

# An Energy Action Plan for Town of Erie, Colorado



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## Acknowledgements

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### ***Erie's Energy Action Planning Team***

The planning team was formed from a varied group of Town staff, local organizations and businesses, and committed community members.

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## Executive Summary

The Town of Erie has developed this Energy Action Plan (“plan”) to help institute a series of actions and activities that will lower energy use community wide and engage residents and businesses to take advantage of utility rebates that save resources. The plan consists of an energy vision, goals for energy savings, and specific and detailed strategies to achieve those goals. Xcel Energy will provide support for an approximately 18-month period commencing after the finalization of this plan and the acceptance of a Memorandum of Understanding outlining the roles of stakeholders.

## Our Energy 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.*

## Our Goal

Goals for energy savings have been identified for each focus area that combined will save Erie residents and businesses approximately 1.45 gigawatt-hours (GWh) of electricity and 46,500 therms of natural gas over the 18-month implementation period. This is the equivalent of offsetting 231 passenger cars in carbon emissions and saving the community an aggregate \$137,300 annually. In addition, the community has also identified a stretch goal if the plan goals are tracking to be achieved early.

## How Will We Get There?

The strategies are summarized below, within their respective focus areas, to engage in achieving the plan’s goals.

<b>New Construction</b>	<b>Strategies:</b> Residential New Construction Energy Efficiency Commercial New Construction Energy Efficiency
<b>Existing Businesses</b>	<b>Strategies:</b> Business Outreach Campaign Energy Achievement Recognition
<b>Municipal Energy Leadership</b>	<b>Strategies:</b> Benchmarking and Energy Audits Community Awareness Campaign

## Playbook for Achieving Our Goals

### Ongoing – Tracking

- Bi-monthly project management team meetings
- Monthly strategy team meetings
- Update to Town of Erie webpage with up-to-date energy efficiency and renewable energy information
- Periodic updates to the Town Board, as necessary
- Bi-annual Xcel Energy program progress tracking
- Coordination with United Power

### Immediate Actions (Feb. 2018 – August 2018)

- Launch strategy teams
- Finalize calendar of activities and responsibilities
- Plan and begin business outreach activities
- Develop key messages and first round of outreach materials
- Determine scope and approach of business energy achievement recognition
- Launch Town of Erie webpage
- Enroll facilities in energy benchmarking
- Complete energy audits for targeted Town of Erie facilities and identify potential energy improvements
- Pursue adoption of updated energy codes
- Target specific new construction projects

### Longer Term Actions (beyond August 2018)

- Refresh/update outreach materials as appropriate
- Maintain Town of Erie webpage
- Review energy benchmarking results
- Implement energy improvement projects at selected Town of Erie facilities
- Share information with Erie's schools
- Outreach to new construction projects
- Adopt new energy codes
- Continue and refresh business outreach activities
- Implement business energy achievement as envisioned

## Introduction

This Energy Action Plan (i.e., “plan”) outlines tangible steps for the Town of Erie to support the community in reaching its energy efficiency and renewable energy goals.

## Xcel Energy Partners in Energy

Xcel Energy is a primary electric and gas utility serving the Town of Erie. In the summer of 2014, Xcel Energy launched Partners in Energy to support communities, such as Erie, in developing and implementing energy action plans that supplement existing sustainability plans, strategies, and tools. Four workshops were held in Summer and Fall 2017 to gather ideas, discuss, and refine the strategies contained in this plan. It provides an overview of the Town of Erie’s baseline energy use and profile, documentation of the Partners in Energy planning process, a summary of priority focus areas identified for implementation, the community’s demographics, and the actions and strategies required to keep the implementation of this plan on track. Implementation of the plan will begin in early 2018 with support from Xcel Energy.

Partners in Energy will work with the Town of Erie to coordinate support for implementing the plan and will develop a Memorandum of Understanding (MOU) that outlines specific support Xcel Energy will provide to help Erie deploy its strategies and achieve its goals.



