pursue a regular spot on a local radio or tv station to discuss energy transition technologies, incentives, lifestyle changes, etc.
- The City has committed to funding and supporting a significant, new green carnival called Sustainival. This unique community event is expected to attract tens of thousands of students, citizens and visitors over a three-day period in May 2017.
- **Green Leagues: EFCL Energy Efficiency and Solar Program** This purpose of this partnership program (involving the City, Edmonton Federation of Community Leagues and the Solar Power Investment Cooperative of Edmonton) is to: (1) encourage the adoption of solar PV and energy efficiency upgrades in Community League buildings and (2) raise awareness about the benefits of these improvements through a four-part workshop that is offered to Community League members and community champions. Workshops held in Q4, 2016 attracted 35 participants from 17 Leagues, qualifying those Leagues for free solar site assessments and energy audits in 2017.
Next Steps: Leagues that participated in 2016 workshops are now eligible to receive energy audits and solar site assessments in 2017. These assessments will provide detailed information that is needed to pursue grants offered by the City, Municipal

Climate Change Action Centre and the Province. Workshops will be offered again in Q4, 2017. In 2017, the City will also provide the Edmonton Federation of Community Leagues with funding for a Sustainability Coordinator. Through this position, community leagues across Edmonton will be engaged in new energy efficiency and renewable energy programs.

- **EcoCity Edmonton: Community Sustainability Grants:** The purpose of this grant program (established by City Environmental Strategies Branch in 2014) is to support community-based sustainability projects. Approximately \$150,000 a year is allocated through the program, with a maximum of \$50,000 a project. In 2016, EcoCity Edmonton Grants 2016 were awarded to:
 - *Kate Chegwin Junior High School* (\$30,000) for solar panels, energy audit kits, community information sessions and field trips to NAIT
 - *Evansdale Community League* (\$28,750) for a 12.5 kW solar photovoltaic system (PV) and related public events
 - *Old Strathcona Farmers' Market Society* (\$48,750) for a 17 kW solar PV system and related stakeholder outreach efforts
 - *NAIT* (\$20,000) for evaluating current outreach programs and developing/delivering more educational tours

Over its two years of operation, the grant program has awarded \$247,500 for 8 different projects which are in various stages of completion. The three projects that have been completed have engaged more than four thousand people and more than 400 volunteer hours. As well, the City's funding for these projects has helped to leverage an additional \$200,000 from other funding sources. Overall the grant program has facilitated the installation of 35.5 kW of solar PV, with an additional 42 kW of solar PV systems planned.

The remaining 5 projects also anticipate that at least another 15 thousand people in Edmonton will be directly engaged or impacted by the projects.

Next Steps: The program will continue in 2017 – leveraging community efforts to help achieve Edmonton's energy transition goals.

- **Property Assessed Clean Energy (PACE):** The purpose of this project is to develop a business case for property assessed clean energy programs (PACE) in Alberta, using it to advocate for Provincial action. During 2016, the City (in collaboration with community partners), took steps to raise awareness about this innovative tool. In October, the City hosted a workshop titled *Keeping PACE with the Conversation* that was attended by nearly one hundred leaders from government, energy, utility, financial, banking, building construction and real estate sectors from across the province. The workshop provided a general introduction to PACE and examined recent experiences in other jurisdictions where PACE programs had been established. In 2016, the City also requested PACE-related powers as part of a larger set of powers it was pursuing through City Charter negotiations with the Province.

Next Steps: In 2017 the City intends to update Provincial authorities on the benefits of PACE in a report that includes: (1) recent experiences in the U.S., (2) legal opinions on legislative barriers that exist and amendments that are needed for PACE to proceed in Alberta, (3) models under which PACE could be delivered in Alberta, and (4) examples

of PACE legislation from other parts of Canada.

