Town of Erie Energy Action Plan 2.0

October 2021

ACKNOWLEDGEMENTS

Thank you to the following individuals who contributed many hours of service to developing this Energy Action Plan. The content of this plan is derived from a series of planning workshops hosted by Xcel Energy's Partners in Energy. Xcel Energy is one of the electric and gas utilities serving the Town of Erie. Partners in Energy is a two-year collaboration to develop and implement a community's energy goals.

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Building on Previous Success

The Town of Erie is an emerging leader in energy efficiency and renewable energy. Erie achieved and exceeded all of its goals outlined in the 2018 Energy Action Plan, offsetting 1.5 GWh of electricity and saving $137,000 community-wide through efficient new construction, business participation in energy programs, and municipal leadership!

The mission of Energy Action Plan 2.0 is to inspire renewed coordination across departments and organizations, and to contribute toward the aspirational energy goals outlined in the 2019 Sustainability Plan.

Aligning With the Town of Erie Sustainability Plan

In alignment with the Town of Erie's Sustainability Plan, the strategies outlined in this Energy Action Plan aim to contribute toward the following goals:

Source 25% of commercial electricity use from renewable resources by 2025*

Source 20% of residential electricity use from renewable resources by 2025 (with a stretch goal of 30%)*

Reduce average household electricity use by 3% by 2025 (with a stretch goal of a 5% reduction)*

Reduce average household natural gas use by 3% by 2025 (with a stretch goal of a 5% reduction)

Increase the number of green buildings that are tracked in the community annually

*Above and beyond what is already included in the utilities' fuel mix. All targets will be measured against a 2018 baseline.

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Moving the Needle on Energy Efficiency and Renewable Energy

This plan will help attain the goals listed above through two focus areas:

Renewable Energy Campaign

✓ Conduct an energy subscription campaign for Old Town residents.
✓ Share energy information with new residents through welcome materials.
✓ Obtain gold-level SolSmart certification.
✓ Share renewable energy information with all Town of Erie residents and businesses.

Green Business and HOA Program Support

✓ Share energy information with existing or potential green businesses.
✓ Recognize existing and recruit new green businesses and HOAs.

Impact and Results of Plan Implementation

Implementing the strategies outlined above will work toward:

Doubling participation in energy programs, compared to a three-year average (2018-2020), over the course of 18 months.

That would offset approximately 1.7% of community-wide electricity use and approximately 1.8% of Erie's Xcel Energy natural gas use in 2018 and generate approximately 10% of total community electricity use in 2018 through renewable energy.

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INTRODUCTION

What Is Partners in Energy

Partners in Energy is a two-year collaboration between Xcel Energy and a community, to develop and implement a community's energy goals. Participation typically spans two years. The first four to six months are spent developing an energy action plan, and the following eighteen months include support to implement that plan. Once the implementation support period is complete, "graduate" communities receive ongoing benefits, which includes access to Partners in Energy events, newsletters, and resources. Graduate benefits can also include targeted or ad-hoc support to continue building on success established during implementation. See Figure 1 below.

Figure 1. Partners in Energy Scope

During planning and implementation, Partners in Energy provides project management and facilitation services, serves as a liaison between Xcel Energy and the community, and delivers detailed data analyses. During implementation, Partners in Energy builds on these resources to provide marketing and communication, host events, share technical information, and coordinate among implementation stakeholders. Ultimately, community participation in Partners in Energy serves to accelerate the achievement of community energy goals through coordinated planning and implementation.

Erie's Participation in Partners in Energy

Recognizing these benefits, the Town of Erie first applied to participate in Partners in Energy in 2017. With the input of a broad community stakeholder group, the Town of Erie adopted their first Energy Action Plan in 2018. The vision, goals, focus areas, and strategies of the 2018 plan are listed below.

Vision and Goals

The 2018 Energy Action Plan set forth the following vision:

> **The Town of Erie is an engaged community that creates awareness, builds partnerships, and invests in energy strategies that responsibly pursue conservation, renewable energy generation, innovation, equity, and economic prosperity for the benefit of present and future generations.**

To measure the achievement of this vision, the 2018 plan also set forth the following measurable goals:

> **Offset 1.5 GWh of electricity and save $137,000 community-wide through efficient new construction, business participation in energy programs, and municipal leadership.**

Focus Areas and Strategies

The 2018 plan established strategies for three key focus areas, as shown in Figure 2:

New Construction	Existing Businesses	Municipal Leadership
• Residential new construction energy efficiency • Commercial new construction energy efficiency	• Business energy achievement recognition • Business outreach campaign	• Municipal energy benchmarking and energy audits • Community awareness campaign

Figure 2. 2018 Energy Action Plan Focus Areas and Strategies

Implementation and Graduate Support

From April 2018 through September 2019, Erie received support from Xcel Energy to implement the strategies outlined in the Energy Action Plan and saw great success. Figure 3 summarizes key achievements completed during the implementation support period.

New Construction	Existing Businesses	Municipal Leadership
• Adopted 2015 or newer IECC codes in 2018 • Encouraged new construction projects to leverage efficiency programs	• 50 Erie businesses – serviced by Xcel Energy – to complete an energy achievement • Recognized businesses that exhibit energy leadership	• Enrolled in energy benchmarking • Completed energy assessments on Town of Erie facilities • Town of Erie completed at least one energy-saving action

Figure 3. 2018 Energy Action Plan Accomplishments

Following the initial implementation support period, the Town of Erie continued to receive Partners in Energy support as a graduate community. Graduate support activities primarily focused on the development of outreach and educational materials, including a COVID-19 energy and economic recovery flyer for businesses and an energy activity kit for kids.

By the end of 2020, Erie achieved or vastly exceeded the goals established in the 2018 Energy Action Plan (Figure 4). More specifically, the Town met its electricity conservation goal (expressed in kilowatt hours, kWh), and far exceeded its natural gas conservation goal (expressed in Therms) and cost savings goal (expressed in dollars).
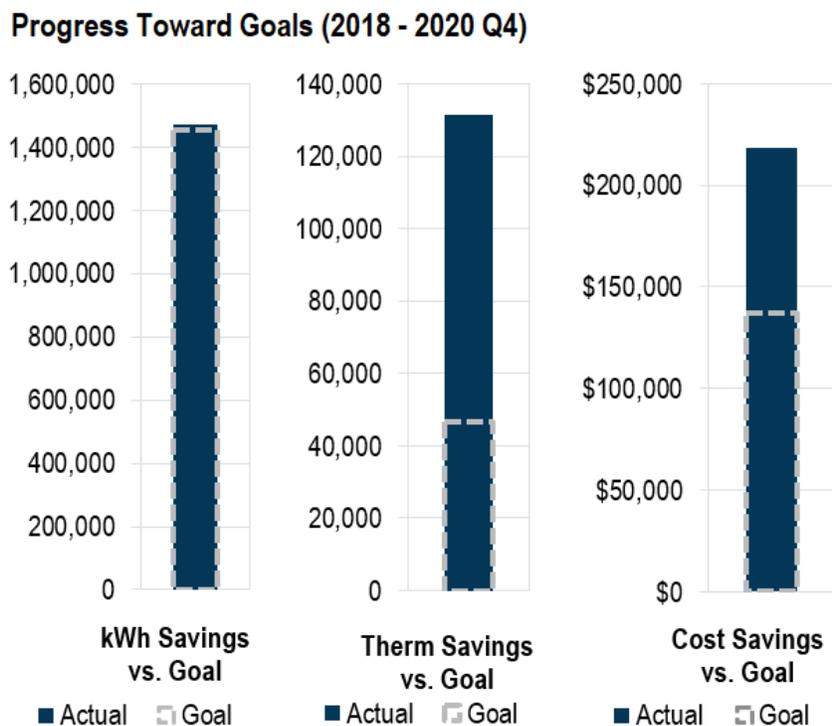

Figure 4. 2018 Energy Action Plan Goals and Progress

Energy Opportunities and Reapplication

As evidenced above, the Town of Erie has demonstrated emerging leadership in energy efficiency and renewable energy. Given this progress, myriad energy programs, projects, and opportunities continue to be identified and implemented across multiple departments. To better understand the landscape and relationship of energy opportunities, and to identify a subset of opportunities that could benefit from additional implementation support, the Town of Erie reapplied to participate in another round of the Partners in Energy planning and implementation process.

In the Town's reapplication to Partners in Energy, some of the most pressing issues included energy affordability, the nexus between energy and water, expansion of the Green Business and HOA (Homeowners Association) program, and clean transportation. The objectives of this renewed participation were two-fold:

1. Map energy opportunities and activities by department
2. Identify 1-2 energy opportunities to support through implementation

The mission of Energy Action Plan 2.0 is to inspire renewed coordination across departments and organizations, and to continue making progress toward Town of Erie energy goals by supporting, over the next two years, the strategies identified in this plan.