Figure 2. Partners in Energy Process for Success

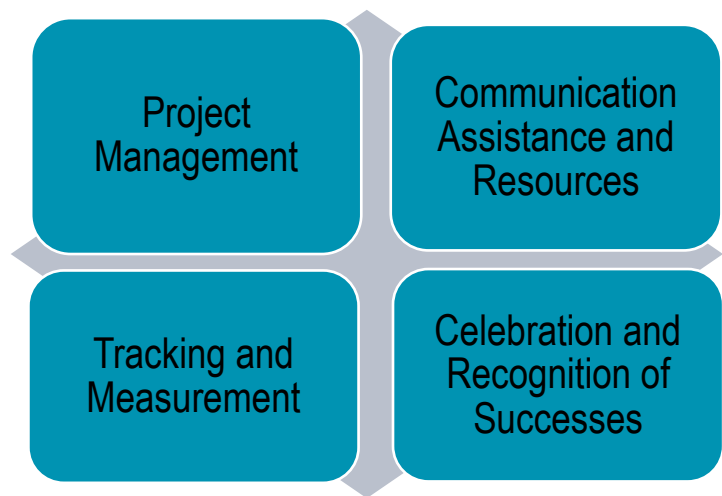


Figure 2. Resources from Xcel Energy for Implementation



## Who Are We?

"Erie is a community which recognizes the importance of conserving and enhancing its historic small town character, the roots from which it grew, preserving the natural environment in which it resides; a caring community which offers its residents an environment in which to seek a high quality of life; a balanced community with a diverse range of housing, employment, educational, shopping and recreational opportunities; and a vital community which provides financial and social support for quality of life programs." The original plan in Erie was filed in 1871, following the establishment of Briggs Mine, the first commercial coal mine in Weld County.<sup>1</sup>

The reasons people call Colorado home often include a passion for the outdoors, a diverse and dynamic community, and the contemporary pace to life that appeals to all ages. The Town of Erie offers the best of all of these. With our majestic mountain views and progressive civic vision, we provide a genuine small-town feel with all the reassuring qualities that implies – a sense of community, neighbors who care, and a contemporary town with modern amenities and comforting closeness.

Erie extends from State Highway 7 on the south to north of Highway 52, and between U.S. 287 on the west to I-25 on the east (Figure 3). Erie resides in two counties, Boulder County and Weld County with 19.8 sq. miles incorporated and a greater 48 sq. mi. within the planning area.<sup>2</sup>

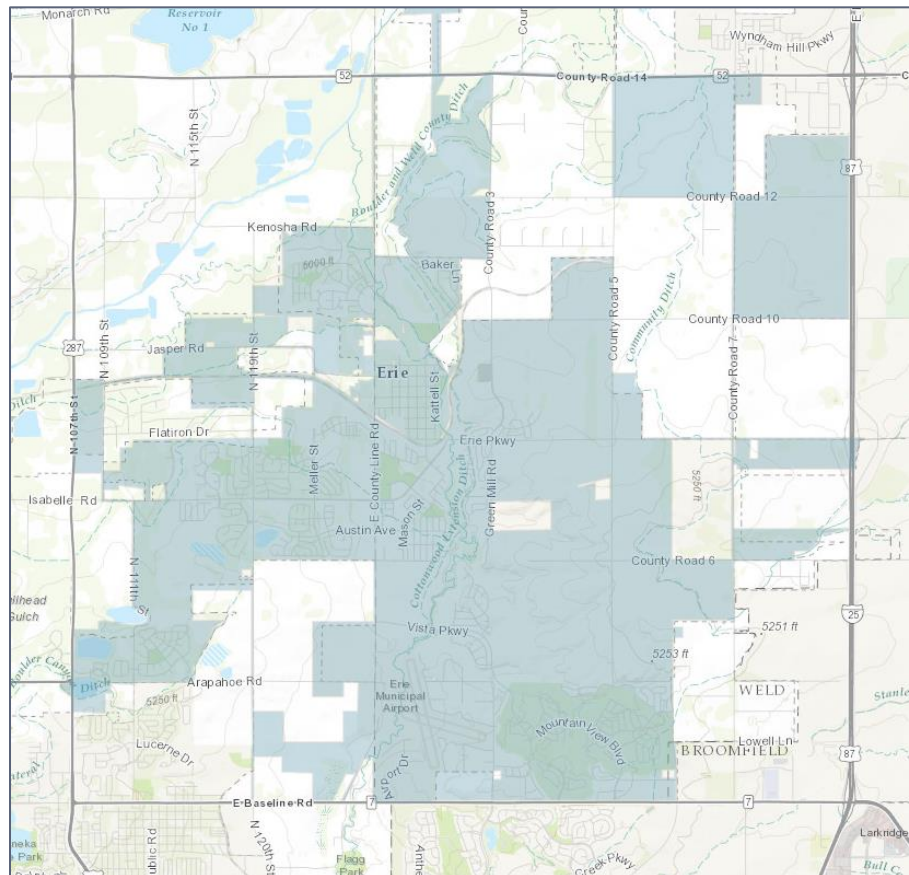


Figure 3. Town of Erie Context Maps (Source: Town of Erie, CO Open Data)