2016 Projects – To Advance Wise Energy Use in Buildings

- **EnerGuide Assessment and Labelling Program for Residential Buildings:** The purpose of this project is to inspire Edmontonians to improve energy efficiency in new and existing homes through the introduction of energy labels that provide information about home energy performance. The desired outcome is to make the EnerGuide label for homes a market norm in Edmonton that attributes value to energy efficiency. This new information is expected to drive energy efficiency improvements in existing homes (through energy efficiency renovations) and in new homes (by increasing consumer demand for energy efficiency). Initially the programs will be voluntary - focused on market champions. This will expand to a City-wide, “opt-in” disclosure program and eventually lead to a City requirement/bylaw. This project aligns with the federal government’s recently released Pan-Canadian Framework on Clean Growth and Climate that states: *Federal, provincial, and territorial governments will work together with the aim of requiring labelling of building energy use by as early as 2019. Labelling will provide consumers and businesses with transparent information on energy performance.* Given the federal government’s signal that regulation are coming, the focus of Edmonton’s program will be to develop a robust voluntary program that supports capacity-building and community participation prior to the regulation coming into effect.

Key efforts to year-end 2016 included: (1) development of a value case for the program, (2) a contest that awarded EnerGuide audits to 25 Edmonton homeowners in order for the City to learn more about the new EnerGuide rating system and the energy performance of Edmonton’s residential building stock, (3) development of a web-based mapping tool showing the location of contest-winner homes and those of participating builders along with their EnerGuide scores and (4) a video explaining and promoting the EnerGuide program [Edmonton’s EnerGuide for Homes: Spot the Difference](#)

Next Steps: In Q1, 2017 an approach known as *human centered design* will be applied in collaboration with the Government of Alberta and Natural Resources Canada to further understand homeowner behaviour and inform the pilot project design. As well, design workshops will be conducted with stakeholders in Q1, 2017 including the examination of opportunities to align this project with complementary provincial programs. It is expected that a well-designed, stakeholder-supported pilot project will be ready for launch in Q2, 2017.

- **Large Building Energy Reporting and Disclosure Program:** The purpose of this project is to collect accurate, annual information on whole building energy performance across Edmonton’s large building stock, including commercial, light industrial, municipal, institutional, mixed-use, and multi-unit residential buildings (i.e., for the purpose of this project, large buildings are defined as those greater than 20,000 square feet). The information will be used to benchmark building energy performance across Edmonton’s large buildings and direct energy efficiency improvements in those buildings through the creation of an information-action feedback loop with program participants. The pilot project will be rolled out in stages. In year-one (2017), building owners in Edmonton will be invited to participate in a voluntary pilot where they can

choose to report their energy usage for the 2016 calendar year. Many municipally-owned buildings will participate – demonstrating the City’s commitment to lead-by-example. The long-term objective is to increase the number of buildings participating in the program until nearly all large buildings within Edmonton city limits are participating annually.

As with the EnerGuide labelling program for homes (above), this project is influenced by the Federal Government’s recent announcement (in the Pan-Canadian Framework on Clean Growth and Climate Change) – that energy reporting and disclosure for buildings will be regulated nationwide as early as 2019. As a result, this project will focus on preparing Edmonton’s large building sector for the new regulations that are coming and use Edmonton’s experience to influence the national/provincial program that will emerge.

Key efforts to year-end 2016 included: (1) significant completion of a value case for the program (compiling theoretical and practical evidence for the program, including an Edmonton building stock analysis and modelling to understand the benefits that can be reasonably expected from the program), (2) building external stakeholder understanding and support for the program (with BOMA Edmonton seen as a key stakeholders) and (3) ensuring strong participation of City-owned buildings/facilities.

Next Steps: Design workshops will be conducted with internal and external stakeholders in Q1, 2017 including the examination of opportunities to align this project with complementary provincial programs. It is expected that a well-designed, stakeholder-supported pilot project will be ready for launch in Q2, 2017.

- **Community Energy Consumption Information Platform:** The purpose of this project is to establish an information and analytical tool that will: (a) help citizens understand their personal energy use and actions they can take to conserve and use energy more efficiently, and (b) help City policy makers and program managers understand where and how energy is being used in Edmonton (in order to target energy conservation and efficiency opportunities). The web-based platform that is envisioned will be a place where a large majority of Edmontonians will go to better understand the energy performance of buildings where they work, live and play. This user-friendly environment will allow building owners and occupants to quickly increase their understanding of the electricity, natural gas, water and transportation-related energy consumption by building, street, postal code, neighbourhood and/or city sub-region. Based on building age, size, number of occupants, location and other factors, the system will provide feedback to owners on how the building compares to: (a) buildings of a similar size/age in Edmonton, (b) buildings constructed to the current Model National Energy Code, and (c) other benchmarks that will be helpful to them in understanding building performance. Based on this analysis, the system will be further designed to provide site-specific advice on possible areas of improvement and next steps that building owners can take. The site will be designed to entice regular return visits by providing regular updates of information (at least quarterly), offering incentives and promotions on various devices that improve energy efficiency in buildings, and by providing information and learning opportunities.