Sustainability Plan Overview

In 2019, the Town of Erie adopted the Sustainability Master Plan, a five-year plan to enhance sustainability across the energy, transportation, and waste sectors. The Sustainability Master Plan builds on many of the strategies included in the 2018 Energy Action Plan, including energy efficient codes, education and outreach, and municipal leadership.

Vision

"As the Town of Erie grows and expands, we will become a leader in sustainability by providing outreach and leadership alongside inclusive and accessible opportunities that support the growth of our economy and engage the community while protecting our natural environment."

Energy Sub-topics

Sustainable energy opportunities are organized into four sub-topics:

- Codes and Policies
- Building Energy Use
- Renewable Energy Empowerment and Innovation
- Municipal Leadership

Energy Sector Targets

The energy sector includes the following six targets:

- Reduce average household electricity use by 3% by 2025 (with a stretch goal of a 5% reduction)
- Reduce average household natural gas use by 3% by 2025 (with a stretch goal of a 5% reduction)
- Increase the number of green buildings that are tracked in the community annually
- Source 25% of community-wide electricity use from renewable resources by 2025
- Source 25% of commercial electricity use from renewable resources by 2025*
- Source 20% of residential electricity use from renewable resources by 2025 (with a stretch goal of 30%)*

Above and beyond what is already included in the utilities' fuel mix. All targets will be measured against a 2018 baseline.

ERIE'S ENERGY BASELINE

An integral part of the Partners in Energy planning process is reviewing historic energy data that inform a community's energy baseline. Looking at energy trends, especially in conjunction with other contextual trends – for instance, weather, population growth, or even energy activities – tells a story about Erie's energy challenges and opportunities.

During Erie's first round of participation in Partners in Energy, historical energy data were gathered and charted for 2014-2016 (the years most recently available at that time). The new data in this section build on those initial charts. Starting in 2020, an updated Town of Erie municipal boundary was used to collect energy data for premises served by Xcel Energy. This updated boundary includes new premises added through Town annexations, and other premises that have been added since Erie's 2016 data analysis.

📚 **Defining Energy Terms**

Energy data is collected for each premise in a community. A "premise" is a unique combination of service address and meter. For residential customers, this is the equivalent of an individual house or dwelling unit in a multi-tenant building. For business customers, it is an individual business, or for a larger business, a separately-metered portion of the business's load at that address.

Multiple Utility Providers

The Town of Erie is home to not just one, but three energy providers. In addition to Xcel Energy, community members in the Town of Erie may receive energy services from United Power or Black Hills Energy. Within the Town of Erie boundary, United Power provides a portion of the community with electricity and Black Hill Energy provides a portion of the community with natural gas. Figure 5 illustrates the service areas of Xcel Energy and United Power; the boundary for Black Hills Energy was not available.
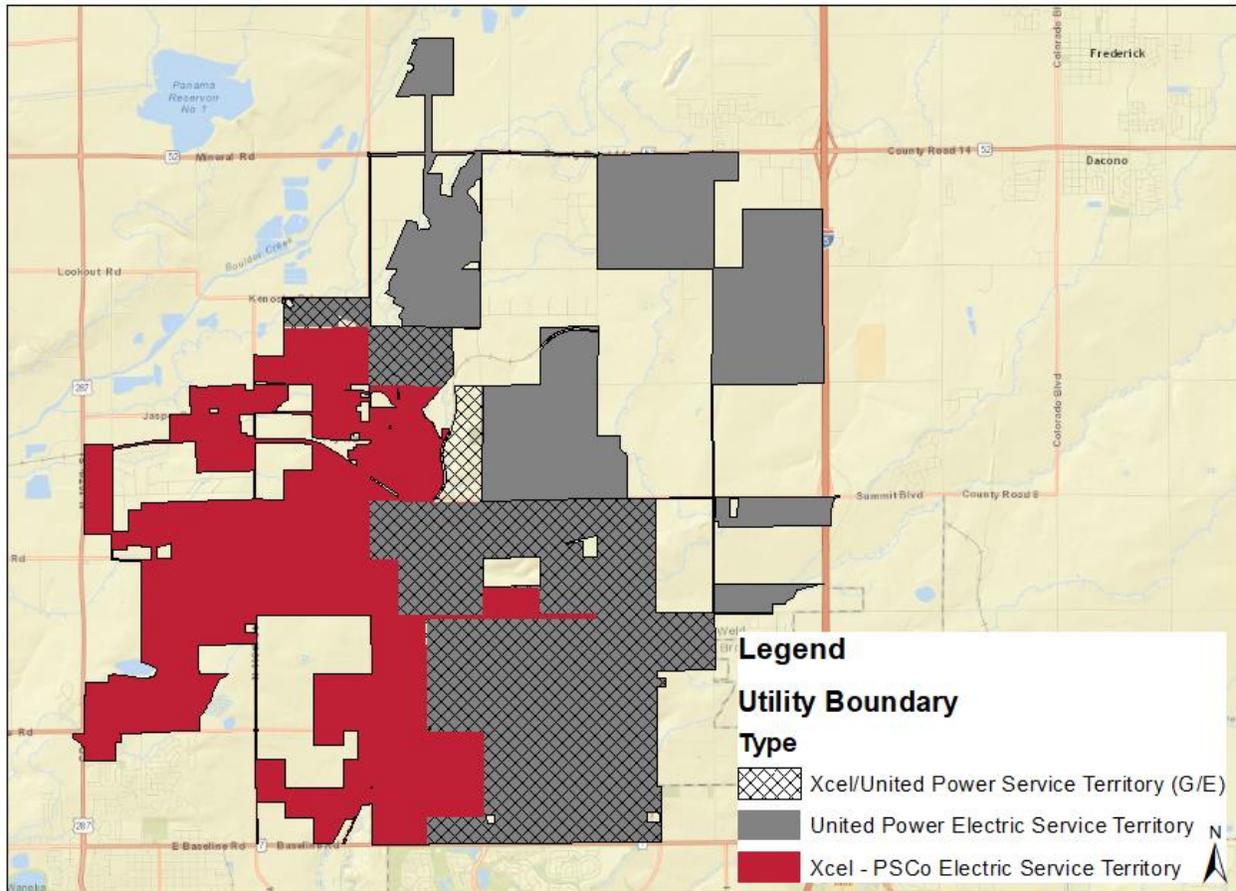

Figure 5. Energy Service Territories in Erie

The data represented in this plan only represents energy data for Xcel Energy customers, unless otherwise indicated. Xcel Energy provided data on energy use, participation counts, and utility energy conservation program savings for the Town of Erie. United Power provided data on electricity use for the Town of Erie.

Grid Energy Use

As a rapidly-growing Front Range community, it's not surprising that total premises and energy consumption in Erie is increasing. From 2014 to 2020, the number of premises served by electricity from Xcel Energy and United Power nearly doubled - from 8,308 total premises in 2014 to 16,411 total premises in 2020. This growth reflects new development and annexations by the Town during this period, and as such, a new municipal boundary file was used to collect 2017 to 2020 energy data, as compared to the 2014-2016 data collected.

As shown in Figure 6, residential premises accounted for the vast majority of Xcel Energy and United Power premises in Erie (92%) in 2020. Residential electricity premises are split fairly evenly between Xcel Energy and United Power, though United Power's share of electricity premises grew between 2014 and 2020 (Figure 7). United Power provided electricity to approximately twice as many commercial customers as Xcel Energy in 2020. Figure 8 shows a similar growth in Xcel Energy natural gas premises between 2014 and 2020. Black Hills Energy data was unavailable at the time of this report.
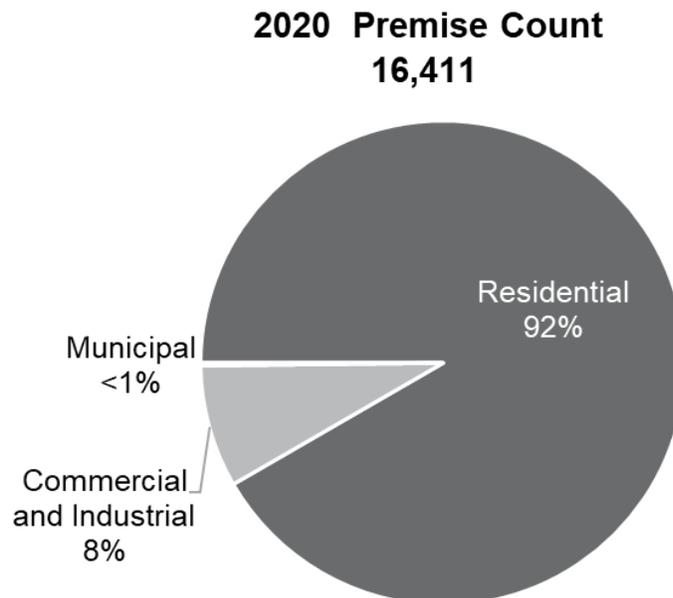