<sup>1</sup> <https://www.erieco.gov/239/Erie-History>

<sup>2</sup> Comprehensive Plan 2015 Update



## Population and Demographics

The Town of Erie is a growing community with an estimated 25,000<sup>3</sup> persons in 2017, it is projected to increase at an annual rate of about 4 percent through 2035, reaching 65,526 persons at buildout. Amid a changing landscape, Erie's population is trending more affluent and diverse. The Town's median age is 37.1, younger than the Denver metro area in the mid-40s. The median household income is \$112,000 with more than 60 percent of household incomes over \$100,000, outpacing both the Denver metro area and Colorado. Residents are also well-educated as 59 percent having earned a Bachelor's degree or higher.

## Housing

Erie is a full-service community with 8,500 total housing units, nearly 90 percent of which are owner-occupied and single-family detached. In recent years, the area has exhibited strong residential construction trends with over two-thirds of Erie's existing housing stock built in 2000 or later. Few homes in Erie are older than 20 years, apart from a unique housing vintage built prior to 1939 located in and around Old Town. Municipal codes governing building and energy standards in Erie were the 2006 edition of the International Building Code 2006 and International Energy Conservation Code (IECC) as of the end of 2017.

In anticipation of continued growth demands (annual new building permits are estimated to be as high as 465 through 2025 - increasing Erie's housing stock by up to 45 percent<sup>4</sup>), it is important to understand housing needs and housing types as new development will increase energy demands on the existing system. Likewise, a competitive market fueled by a strong regional economy poses opportunities and challenges related to meeting demands for housing variety and affordability.

## Business and Economy

Erie has limited industry and a smaller business base as it has historically been a bedroom community for the region with a jobs to housing ratio of 0.45 (i.e., about one job for every two households). The primary industries in the area – professional, scientific, and technical services, health care, and retail trade – mirror the top energy users by activity, according to the Department of Energy's Cities-LEAP (Cities Leading through Energy Analysis and Planning):

1. Merchant wholesalers, durable goods
2. Food and beverage stores
3. Health care services
4. Motor vehicle, parts dealers
5. Manufacturing

Similarly, Erie's top employers are an alternative lens to consider top industries as well as potential high energy users and opportunity for engagement (Table 1).

<sup>3</sup> Town of Erie 2017 Community Profile

<sup>4</sup> Town of Erie 2017 Economic Profile

Table 1. Erie's Top Employers (by employee count)<sup>5</sup>

<b>Company/ Organization</b>	<b>Employee Count</b>
Town of Erie	259
King Soopers	250
Safeway – Arapahoe Ridge	83
Lazy Dog	47
CML Security	43
Aspen Ridge Preparatory School	42

The Town is engaged in enhancing the local economic base by recruiting new businesses and retaining residents through local employment opportunities. Erie is uniquely positioned to attract commercial development for its quality of life, amenities, available land, and relation to the Denver metro area. Business and industrial development is slated to diversify and balance the land use mix. This offers an opportunity to build less energy-intensive, high-performing buildings from the start while reducing upfront costs and receiving design support expertise in the process.

### Commitment to Sustainability

The Town of Erie has a record of accomplishment implementing innovative energy projects and partnerships for the benefit of the community and region. Most notably, the Town partnered with Waste Connections, Inc. and Landfill Energy Systems on a landfill gas to energy facility and landfill gas collection system at the Front Range Landfill and Denver Regional Landfills. Commenced in 2011, the project captures methane to produce electricity, estimated to generate up to 4.8 MW of electrical capacity. Likewise, the Town has pursued energy efficiency and renewable energy projects like the installation of the PV solar array on Leon A. Wurl Service Center as well as the Erie Community Center thermal solar system. Future projects under consideration and/or implementation include a community battery storage partnership with United Power, LED street lighting, and power generation using raw water supply lines. The innovative projects completed to-date serve as a platform for the Town of Erie and community to actively pursue a more sustainable, energy efficient, and economically vibrant future.