In 2016, the City of Edmonton hosted a number of stakeholder meetings (involving

representatives from EPCOR, ATCO Gas, Enmax, Province of Alberta, Municipal Climate Change Action Centre, City of Calgary and City of Edmonton) to explore the potential for such a platform. Generally, stakeholders expressed strong support for the concept and interest in working together to explore possible solutions. As a first step, the City conducted a request for information (RFI) in April 2016 (followed by a supplemental RFI in August 2016) to obtain advice from proponents on the range of possible solutions and products. Seven proponents responded, acknowledging the need and value of such a platform and offering a range of advice. Based on this information, it was concluded that justification existed to proceed with a request for proposals (RFP) for a web-based platform that would be externally owned and operated. However, the RFP did not proceed in 2016 as one of the participating utility companies requested time to evaluate the possibility of it providing the platform. In the end, they decided the timing was not right to lead such an effort.

Next Steps: The City of Edmonton has resumed its leadership role, in close collaboration with the aforementioned stakeholder, to further evaluate options, including the possibility of a RFP or a pilot project in 2017.

2016 Projects – To Advance Clean Electricity Generation

- **Streamlining the Solar PV Permitting Process:** The purpose of this project is to establish a permitting process for building-mounted solar PV systems that will streamline the existing approval process and provide clarity.

The scope of this project allowed for the possibility of residential solar PV projects being exempt from development permit requirements (as is the case in a number of Canadian and U.S. cities)..

Next Steps: The draft amendment to Zoning Bylaw 12800 (re: building-mounted solar PV systems) will be presented to City Council in Q2, 2017.

- **The Anaerobic Digestion Facility (Edmonton Waste Management Centre):** The purpose of this project is to use anaerobic digestion technology to decompose the organic fraction of municipal solid waste to produce biogas (a mixture of methane, carbon monoxide, and other gases). The biogas is then used in engines to create electricity. The waste heat from the engines is used for the anaerobic digestion process and for other on-site uses. The remaining solid waste is composted to produce soil amendments.

The facility, located at the Edmonton Waste Management Centre, will process up to 48,000 tonnes of organic waste annually. The power generated is expected to be 1.6 megawatts per hour, of which only 15% is used by the anaerobic digestion process. The remainder will be used at the Edmonton Composting Facility to lower the greenhouse gas footprint of that facility. The project received funding from the provincial CCEMC (Climate Change and Emissions Management Corporation) and the University of Alberta.

Next Steps: The project is in the construction phase and scheduled to be complete by the end of 2017. Commissioning will begin with the generators, using natural gas.

Commissioning of the anaerobic digestion process with organic waste is expected in early 2018, with the facility at full production by 2019.

2016 Projects – To Advance Wise Energy Use in Local Industry

- **Eco Industrial Pilot Project:** The purpose of this project is to evaluate ways in which Edmonton's industrial sector can improve individual and collective environmental performance (including reducing energy consumption and greenhouse gas emissions). In 2016, the Aurum Industrial Park in northeast Edmonton was selected as the potential site for an eco-industrial pilot project. However, following several community meetings and a workshop to identify eco-industrial opportunities, it was determined the Aurum Industrial Park would not be a good choice, due to the economic downturn the Park was experiencing and the limited capacity of companies in the Park to participate in a project.

The project scope was revised to assess other eco-industrial approaches that could be applied more broadly across the community. In Q4, 2016, the City applied to participate in an internationally-recognized program called the National Industrial Symbiosis Program (NISP). The NISP model was developed in the UK in 2005 and since then has reportedly delivered significant environmental, social and economic benefits. There are now programs based on the NISP model running in more than 20 countries.

If successful in its application, City funding will be leveraged many times with pilot project funding from Western Economic Diversification and the Green Municipal Fund. Over the two-year pilot project, two full-time practitioners will lead local workshops in Edmonton and the region to identify and advance local industrial symbiosis opportunities.