Figure 6. 2020 Total Premises (Xcel Energy and United Power)
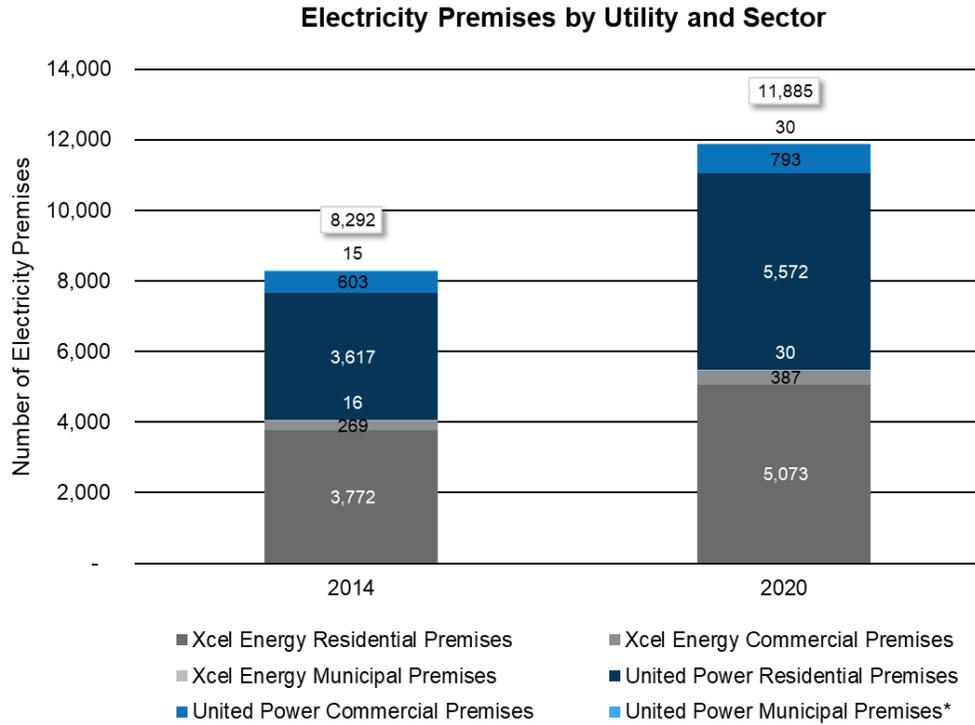
Electricity Premises by Utility and Sector

Figure 7: Electricity Premises by Utility and Sector 2014 and 2020

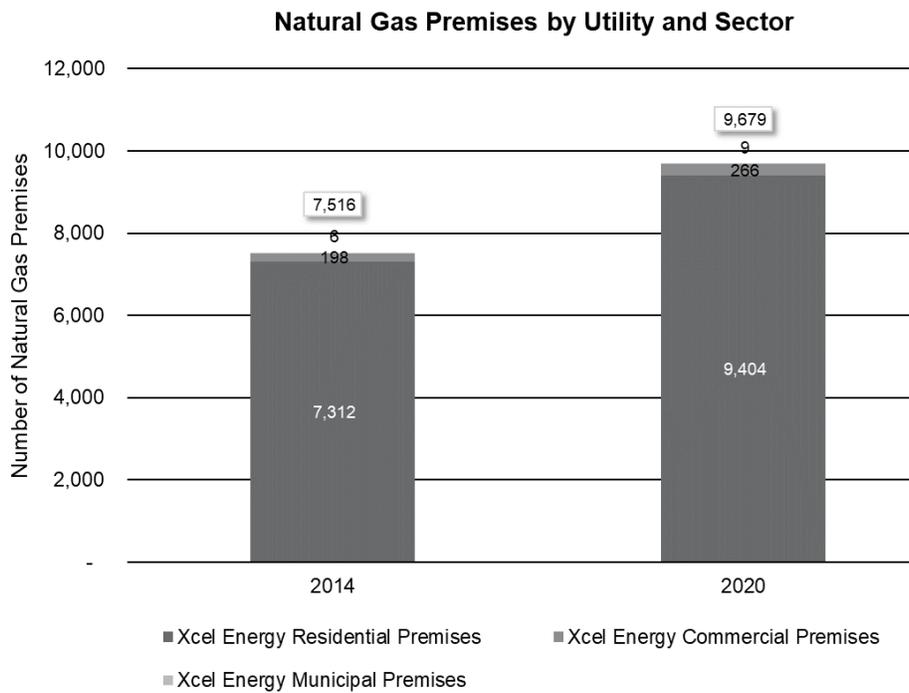## Natural Gas Premises by Utility and Sector

Figure 8. Natural Gas Premises by Utility and Sector 2014 and 2020

Figure 9 shows that electricity consumption across Xcel Energy and United Power premises in Erie grew 40% between 2014 and 2020.[1] Growth in electricity consumption outstripped growth in electricity premises, indicating opportunities to improve energy efficiency practices.

Residential electricity use consistently accounts for the majority of community electricity consumption (79% in 2020). In 2020, commercial and industrial premises accounted for 19% of community electricity consumption, and municipal premises accounted for 2% of total electricity consumption.

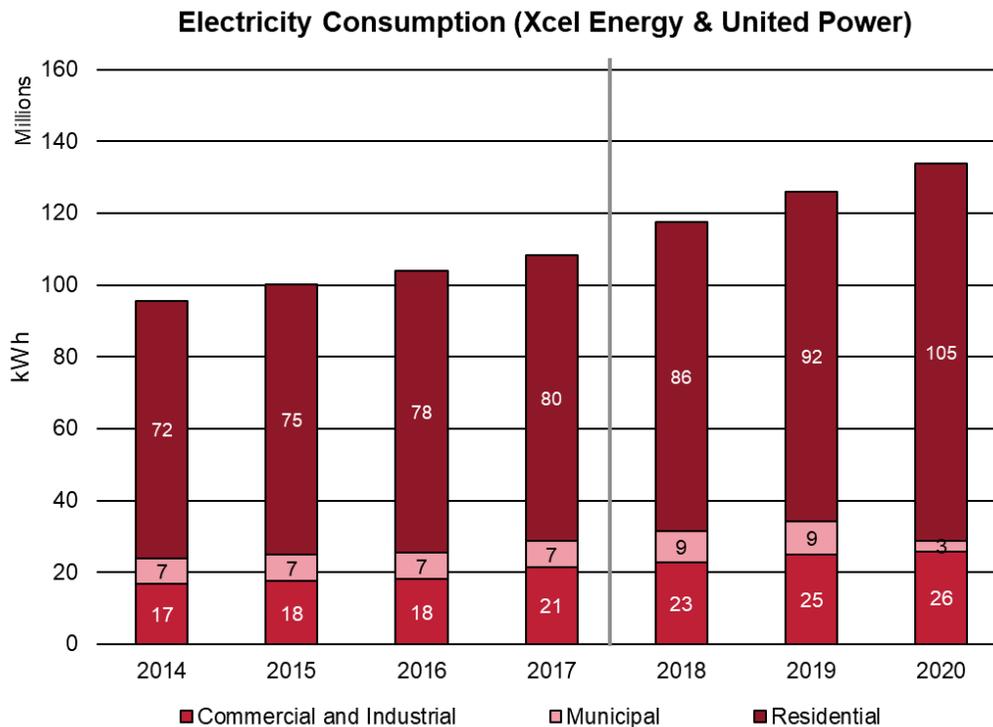**Electricity Consumption (Xcel Energy & United Power)**

Figure 9. 2014-2020 Electricity Consumption by Sector (Xcel Energy and United Power)

Figure 10 shows that natural gas consumption across Xcel Energy premises in Erie grew 29% between 2014 and 2020. During this time, the number of premises served natural gas by Xcel Energy increased from 7,516 in 2014 to 9,679 in 2020.

As with electricity consumption, residential use consistently accounts for the majority of community natural gas consumption (90% in 2020). In 2020, commercial and industrial premises accounted for 9% of community natural gas consumption, and municipal premises accounted for 1% of total natural gas consumption.

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[1] In Figure 9 and Figure 10, the vertical grey line indicates a break in the data. Data to the left of the grey line was collected using Erie's 2017 municipal boundary. Data to the right of the grey line was collected using Erie's larger 2020 municipal boundary.