Next Steps: The selection of the City to participate in the National Industrial Symbiosis Program is pending.

2016 Projects – To Advance Energy Efficient Land-Use, Development and Transportation

- **Establishment of Edmonton’s Electric Vehicle Strategy:** The purpose of this project is to establish an evidence-based, action-oriented plan that will create a market-shift toward the purchase of battery electric and plug-in hybrid vehicles in Edmonton. The goals of the project are to: (1) determine strategic actions and establish an implementation plan that will accelerate the uptake of electric vehicles in Edmonton and (2) identify actions that will position the City of Edmonton to lead-by-example in supporting the accelerated adoption of electric vehicles. At year-end 2016, the Project Charter for this project was drafted and the RFP for consulting services was underway. **Next Steps:** Key activities in Q1 and Q2, 2017 include conducting a scan of best practices, seeking input from various stakeholders through various forums, conducting Edmonton-focused market research to identify barriers and opportunities to electric vehicle adoption, and completing a strategy document and detailed implementation plan. The resulting strategy will be presented to Urban Planning Committee July 2017.
- **Valley Line LRT and LRT Expansion Projects:** The purpose of these projects is to build an LRT system that is an efficient and environmentally friendly way to move Edmontonians. As the LRT and supporting bus network expands, high quality, high-capacity transit travel will be available to an increasing number of destinations, thereby increasing the attractiveness of the system to users.

In June 2009, City Council adopted a long-term LRT Network Plan that defines the future size, scale and style of the regional LRT system. Eventually, the LRT network will have six lines extending to the northwest, northeast, east, southeast, south and west.

The Valley Line LRT (Stage 1: Mill Woods to Downtown) is an urban-style, low-floor LRT currently that began construction in 2016 and is scheduled for completion in December 2020. The 13.1km line is being built at a capital cost of approximately \$1.8 billion (2016 CAD) which will feature:

- o 11 fully accessible, community-integrated stops, designed with a minimal infrastructure footprint
- o Davies station, which includes a full Park & Ride and transit centre
- o The new Tawatinâ bridge spanning the North Saskatchewan River
- o A short tunnel from the Quarters redevelopment to Louise McKinney Park
- o An interchange at Churchill Square linking to the Capital and Metro LRT lines

Even as the Valley Line project progresses, preparations are underway for the construction of several other LRT expansions, including:

- o The Metro Line, extending northwest from Blatchford to city limits near St. Albert
- o The Capital Line, extending south from Century Park to Heritage Valley, and northeast from Clareview to Gorman
- o The Valley Line, extending west from Downtown to Lewis Farms
- o A future ‘central area circulator’ is also in the early stages of planning.

LRT development promotes many City initiatives from *The Ways* encouraging efficient energy use, including:

- o Promoting mode shift: Moving more people more efficiently in fewer vehicles, and encouraging more active forms of transportation.
- o Promoting a compact urban form: Creating denser development around LRT stations and transit centres, reducing the length of vehicle trips and infrastructure expenditure.
- o Promoting green transit: Building out a transit system that is environmentally sustainable and reduces greenhouse gasses and energy consumption.
- **Blatchford Redevelopment:** The purpose of this project is to transform 535 acres in the heart of Edmonton into one of the world's largest sustainable communities. The neighbourhood will create an opportunity for 30,000 residents to live a unique and sustainable lifestyle.

Driven by City Council's vision to create a community that significantly reduces its ecological footprint and empowers residents to pursue sustainable lifestyle choices, Blatchford is a leading-by-example opportunity to showcase Edmonton's commitment to becoming an energy sustainable city. The community will incorporate best practices for sustainable urban design including increasing density; prioritizing design that promotes walking, cycling or transit; creating a mix of housing, retail, commercial and public spaces; and incorporating significant park and green spaces.

On December 8, 2016, City Council approved the community energy strategy, including the framework for a renewable energy utility that will further reduce greenhouse gas emissions and enable the effective use of energy. The plan relies on the following three strategies:

- o Conservation: All buildings in Blatchford will incorporate green building features to reduce the amount of energy required.
- o Efficiency: An ambient district energy sharing system (DESS) will provide heating, cooling and domestic hot water for the buildings in Blatchford. It will be capable of sharing energy between buildings, neighbourhoods and seasons, significantly reducing overall energy demand.
- o Renewables: The use of on-site renewable energy sources including geo-exchange, solar PV and sewer heat exchange.

Next Steps: After years of necessary planning, design, engineering and site preparation work, construction for the first residential stage and a section of the central park starts in spring 2017. The first stage will see approximately 250 units (townhomes and condos) built.

- **Edmonton Transit Service (ETS) Electric Buses:** Over the past three years, ETS and Fleet and Facility Services have worked towards introducing battery-powered electric buses (e-bus) into its regular service fleet. This is part of the City's commitment to exploring emerging technologies to create a more effective, efficient and ecologically responsible public transit service for Edmontonians.

The first pilot project was conducted between May and October of 2014, testing two electric buses on Edmonton streets. In winter 2015/16, field trials showed that e-buses will operate effectively on Edmonton roads and throughout winter months.

In June 2016, Administration provided a report to City Council outlining the results of winter testing and a business case for an initial deployment of 40 e-buses. The analysis indicates that e-buses is a cost neutral alternative to diesel buses. Based on present electricity generation in Alberta, it is estimated that an e-bus emits approximately 38 to 44 per cent less CO2 emissions than its diesel counterpart.

Next Steps: City Council has directed Administration to purchase up to 40 e-buses, with funding available through the Public Transit Infrastructure Fund (PTIF). A request for proposals will be issued in the second quarter of 2017, with delivery of buses expected in late 2018/early 2019. Administration is undertaking other activities to plan for e-bus deployment in Edmonton, including:

- Change management activities, ensuring staff is trained to operate and maintain the new technology, and facilities and processes are in place to support e-bus operations,
- Facility assessments to determine the feasibility and costs of upgrading transit garages to equip e-buses, and
- Developing a longer term acquisition and deployment strategy for the next capital budget cycle in 2019.
- **Residential Infill:** The purpose of this program is to encourage residential infill in Edmonton. The City defines residential infill as *the development of new housing in established neighbourhoods. This new housing may include secondary suites, garage suites, duplexes, semi-detached and detached houses, row houses, apartments, and other residential and mixed-use buildings.* In 2016, residential infill was encouraged through a number of Zoning Bylaw changes that came into effect:
 - Requiring a minimum planting of trees and shrubs and promoting the preservation of mature trees in established communities
 - Reducing parking requirements for certain high-volume commercial areas (such as Whyte Avenue) to promote alternative forms of transportation
 - Allowing more compact built forms while also requiring a mix of housing types

Moreover, in 2016 the Rain Garden in a Box initiative was introduced, promoting natural on-site collection of stormwater which is then slowly released into the stormwater sewer system. As well, an information report was presented to Council discussing possible incentives to promote more and better landscaping on commercial and industrial sites.

Next Steps:

- Proposed Zoning Bylaw amendments to the Mature Neighbourhood Overlay which include changes that would accommodate the recently-updated insulation requirements in the Alberta Building Code
- Proposed Zoning Bylaw amendments to allow for solar panel collectors to be located on low density residential buildings
- Proposed Zoning Bylaw amendments to limit impermeable surfaces on low density residential sites
- Proposed Zoning Bylaw amendments to promote the buildability of garage and garden suites

- Proposed Zoning Bylaw amendments to reduce parking requirements for low density residential uses from 2 spaces to 1 space
- The Evolving Infill project will explore additional infill opportunities, including medium and high density opportunities that would facilitate a more efficient use of infrastructure and services, including transit

2016 Projects – To Lead-By-Example in City (corporate) Operations

- **Update of City Policy C532 – Sustainable Buildings:** The purpose of this project is to update the City’s Sustainable Building Policy C-532 to ensure the City leads-by-example in establishing, implementing and maintaining sustainable building practices for the buildings it owns, leases and funds, over the course of their entire lifecycle (including planning, design, construction, operation and demolition). This policy supports the City’s larger goal of carbon-neutral City (corporate) operations given that 60% of the City’s greenhouse gas emissions come from buildings. For City-owned buildings, the update of C-532 will establish stronger rationale for LEED certification, higher energy efficiency and intensity requirements, more ambitious carbon emissions requirements, new renewable energy generation requirements, new requirements for life cycle costing analysis, and new requirements for BOMA BEST 3.0 certification (for sustainable operations and maintenance, energy benchmarking and recommissioning). For buildings the City leases and private buildings that receive significant City funding, the updated policy will establish a suite of new sustainable building practices which previously did not exist.