Natural Gas Usage Historical by Sector, Xcel Energy Only
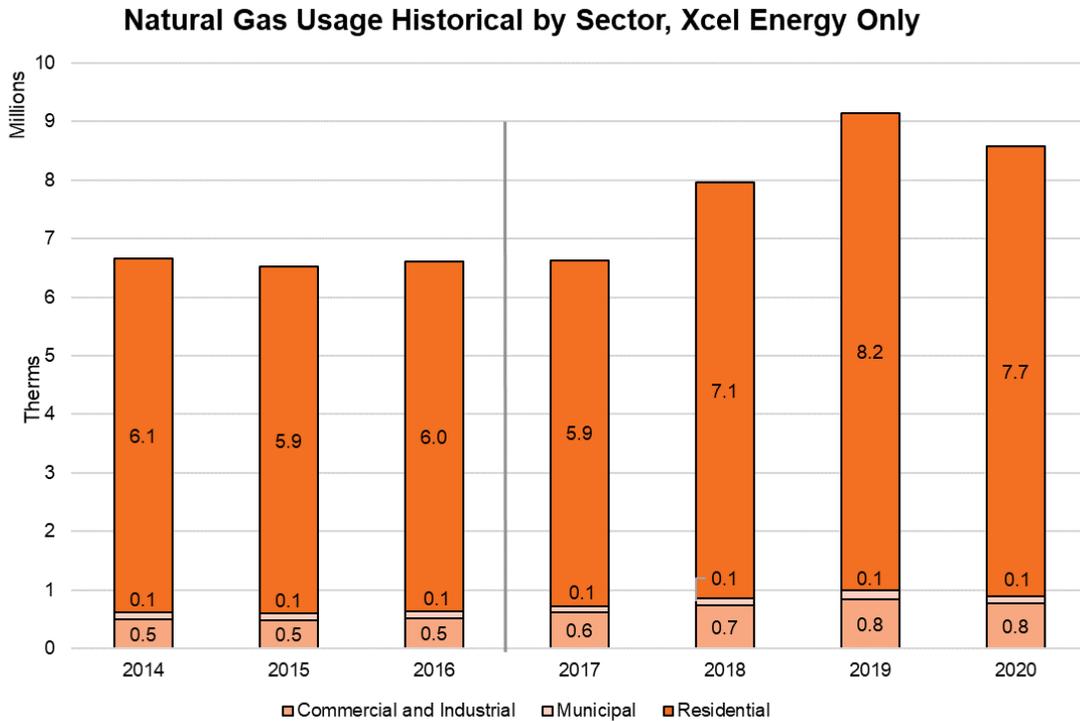
Figure 10. 2014-2020 Natural Consumption by Sector (Xcel Energy)

A snapshot of total energy use in 2020 (Figure 11) reveals that natural gas is the driving factor behind total energy use, making up 58% of Erie's total energy use. Residential energy use (electricity and natural gas) makes up 82% of Erie's total energy use.

2020 Energy Consumption by Fuel and Sector
6,269,439 MMBtu

Figure 11. 2020 Total Energy Consumption by Sector (Xcel Energy and United Power)

Greenhouse Gas Emissions

Energy consumption contributes to the community's carbon footprint through greenhouse gas emissions. As illustrated in Figure 12, total community greenhouse gas (GHG) emissions from community electricity and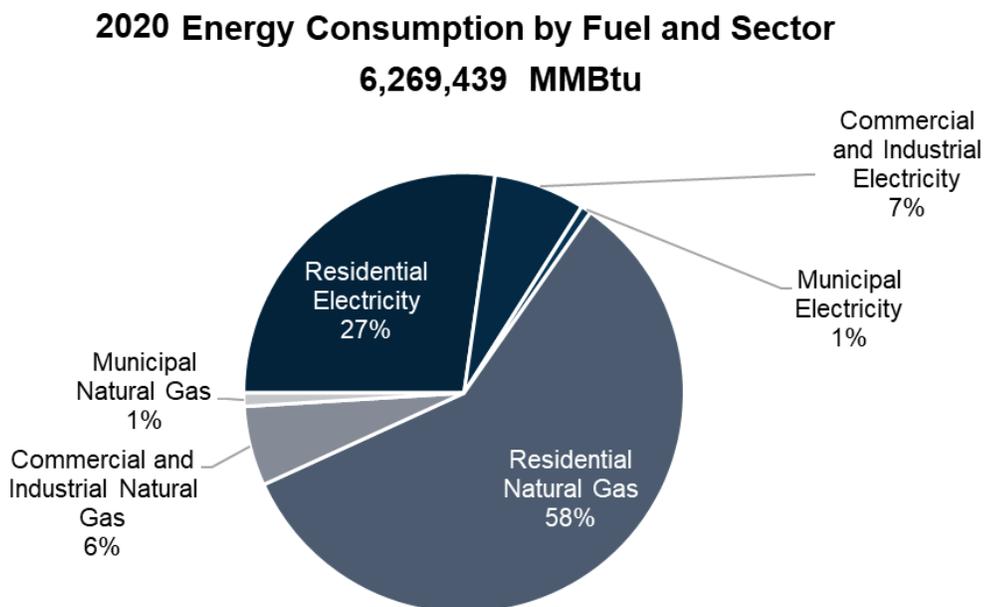 natural gas consumption have increased since 2014. The increasing number of total premises included in the analysis is a primary driver in the GHG increase from 2014 to 2020.

Although Erie's energy consumption has increased at the community scale, Xcel Energy's electric grid infrastructure is adding renewable energy sources to lower the emissions associated with using electricity over time, resulting in decreased GHG emissions from electricity sources. Xcel Energy is committed to becoming 100% carbon free by 2050 and cutting carbon emissions 80% by 2030. These commitments by Erie's utilities will help in achieving community-wide goals and help energy usage in Erie become cleaner.

In addition to reduced carbon intensity of grid energy supplied by utilities, participation in utility renewable energy programs; investing in energy efficiency improvements; and implementing renewable energy installations at Town facilities, commercial buildings and multi-family units - as well as in residential homes within the Erie community - will continue to help lower the community's GHG footprint.
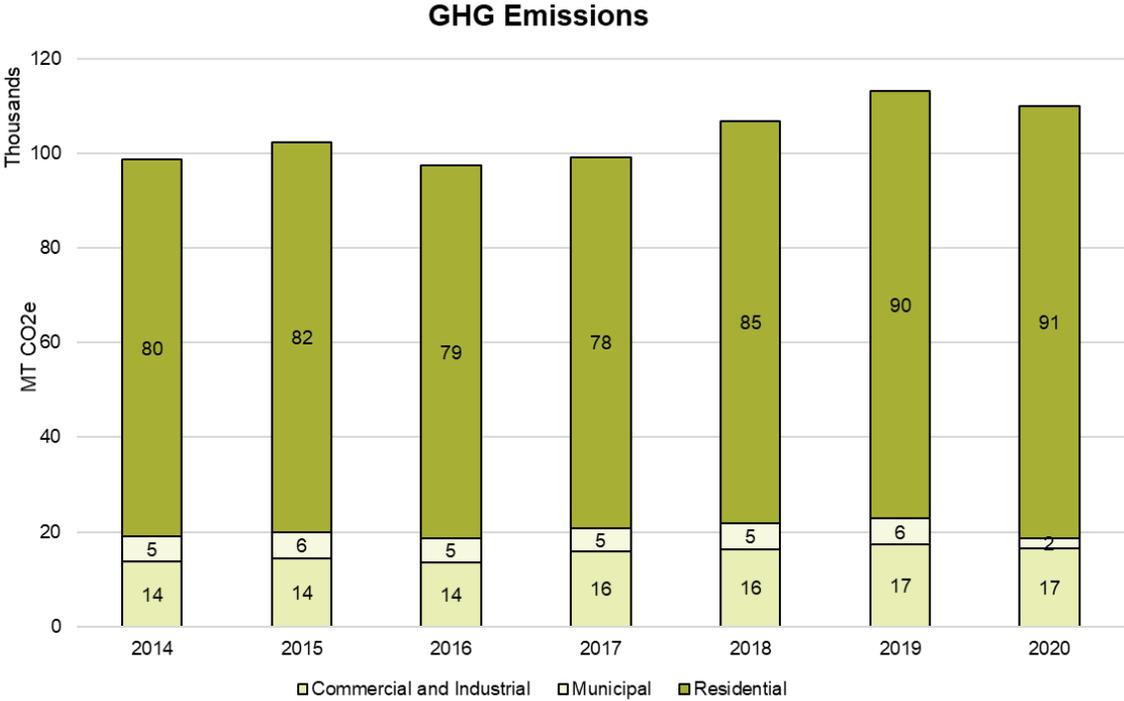

Figure 12. 2014-2020 Greenhouse Gas Emissions by Sector (Xcel Energy and United Power)

Program Participation & Savings

The community energy profile also includes Xcel Energy's energy efficiency and renewable energy program participation and associated energy savings for the residents and businesses of Erie. These data provide a snapshot of the types of programs customers are using and to what extent. The data also show opportunities for greater participation in the available programs and the opportunity for increased education and awareness about the programs.