Next Steps: Updated Policy C-532 will be presented to Executive Committee in April 2017.

- **Update of the City (corporate) Operations GHG Inventory:** The purpose of this project is to: (1) establish a short-term plan for achieving the 2018 Corporate Measure – *Reduce Greenhouse Gas Emissions in City (corporate) Operations*, (2) establish a ten-year plan (2019-2028) for reducing greenhouse gas emissions in City (corporate) operations, and (3) establish a corporate management and accountability framework for guiding the implementation and ongoing maintenance of these two plans.

The current City (corporate) Operations GHG Management Plan was approved by Corporate Leadership Team in 2012. It sets an ambitious goal to reduce GHG emissions by 50% by 2020 (compared to 2008 levels). The reason the plan requires updating at this time is because a number of its key assumptions are obsolete – particularly those relating to infrastructure growth and the amounts of green power that would be purchased in this timeframe. Because the City is not on track to achieve the 2018 Corporate Target (*in the red*) there is need for action to fully understand the situation, evaluate possible corrective actions and report back to City Council with an updated plan. At year-end 2016, the project charter for this project had been drafted and submitted to the executive sponsors for approval.

Next Steps: The project will commence in early 2017 with: (1) a report to City Council in summer 2017 detailing a short-term plan for achieving the 2018 Corporate Target, and (2) a second report to City Council in December 2017 outlining a ten-year plan and accountability framework.

- **Electric Vehicle Charging Station Pilot Project:** The purpose of this project is to advance the uptake of electric vehicles within the City's municipal fleet through the provision of electric vehicle charging stations.

At the September 28, 2016 Urban Planning Committee meeting, Administration presented an information report (CR_3961) identifying potential funding from Natural Resources Canada for electric vehicle charging station infrastructure, for which the City had applied. After receiving notification that its application was unsuccessful, Administration brought back a second report to Executive Committee on November 22, 2016 (CR_4178) recommending an electric vehicle charging station pilot project called *Plug'n Go Edmonton* that would fund the installation of 100 publicly-accessible Level 2 charging stations: 30 at City-owned facilities and 70 at privately owned facilities. It was intended that the pilot project would inform the development of Edmonton's Electric Vehicle Strategy, including: (1) creating public awareness to encourage the uptake of electric vehicles, (2) understanding the relationship between electric vehicle purchases in Edmonton and the need for public charging station support, (3) evaluating the overall operational efficiency and effectiveness of Level 2 charging stations in Edmonton's winter climate, and (4) understanding the potential effectiveness of different ownership and partnership models.

In response to Council Report CR_4178, Executive Committee recommended the approval of capital funding for 30 electric vehicle charging stations on City-owned property. However, it did not approve funding for the 70 stations on private property. Instead, it requested that private ownership models be further explored when developing Edmonton's Electric Vehicle Strategy. As well, Council postponed the decision on the capital funding for the 30 City-owned charging stations to April 2017.

Next Steps: Based on Council direction, all charging stations options (corporate and community) will be considered as part of the Edmonton's Electric Vehicle Strategy. In developing that strategy, Fleet and Facility Services Branch will prepare a business case for the acquisition of electric vehicles to replace some of the existing light duty City fleet. This will include an analysis of charging station needs and the importance of the City leading by example. The strategy will be presented to Committee in July 2017.

- **Community Greenhouse Gas Inventory:** The objective of this project (completed in Q4, 2016) was to improve methodologies used to calculate Edmonton's community GHG. The project involved developing a calculation and forecasting tool in conformance with the *Global Protocol for Community Scale Greenhouse Gas Emission Inventories*. In pursuing this protocol, the City applied what is called the BASIC+ inventory reporting level that includes all source 1, 2 and 3 emissions; as compared to the BASIC reporting level that includes only source 1 and 2 emissions. As such, the City of Edmonton was one of the first municipalities in Canada to fully comply with the BASIC+ approach outlined in the protocol.

Next Steps: The improved calculator will be used extensively in 2017 to better understand and target greenhouse gas emissions in the community.

- **Sustainable Building Practices:** Integrated Infrastructure Services led a number of projects/initiatives in 2016 to advance sustainable building practices in City buildings. Key efforts included: (1) establishing the City (corporate) Operations Energy Education

Program, (2) integrating the impact of energy efficiency retrofits and rehabilitation changes to City assets to lifecycles analysis, (3) conducting daylight harvesting and LED lighting pilot projects, (4) optimizing the building rehabilitation program by implementing requirements for higher efficiency building envelope, and mechanical and electrical systems, (5) completing the solar photovoltaic micro-generation pilot project and initiating large scale installation on City-owned buildings, (6) establishing the Combined Heat and Power Pilot Program, (7) building out the City Energy Management Opportunity Assessment Framework to include best practice energy audits and energy inspections, and (8) incorporating renewable and alternative energy considerations into the planning, architecture and engineering design of new buildings and rehabilitation of existing buildings.

Emerging Opportunities/Issues

2016 was an ambitious year for the start-up Energy Transition Program. The Energy Transition Unit doubled in size from five to ten practitioners; accountability frameworks were established; significant initiatives and projects were launched; and stakeholder engagement efforts were greatly expanded. While implementation efforts will continue to accelerate in 2017, the complexity of this effort will increase in response to a number of emerging opportunities and issues.

Opportunity/Issue: Alignment with Other Government Agencies

In 2015 and 2016, federal and provincial government expressed strong commitments for climate change action. As the year passed, more defined directions began to emerge.

New provincial directions in 2016 included:

- **Creation of Energy Efficiency Alberta:** Energy Efficiency Alberta is a new provincial agency, established to provide programs and services to help Albertans save money and lower their carbon footprint. The agency was established in response to recommendations in the Climate Leadership Plan and will be funded by carbon levy revenue. At year-end 2016, the Board of Directors for the agency was in place and the search for a CEO was underway. The Government of Alberta has announced a number of energy efficiency programs that will transfer to the agency, including:
 - Establishment of a *Residential No-Cost Energy Savings Program*: A program that will offer direct, no-charge installation of low-cost energy efficiency products to Alberta residential and multi-family properties. (Expected launch: Spring 2017)
 - Establishment of a *Residential Retail Products Program*: A program that will offer point-of-sale rebates through participating retailers for the purchase of energy-efficiency measures including refrigerators, clothes washers, high efficiency windows, water heaters, etc. (Expected launch: Spring 2017)
 - Establishment of a *Business, Non-Profit and Institutional Energy Savings Program*: A program that will offer incentives to business, non-profit and institutional energy users to encourage them to choose high-efficiency products from a comprehensive list including efficient lighting products, efficient HVAC equipment, efficient water heating equipment, etc. (Expected launch: Spring 2017)
 - *Non-Profit Energy Efficiency Transition (NEET) Program*: A program providing funding to help non-profit and volunteer groups determine the efficiency of their current lighting, heating, cooling and hot water systems. With this information, agencies will be positioned to apply for funding through the provincial Business, Non-Profit and Institutional Rebate Program, which offers incentives for the purchase and installation of high-efficiency products. (Expected launch: Spring 2017)

Similarly, the federal government expanded its climate policy framework in 2016, releasing the *Pan-Canadian Framework on Clean Growth and Climate Change*. The Framework included four main pillars: pricing carbon pollution; complementary measures to further reduce emissions across the economy; measures to adapt to the impacts of climate change and build resilience; and actions to accelerate innovation, support clean technology, and create jobs. Together, these interrelated pillars form

a comprehensive plan.

Given this dynamic policy environment at both the federal and provincial levels, it will be essential for the City to steer carefully in 2017 in order to: align complementary efforts and resources, avoid duplication of efforts, and capitalize on whatever program and funding opportunities might arise.

To this end, the City of Edmonton met with the Province's Climate Change Office several times in 2016 to stay abreast of changes and to ensure the Province was aware of City strategy. As well, in September 2016, the City submitted a letter to the Province's Energy Efficiency Advisory Panel, offering 24 recommendations, re: services the agency should be providing. The City will continue to advocate for these recommendations as the agency gets up-and-running in 2017. Similarly, at the federal level, the City will monitor the implementation of the *Pan-Canadian Framework* as well as funding programs that are likely to emerge through Natural Resources Canada and the Federation of Canadian Municipalities.