Residential

From 2018 to 2020, an average of 454 residential customers participated in Xcel Energy programs each year, saving an average total of 363,162 kWh and 87,508 therms annually. Figure 13 shows which Xcel Energy programs residents participated in from 2017 to 2019.

As Figure 13 illustrates, the ENERGY STAR ® New Homes program is frequently used in new residential construction. Other popular opportunities used to increase residential energy efficiency and performance include rebates for high efficiency heating, air conditioning, and water heating systems; refrigerator and freezer recycling rebates; and thermostat optimization.
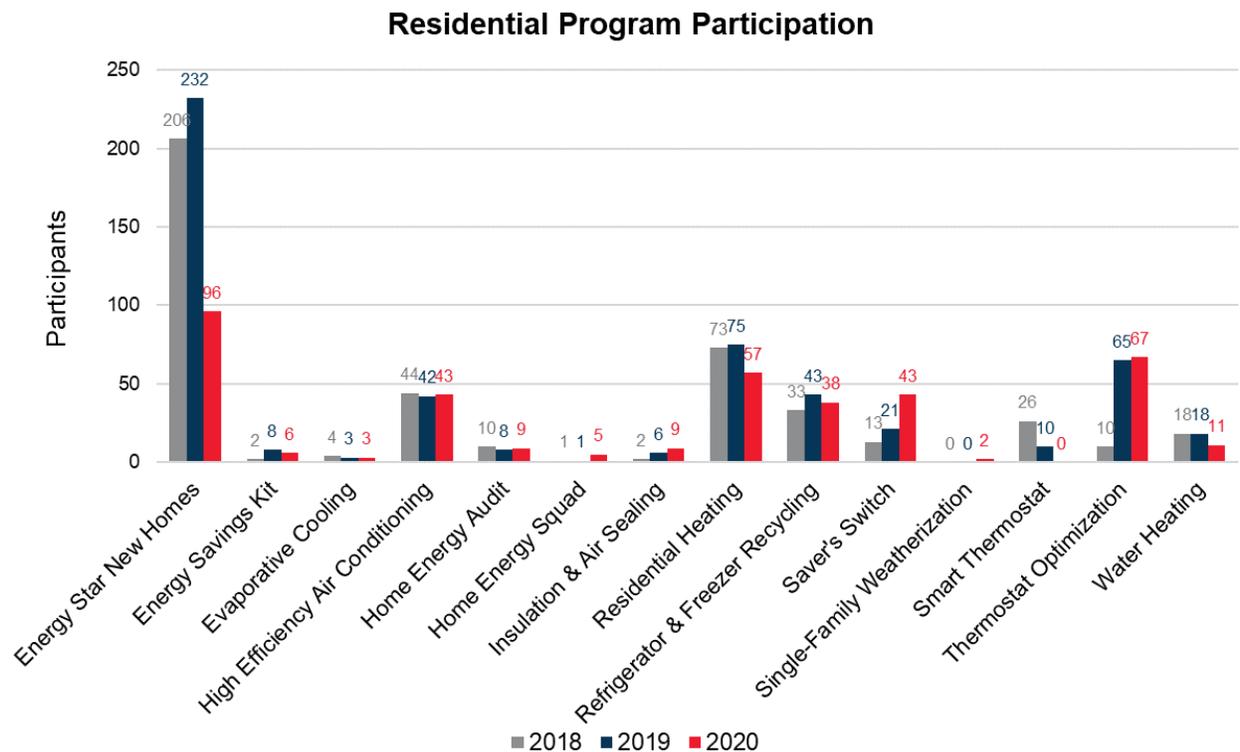

Figure 13. Residential Program Participation by Year, Program (Xcel Energy)

Commercial

From 2018 to 2020, an average of 17 commercial and industrial customers participated in Xcel Energy programs each year, saving an average total of 337,503 kWh and 8,010 therms annually. Figure 14 shows which Xcel Energy programs residents participated in from 2017 to 2019. As Figure 14 illustrates, the most popular opportunities for commercial participation in Erie included rebates for high efficiency cooling and heating.
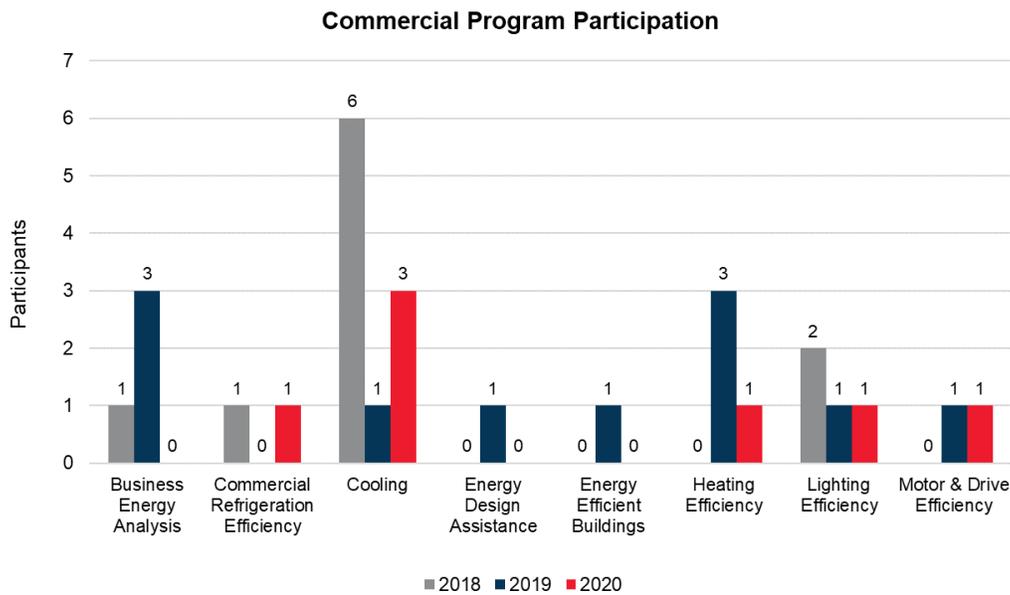
Figure 14. Commercial Program Participation by Year, Program (Xcel Energy)

Renewable Energy

In addition to energy efficiency programs, Xcel Energy offers a variety of renewable energy programs to its customers. In 2020, a total of 1,315 premises participated in Xcel Energy renewable energy programs, as summarized in Table 1. Note that detailed net-metering data are unavailable. A more detailed renewable energy baseline will be developed as part of the Energy Action Plan implementation efforts.

Table 1. 2020 Renewable Energy Program Participation (Xcel Energy)

Renewable Energy Program	2020 Participation	2020 Renewable Energy Generation Total (kWh)	2020 Average kWh / Participant
Windsource®	308	1,321,640	4,291
Renewable*Connect	12	66,721	5,560
Solar*Rewards	472	4,487,919	9,508
Solar*Rewards Community	5	22,831	4,566
On-Site Net Metering	518	n/a	n/a
Total	1,315	5,899,111	23,925

ERIE'S ENERGY OPPORTUNITIES

Identification and Prioritization Process

As enumerated in **Appendix A: Energy Opportunities by Department**, the Town of Erie has myriad opportunities underway or on the horizon. Ultimately, one of the key objectives of the Town of Erie's re-engagement in Partners in Energy was to identify a sub-set of those opportunities to prioritize for additional support.

A register of opportunities was developed in three phases.

Phase 1: Review of existing plans and documents. This included reviewing the 2018 Energy Action Plan and the 2019 Sustainability Master Plan in order to understand activities previously prioritized through robust stakeholder processes.

Phase 2: Kick-off meeting and staff survey. The second round of Partners in Energy planning began with a kick-off meeting which included representatives from the Town of Erie departments and Boulder County. Each participant was asked to share relevant energy opportunities. Following this kick-off meeting, a survey was administered to garner additional details related to opportunities underway or on the horizon. Follow-up conversations with key stakeholders revealed important details that were later used to prioritize opportunities.

Phase 3: Work Session 1. Based on the information gathered during Phases 1 and 2, all relevant energy activities and opportunities were cataloged by department and presented to the Energy Action Team (which included many of the stakeholders present at the project kick-off plus additional Town of Erie representatives). The Energy Action Team provided clarifying details regarding the various activities and opportunities and added a few more opportunities to the list.

Once the final register of opportunities was selected, opportunities were evaluated across four criteria:

- Good fit for Partners in Energy support
- Alignment with Town of Erie Board priorities
- Appropriate scope and timing
- Need for additional resources

Several activities that already had sufficient resources allocated for support were identified. These efforts are summarized in Table 2.

Table 2. Town of Erie Energy Efforts Underway or On the Horizon

Activities Underway	Activities on the Horizon
- LED streetlight conversion project - Energy performance contracting - Police building lighting upgrades - Town water-energy nexus projects	- Fleet electrification - Solar demonstration/community solar project

Key Opportunities

Through the prioritization process described above, two opportunities emerged as front-runners:

Renewable Energy Campaign: In addition to aligning well with the Sustainability Master Plan and Partners in Energy resources, this opportunity will encompass scope elements of several opportunities identified through this stakeholder process, including energy efficiency and renewable energy, businesses and residents, and new and existing development.

Green Business and HOA Program Support: Partners in Energy helped launch Erie's original Green Business Program, making it a natural fit for continued Partners in Energy support.

Sustainability Plan Synergy

Implementing the opportunities above is expected to contribute to all of the Sustainability Master Plan targets and support the following strategies:

E8. Promote existing energy efficiency programs for commercial and residential users.

E11. Educate on and incentivize commercial building retro commissioning.

E12. Identify creative and innovative opportunities to fund energy efficiency and renewable energy projects and programs in commercial and residential sectors and consider other innovative technologies, as they become available, for reducing energy use and increasing the amount of renewable energy powering the community.

ENERGY ACTION PLAN STRATEGIES

Renewable Energy Campaign

The Sustainability Master Plan's renewable energy goals identify both residents and businesses as key adopters of renewable energy. Fostering renewable energy adoption will require a tailored approach for the sub-audiences of these two broad sectors. Key audiences identified through the planning process included Old Town residents, new residents and businesses, and existing homeowners, business owners, and renters.

Messaging is a crucial component of any energy action campaign. Successful messaging motivates action by addressing commonly experienced barriers and can also answer basic questions that allow the recipient to take next steps. Messages should be customized to each audience and should inspire confidence and trust.

In addition to sharing a message that resonates with the audience by connecting with commonly held values, it is crucial to share information that explains the "how." Given the mix of utility providers within the Town of Erie, a key component of the strategies in this focus area will include sharing information that points community members, regardless of where they live or work, to relevant resources.

> **Connecting the Dots: Energy Efficiency and Renewable Energy**
> In addition to setting ambitious renewable energy goals, the Town of Erie Sustainability Plan also established lofty energy reduction targets. Reducing electricity use as much as possible makes it easier and more affordable to power a home or business with renewable energy. One of the key messages shared through these strategies will be how to conserve energy and promote efficiency while simultaneously advancing renewable energy options.

Measuring Success

Success will be measured by the estimated amount of solar energy provided through on-site solar and renewable energy subscription programs.

The Sustainability Plan sets the following renewable energy goals:

- Source 25% of commercial electricity use from renewable resources by 2025*
- Source 20% of residential electricity use from renewable resources by 2025 (with a stretch goal of 30%)*

*Above and beyond what is already included in the utilities' fuel mix. All targets will be measured against a 2018 baseline.

Understanding the landscape of renewable energy infrastructure and program subscription will require layering together multiple data sources and, in some cases, applying data trends across utility providers. A baseline will be established using the following data sources:

- Solar permit data from the Town of Erie to track the number of systems
- Solar permit data from Partners for a Clean Environment (PACE) to track the size of Photovoltaic (PV) systems installed for commercial users
- Solar permit data from EnergySmart to track the size of PV systems installed for residential users
- Xcel Energy renewable energy program data (e.g., Windsource®, Solar*Rewards®, and Net-Metering)
- United Power Green Power Partners program data

Subscription Campaign for Old Town Residents (ReNEWable OLDtown)

Context: Old Town Erie is home to approximately 566 established residences, two of which are marked as historical landmarks. While a rooftop solar array may be a viable option for some residents in Old Town, compared to newer development, older homes may not have been designed to readily accommodate solar panels. Additionally, areas with a dense tree canopy can inhibit a positive return on investment for installing solar. Finally, unlike new homebuyers, established residents may have fewer or less attractive options for financing new renewable energy systems. This strategy seeks to overcome those barriers by connecting Old Town residents with renewable energy subscription information.

Timeline: Q4 2021-Q3 2022

Target: Reach every Old Town resident with information about Windsource®.

Action Steps	Community Responsibilities	Partners in Energy Responsibilities
Draft website content about subscription options	• Sustainability Advisory Board (SAB) – Review website content • Town Staff – Create webpage to host renewable energy information	• Coordinate with utilities and other program providers to identify all relevant program information • Draft comprehensive content
Collect addresses for Old Town residents	• Town Staff – Develop spreadsheet with street address, PO box number, city, and ZIP code	• Assist in collection of PO box addresses as needed
Draft post card or letter from Old Town community member and send to residents	• SAB – Identify Old Town community members to help personalize message (e.g., renewable energy champion and/or Town of Erie staff) • Old Town community member – Co-create or review and sign message • Town Staff – Review postcard and provide branding guidance, including photos	• Assist in creation of letter to community members • Print and send post card or letter to Old Town residents
Create flyers and yard signs to post around Old Town	• SAB – Co-create flyer design and message • Town Staff – Review postcard and provide branding guidance, including photos • Town Staff – Post flyers around town and distribute yard signs to participating community members	• Co-create flyer and yard sign design and message • Print flyers and yard signs (laminate flyers)

Share Energy Information through Welcome Kit for New Residents and Businesses

Context: Erie's annual growth rate is approximately 5.5%. As new residents and businesses join the Erie community, there is an immediate and ongoing opportunity to connect incoming community members with energy information. This strategy will focus on developing and distributing energy information to share, through existing channels, to welcome new residents and businesses. Consistent with other strategies within this focus area, energy information will focus on efficiency first, and then consider renewable options.

Timeline: Planning and development: Q1 2022-Q3 2022; Delivery: Ongoing

Target: Reach every new resident and business with energy information.

Action Steps	Community Responsibilities	Partners in Energy Responsibilities
Develop key information to include in welcome packet	• Town Staff – Share existing welcome information and materials, and identify commonly-asked questions from new residents and businesses	• Coordinate with utilities and program providers to clarify service boundaries and develop list of relevant programs
Brainstorm motivational messages	• SAB – Co-create messaging and content by audience (residents vs. businesses), focused on Erie's community values	• Provide sample language and designs by audience (residents vs. businesses)
Draft informational materials	• Town Staff – Provide branding guidance and inform options for collateral type (e.g., full page flyer, half sheet, post card) • SAB – Brainstorm creative design and delivery options	• Draft content for one primary piece of collateral each for residents and businesses, focused on reducing energy use and renewable energy options (by energy and program provider) • Identify options to creatively design and deliver information through secondary piece of collateral (e.g., sticker, magnet, digital coloring book) • Design materials based on drafted content and selected delivery options
Distribute welcome materials	• Town Staff – Include energy welcome collateral in resident welcome kit • Town Staff – Provide Erie Chamber of Commerce with energy collateral for businesses	• Print and deliver all collateral materials to Town of Erie for distribution

Pursue Gold-Level SolSmart Certification

Context: SolSmart is a certification system that recognizes communities that have removed barriers to solar energy. Many communities along the Front Range, including Erie's neighbors – Boulder, Lafayette, and Superior – have obtained SolSmart certification. The Town of Erie values access to solar energy and has already taken steps to demonstrate municipal commitment and to remove barriers for community members. Completing the steps necessary to receive a SolSmart designation would solidify Erie's commitment to encouraging the adoption of renewable energy technology community-wide.	
Timeline: Q4 2021-Q2 2023	
Targets: Obtain gold-level SolSmart certification.	

Action Steps	Community Responsibilities	Partners in Energy Responsibilities
Evaluate progress completed to date	• Town Staff – Share progress completed to date	
Identify action steps required to complete certification	• Town Staff – Co-create action plan for achieving certification and identify staff leads where appropriate	• Analyze actions completed against requirements for gold level certification • Co-create action plan with Town staff, outlining steps required to complete certification
Identify synergies with other Town of Erie efforts (e.g., comprehensive plan and development code update)	• Town Staff – Coordinate with appropriate staff and consulting team members to accomplish any comprehensive plan and code-related action steps	
Implement remaining action items outlined to complete certification	• Town Staff – coordinate with identified staff to complete remaining action items	

Conduct Media Campaign

Context: Lack of access to a trusted source of information can be a significant barrier to adoption of renewable technology. The Town of Erie can help overcome this barrier by connecting community members with unbiased information to help them make informed decisions about renewable energy. This strategy will focus on building a repository of renewable energy information – including renewable energy basics, renewable energy program information, and renewable energy "how to" information - to leverage for use by varied media outlets. Importantly, the media campaign will help community members navigate the renewable energy landscape in accordance with the utility by which they are served.

Timeline: Q4 2021-Q2 2023

Targets: Reach all residents and businesses with energy information at least three times.