Clearly, the alignment of government policies, programs and initiatives will be a key to program success in 2017 and beyond.

Opportunity/Issue: Reducing GHG Emissions in Corporate Operations

As indicated above, in 2016 the City launched a project to update its City (corporate) Operations Greenhouse Gas Management Plan (i.e., to establish ambitious, cost-effective plans for reducing greenhouse gas emissions in City (corporate) operations). An update of the plan was necessary as the existing plan is obsolete in a number of respects and because the City is not on track to achieve its 2018 Corporate Target to reduce GHG from City (corporate) operations. This project will require the City to reexamine the value it places on carbon avoidance and the price premium it may be willing to pay for energy efficient infrastructure. As well, the project will require the City to look more closely at its energy supply, with an aim to reduce the carbon intensity of the electricity, heating fuels and transportation fuels it consumes. Again, this discussion will require the City to determine the premium it may be willing to pay for greener energy.

Opportunity/Issue: City Charter Powers to Advance Energy Transition

Edmonton's Community Energy Transition Strategy recommends tactics for reducing energy use and greenhouse gas emissions in Edmonton – including Tactic 4.7.14 which identifies the opportunity for property-assessed clean energy financing mechanisms to support clean energy investments:

- Tactic 4.7.14: *In partnership with the Province, Alberta municipalities, major financial institutions and key stakeholders, identify and assess the feasibility of new financing arrangements to assist citizens with energy efficiency and clean energy investments (including arrangements such as property-assessed financing programs (PACE) and on-bill tariff repayment financing programs).*

PACE is a form of public financing for energy and resource efficiency upgrades to buildings (residential or commercial). The financing typically takes the form of a special assessment on municipal property taxes. Typically, under most PACE programs, property owners obtain the

advice of a program-authorized energy efficiency professional on upgrades that are best suited to their property and energy efficiency needs. They then obtain loans from an approved funding source (either a financial institution or the municipality, depending on the program). Repayment occurs through an assessment on property taxes or via separate monthly or annual invoicing to the property owner. In either case the loan is tied to the property and not to an individual property owner. PACE programs have been adopted or piloted by many jurisdictions in the United States and two in Canada (Halifax Regional Municipality and the City of Toronto).

As per the Government of Alberta’s *City Charters Overview Package* (p.17), the opportunity for Property Assessed Clean Energy (PACE) loans will be considered as a possible Charter power:

Topic	Current	Enabling Proposal
Clean energy loans	The cities do not have authority to provide loans to homeowners for energy efficiency or renewable energy upgrades	Enable Property Assessed Clean Energy (PACE) loans to property owners in the cities. Under this program, the cities would be allowed to provide loans to homeowners to fund energy efficiency or renewable energy upgrades in their homes.

In pursuing this opportunity, the City will have the opportunity, through the evolving Charter development, to enhance the potential for PACE beyond what is described in the above paragraphs (extracted from the Province’s document).

A second Charter opportunity relates to energy labelling, reporting and disclosure for buildings. Edmonton’s Community Energy Transition Strategy recommends tactics for encouraging energy efficiency in buildings including:

Tactic 4.1.6: In partnership with BOMA Edmonton, establish and implement a voluntary program for publicly reporting/disclosing energy consumption and GHG emissions of Edmonton’s largest buildings. Lead by example with City of Edmonton’s largest buildings.

4.1.4: In partnership with Canadian Home Builders’ Association (Edmonton Region) and the Edmonton Real Estate Board, establish a voluntary energy labeling pilot program for existing homes in Edmonton.

With respect to this opportunity, the Government of Alberta’s *City Charters Overview Package* (p.21) proposes this topic for further collaboration under the framework of Environment and Climate Change Policy as follows:

Topic	Current	Enabling Proposal
Building energy labelling	There is no formalized collaboration on energy labelling for buildings.	Cities and the GOA work together to encourage building labelling for the private sector.

As the Charters are further developed, the City may take the opportunity to obtain Charter powers to regulate/require energy labelling of all Edmonton buildings, as opposed to the more limited position that has been advanced at this point in the development of the Charters.