Action Steps	Community Responsibilities	Partners in Energy Responsibilities
Develop Bang the Table landing page	• Town Staff – Facilitate development and administration of "Bang the Table" landing page for Partners in Energy efforts	• Coordinate with utilities, PACE, and EnergySmart to identify all relevant program information • Draft informational content
Develop and implement social media calendar	• SAB – Brainstorm and co-create social media calendar • SAB – Distribute approved content through personal social media accounts (e.g., NextDoor) • Town Staff – Review social media content and share as part of weekly update and subsequent social media posts as appropriate	• Draft social media calendar, including text posts and video shorts • Coordinate with additional partners (e.g., PACE, EnergySmart) for content refinement, review and delivery (e.g., NextDoor)
Share renewable energy opportunities through utility bill insert (Erie Edition)	• Town – Review content and coordinate distribution logistics	• Repurpose content developed for welcome kits and Old Town residents to design up to two utility bill inserts oriented toward residents
Develop and print flyers to post in public buildings or share during community events	• Town – Review content and branding and coordinate distribution	• Repurpose content developed for welcome inserts to develop flyers oriented toward businesses and residents • Coordinate with utilities and additional partners (e.g., PACE, EnergySmart) for content refinement, review and delivery (e.g., Latino Chamber) • Print and ship flyers to Town of Erie for distribution
Develop spotlight for Channel 8	• SAB – Identify spokesperson to spotlight • SAB – Brainstorm and co-create content for spotlight • Town Staff – Coordinate spotlight logistics	• Help develop speaking points for spotlight • Provide Xcel Energy or Partners in Energy spokesperson if appropriate

Green Business and HOA Program Support

The Town of Erie's Green Business Program was established in 2018 with support from Partners in Energy, the Town of Erie, Partners for a Clean Environment Program (PACE), and the Colorado Department of Public Health and Environment (CDPHE). Since the program's inception, the Town of Erie has certified eight businesses and expanded green-certification availability to Homeowner Associations (HOAs). Currently, there are three HOAs certified.

The scope of this focus area centers on continued and renewed support for the Green Business and HOA Program. The Green Business and HOA program offers numerous touchpoints including certification, recertification, education and networking opportunities, and recognition opportunities - both locally and at the state level. The strategies detailed below will leverage and build on these touchpoints, connecting currently-certified members with information and resources to help them continue on their sustainability journey, and to elevate these participating organizations in the community by celebrating their successes. Additional activities will include connecting with and recruiting potential community organizations - to the Green Business and HOA Programs - by sharing information and connecting them with the success stories of their peers.

Measuring Success

The Sustainability Plan sets the following relevant energy goals:

- Reduce average household electricity use by 3% by 2025 (with a stretch goal of a 5% reduction).
- Reduce average household natural gas use by 3% by 2025 (with a stretch goal of a 5% reduction).
- Increase the number of green buildings that are tracked in the community annually.

Additionally, success will be measured by the number of new green businesses and HOAs certified by the end of the 18-month implementation support period, and by participation in available energy programs and rebates. In addition to the renewable energy programs noted in the previous focus area, relevant programs and rebates may include:

- Energy efficiency rebates provided through Boulder County's PACE and EnergySmart programs.
- Xcel Energy and United Power programs and rebates (e.g., Home Energy Squad®, Business Energy Assessment, Commercial Lighting and Equipment Rebate, Home Rebate).

Share Information with Existing or Potential Green Businesses and HOAs

Context: Oriented toward recruitment of and support for existing program members, this strategy will connect businesses and HOAs with refreshed information to help drive energy action. Where feasible, updated information will align with the green business tracker and HOA scorecard. The green business tracker is a statewide tool helping businesses that are enrolled in programs supported by CDPHE to measure and compare their sustainable actions. The Town of Erie developed the first-ever green HOA scorecard, which is now being piloted in other communities.	
Timeline: Q4 2021-Q4 2022	
Targets: (1) Connect 10 additional HOAs and 50 businesses with information about potential energy actions and the Green Business and HOA program. (2) Reach every certified business and HOA with information to help them take an energy action.	

Action Steps	Community Responsibilities	Partners in Energy Responsibilities
Evaluate green HOA scorecard to identify opportunities for better alignment with Town priorities	• Town Staff – Review recommendations and amend scorecard as desired	• Review scorecard and identify opportunities to align criteria with existing or planned energy programs, resources, and activities
Develop and distribute green HOA outreach packet	• Town Staff – Identify and invite HOA and residential participants • HOAs – Guide desired materials and content that will be included in packet • Town Staff – Review outreach content • HOAs – Leverage packet materials	• Host HOAs at 1-2 implementation meetings to better understand needs and drivers • Draft and design HOA outreach packet in alignment with scorecard • Print and share HOA outreach packet
Conduct webinar training for existing Green Business & HOA (GBHOA)	• Town Staff – Identify previous or upcoming HOA webinars • Town – Co-create and review supplementary webinar content	• Brainstorm and co-create webinar content • Coordinate with state and county partners for content creation and distribution • Coordinate recording logistics
Provide collateral content refresh, including alignment with GBHOA scorecard	• Town Staff – Brainstorm necessary changes to existing collateral, including website • Town – Coordinate with state partners to identify additional needs • Town Staff – Inform alignment of new content with scorecard	• Draft new content for website • Develop electronic and print-ready collateral to distribute to new- and existing-program members

Green Business and HOA Recognition and Recruitment

Context: The Town of Erie continues to recognize Green Businesses & HOAs by listing participating organizations on the Town website and hosting annual celebration events. Bolstering recognition activities could go a long way in supporting current Green Businesses & HOAs, promoting recertification, and recruiting additional green businesses and HOAs. This strategy focuses on identifying ways to continue supporting Green Businesses & HOAs through concerted recognition efforts and to elevate their status in the Town of Erie.	
Timeline: Q2 2022-Q2 2023	
Targets: (1) Certify four additional HOAs and ten additional businesses through Erie's Green Business and HOA program. (2) Get one Erie business recognized by the State's environmental leadership program.	

Action Steps	Community Responsibilities	Partners in Energy Responsibilities
Green Business & HOA (GBHOA) recognition (spotlight and peer benchmarking)	• Town Staff – Identify and recruit one business and on HOA to spotlight on website • Town Staff – Review spotlight content and host final spotlight on *(GBHOA)* program website • Town Staff – Recruit one business to pursue recognition through State leadership program	• Develop template for interviewing spotlight participants • Facilitate interview with selected business and HOA • Develop *(GBHOA)* spotlight to share on website • Coordinate with PACE to customize and share self-marketing toolkit
Raffle green business gift cards or other prizes to residents who take energy action	• Town Staff – Identify participating businesses and prizes • Town Staff – Support procurement of green business prizes • Town Staff – Review collateral to share with residents • Town Staff – Share campaign through utility bill insert, Town social media, and NextDoor	• Draft utility bill insert, social media content, and NextDoor content • Support procurement of green business prizes
Host networking and recognition events	• Town Staff – Continue hosting recognition events (e.g., *(GBHOA)* Certification Ceremony) • Town Staff – Incorporate green businesses into business walks - to spotlight efforts to prospective businesses	• Coordinate with PACE and neighboring municipalities to explore opportunities to participate in regional green business networking events

IMPLEMENTATION AND IMPACT

Energy Action Plan Impact

In summary, the concerted outreach efforts outlined in this plan aim to reach every business and resident in the Town of Erie with energy information multiple times. This outreach is expected to drive a doubling in energy program participation over the three-year average (2018-2020). This includes a doubling of both renewable energy and demand side management (DSM) (i.e., energy efficiency) program participation. **Table 3** summarizes anticipated participation in DSM and Renewables programs.

Table 3. Anticipated Participation in DSM and Renewables Programs

	Baseline Participation	Incremental Participation (over 18 months)	Total Participation
DSM Programs	471	471	942
Renewables Programs	1,315	1,315	2,630

Impact of Doubling Demand Side Management Program Participation

Doubling demand side management program participation will result in an additional 1,352,698 kWh savings over the baseline of 700,723 kWh for a total of 2,053,421 kWh saved. That's **approximately 1.7% of total community electricity use in 2018 saved through program participation**.

Doubling demand side management program participation will also result in an additional 51,004 therms savings, over the baseline of 95,518 therms, for a total of 146,523 therms saved. That's **approximately 1.8% of total community natural gas use in 2018 saved through program participation**.

Table 4 summarizes anticipated kWh and therms savings impact resulting from doubling DSM program participation.

Table 4. Savings Resulting from Doubling DSM Program Participation

	Baseline Savings	Incremental Savings (over 18 months)	Total Savings
Electricity	700,723 kWh	1,352,698 kWh	2,053,421 kWh
Natural Gas	95,518 therms	51,004 therms	146,522 therms

While implementing this Energy Action Plan does not guarantee there will be a decline in overall energy use (there are likely to be other factors, such as community growth and weather, that inform total community energy use), an increase in program participation can significantly reduce a portion of Erie's energy use per household and/or accelerate a shift to renewable sources.

Impact of Renewable Energy Program Participation

Doubling renewable energy program participation will result in approximately 12,000,000 kWh generated[2] through renewable energy programs. That's **approximately 10% of total community electricity use in 2018**. This estimated kWh does not capture:

- Renewable energy generated through PV systems enrolled in net-metering
- Renewable energy generated through PV systems outside of Xcel Energy's service territory

A more robust estimate of renewable energy generation will be calculated as part of implementation. Table 5 shows the distribution of participation in renewable energy programs. Note, Renewable*Connect - a solar subscription program - is fully subscribed, so a doubling of participation is not modeled.

Table 5. Renewable Energy Participation Impacts by Program

	Baseline Participation	Incremental Participation (over 18 months)	Total Participation
Windsource	308	308	616
Renewable*Connect	12	-	12
Solar*Rewards	472	472	944
Solar*Rewards Community	5	5	10
On-Site Net Metering	518	518	1,036

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[2] Renewable energy production associated with program participation was calculated using participation counts and per-participant generation rates (kWh) presented in the Town of Erie's 2020 community energy report for the following Xcel Energy programs: Windsource, Renewable Connect, Solar*Rewards, and Solar*Rewards Community.

Implementation

This Energy Action Plan 2.0 is a living document. Goals and strategies will be assessed and refined as needed, based on updated data, community involvement and staff capacity.

Data and Reporting

Partners in Energy will provide biannual progress reports with metrics of success and overall progress toward targets for Xcel Energy rebates and programs, and will also show progress toward the Town of Erie's sustainability plan goals relevant to this planning process. These reports will be available publicly and shared with both the community and Energy Action Team. Though United Power data is shown in the baseline energy use information for this plan, future progress reports will only report on Xcel Energy rebates and programs.

If available, ad-hoc participation reports for specific Xcel Energy programs (e.g., Windsource®) can be provided to measure success of campaigns and to determine if we need to change course.

Project Management and Implementation Team

Partners in Energy will host regular (approximately every six weeks) implementation coordination check-in calls with the implementation team. The implementation team will include the Plan champions identified throughout the Energy Action Plan strategies. At a minimum, this will include Town sustainability staff, communications staff, Sustainability Advisory Board representatives, and Boulder County and CDPHE partners. Additional staff, community members, or community partners – such as United Power and Black Hills Energy – may be invited to join coordination meetings as needed, to ensure we stay on course to achieve our strategies. Check-in calls offer an opportunity to coordinate across multiple implementation activities, report on progress, and can possibly serve as work sessions.

APPENDIX A: ENERGY OPPORTUNITIES BY DEPARTMENT

This appendix provides a snapshot of the various Town of Erie energy-related activities and initiatives recently completed, in-progress, and on the radar for future consideration – as collected at the time of the first Work Session held June 2021. The information is presented by department and also includes a summary of potential resources to leverage for implementation support.

PUBLIC WORKS

Activities Completed	Activities in Progress	Opportunities
• 2 fleet EVs and 2 plug-in Level 1 chargers • 7 community charging stations • Town-wide streetlight audit • ECC Solar-powered water circulators • Service Center solar panels	• Facility Master Plan • Building assessments • Lighting conversion projects • Pool boiler and RTUE 4 replacement • Hydro turbine for Water Treatment Plant • Feasibility analysis for solar garden site	• Streetlight conversion • Energy Performance Contracting (with CEO) • 100% municipal renewable energy plan

Resources: Boulder County EnergySmart & PACE, Fleet fund

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PLANNING, DEVELOPMENT, AND ENGINEERING

Activities Completed	Activities in Progress	Opportunities
• I-Codes 2015 • Master Plans (Airport, Sustainability, Town Center) • Erie Parkway Corridor Study • I-25 Erie Gateway Developer Handbook • Ordinance enforcement • Implement and monitor Town and private development projects • Review of development applications	• 2020 National Electric Code adoption by August 2021 • 2021 Comprehensive Plan and UDC updates	• 2021 ICC Codes • SOL Smart Certification

Resources: DOLA grant funding

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PARKS AND RECREATION

Activities Completed	Activities in Progress	Opportunities
• Hot water solar on top of recreation center	• Pool lighting and equipment conversion (led by public works) • 2 Dual-port EV Charging Stations at Phase 4 Community Park	• Public outreach and education • Potential for solar demonstration project

Resources: Parks and Recreation as a trusted source and with a captive audience

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ECONOMIC DEVELOPMENT

Activities Completed	Activities in Progress	Opportunities
• Green Business & HOA Certification Program	• Infrastructure improvements to Downtown Area and Business Park	• Light industrial park expansion • I-25 gateway master plan (United Power Territory)

Resources: URA Revitalization Grants, URA Tax Increment Financing, Enhanced Sales Tax

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OTHER DEPARTMENTS

Town Administration: responsible for executing board policies

Human Resources: staffing support related to energy matters

Communications & Community Engagement: key resource for sharing energy information and driving energy action in community

Finance: budgeting & financing, utility bills

Information Technology: technology energy use & recycling

Police: completed energy baseline

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APPENDIX B: GLOSSARY OF TERMS

British Thermal Unit (BTU): the amount of heat needed to raise one pound of water at maximum density through one degree Fahrenheit. MMBTU represents Metric Million British Thermal Unit.

Carbon-free: Carbon-free refers to sources of energy that will not emit additional carbon dioxide into the air. Wind, solar and nuclear energy are all carbon free sources but only wind and solar are renewable.

Commercial Premise: A unique combination of service address and meter. For business customers, it is an individual business; for a larger business, it is a separately-metered portion of the business's load at that address.

Commercial and Industrial: A category of premises associated with non-residential users including institutions, businesses, and municipal users

Demand Side Management (DSM): Modification of consumer demand for energy through various methods, including education and financial incentives. DSM aims to encourage consumers to decrease energy consumption - especially during peak hours - or to shift time of energy use to off-peak periods such as nighttime and weekend.

Energy Reduction: The result of behavior changes that cause less energy to be used. For example, setting the thermostat lower *reduces* the energy used in your home during the winter. Since energy reductions can be easily reversed, they are not accounted for when calculating changes in energy usage.

Energy Savings: Comes from a permanent change that results in using less energy to achieve the same results. A new furnace uses X% less to keep your home at the same

temperature (all things being equal), resulting in energy *savings* of X%. For accounting purposes, energy savings are only counted in the year the new equipment is installed.

Greenhouse Gases (GHG): Gases in the atmosphere that absorb and emit radiation and significantly contribute to climate change. The primary greenhouse gases in the earth's atmosphere are water vapor, carbon dioxide, methane, nitrous oxide, and ozone.

Home Owners Association (HOA): The governing body that makes and enforces rules for residents in a subdivision, planned community, or condominium.

HOA: See Home Owners Association.

IECC: International Energy Conservation Code. Provides code language reflecting best practices for incorporating energy conservation into development codes.

Kilowatt-hour (kWh): A unit of electricity consumption.

Million British Thermal Units (MMBtu): A unit of energy consumption that allows both electricity and natural gas consumption to be combined.

Metric Tons of Carbon Dioxide Equivalent (MTCO2e): A unit of measure for greenhouse gas emissions. The unit "CO2e" represents an amount of a greenhouse gas whose atmospheric impact has been standardized to that of one unit mass of carbon dioxide (CO2), based on the global warming potential (GWP) of the gas.

Megawatt (MW): A unit of electric power equal to 1 million watts.

Municipal Premise: A unique combination of service address and meter for Town-owned facilities. Municipal premises are a type of commercial and industrial premise. See also: Premise or Commercial and Industrial Premise.

Partners for a Clean Environment (PACE): Provides free expert advisor services, financial incentives and a certification program to help businesses in Boulder County measure and gain recognition for their energy, waste, water, and transportation achievements.

Premise: A unique combination of service address and meter.

Recommissioning: An energy efficiency service focused on identifying ways that existing building systems can be tuned-up to run as efficiently as possible.

Residential Premises: A unique combination of service address and meter for residential properties, typically equivalent of an individual house or dwelling unit in a multi-tenant, multi-metered building. See also: Premise.

Solar Photovoltaic (PV): Solar cells/panels that convert sunlight into electricity (convert light, or photons, into electricity, or voltage).

Subscription: An agreement to purchase a certain amount of something in regular intervals.

Sustainability Advisory Board (SAB): This board advises the Board of Trustees with matters that relate to the planning, development, maintenance, and management of sustainability activities throughout Erie.

Therm (thm): A unit of natural gas consumption.