The Town of Erie has a proven commitment to sustainability “delivering services using methods that protect the environment, community and economic interests we all value”.<sup>6</sup> Aligning with community values and needs, the Sustainability Ad-Hoc Committee was established in 2016 tasked with creating a multi-year plan to accelerate the delivery of sustainable practices producing measurable benefits to the local community. The overall goal of the Committee is to “reduce the cost associated with administering Town services through the implementation of the highest return sustainable practices while decreasing municipal/community GHG emissions.” Community sustainability priorities, summarized from the 2017 Town of Erie Citizen Survey and a Sustainability Ad-Hoc Committee survey, include:

- Make government buildings “greener” (e.g., energy efficiency, renewable energy)
- Create community vegetable gardens
- Create community solar gardens
- Adding public electric vehicle charging stations
- Policies and incentive to build sustainable buildings

<sup>5</sup> Town of Erie 2017 Economic Profile

<sup>6</sup> Town of Erie Sustainability Ad Hoc Committee 2017

- Inform residents of current sustainability initiatives
- Reduce air pollution and carbon emissions
- Reduce electricity and natural gas use

## The Case for a Community Energy Action Plan

The Town of Erie pursued Partners in Energy to support the creation of a multi-year action plan that serves as a roadmap for successfully achieving its energy goals, including outlining responsibilities, ownership and the metrics to define success. With a clear implementation focus, this plan accelerates the delivery of sustainability practices for the benefit of the Erie community and serves as a call to action for residents and businesses. The Town of Erie is excited to support the community in achieving its energy and sustainability goals for greater economic vitality and quality of life.

## Where Are We Now?

### Baseline Energy Analysis

Multiple utility providers service the Town of Erie. Xcel Energy and United Power are the electric service providers while Xcel Energy and Black Hills Energy are the natural gas service providers. An introductory step in the Partners in Energy planning process is to develop a community energy profile. Both Xcel Energy and United Power data were used to inform a comprehensive energy profile reflecting the Erie community. The Xcel Energy team analyzed and presented data regarding the amount of energy that was purchased, by fuel source, in a break out by segment (residential, commercial, and industrial), and an overlay of energy use for each segment in Erie from 2014 to 2016. Comparing these data helped the planning team understand how and where energy is used in the community to inform decision making. Three years of data, 2014 through 2016, were used for trend analysis, and the year 2016 was established as the baseline. A map of the utility service boundary area can be found in Appendix 2: Mapping.

## Energy Use and Trending

Erie has approximately 9,220<sup>7</sup> total residential, commercial, and industrial premises as of 2016. Premises served by utility are nearly a 50/50 split with the majority served by United Power (52 percent) and the remaining served by Xcel Energy (48 percent), as shown in Figure 4. Approximately 1.0 million MMBtu of energy (electric and natural gas) was consumed in 2016, with premises roughly split by utility provider and energy tilted towards Xcel Energy due to the inclusion of natural gas.<sup>8</sup>

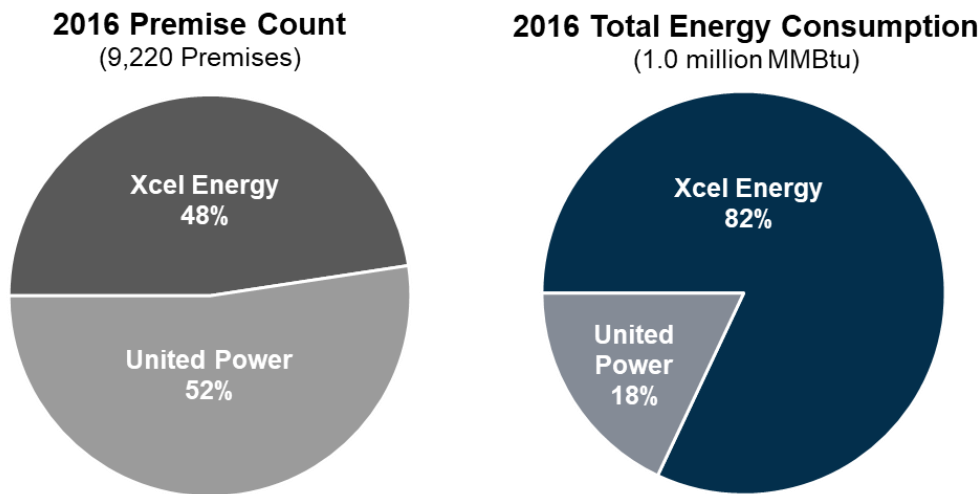


Figure 4. Energy Consumption by Utility in 2016

Electric consumption in 2016 was estimated at about 104 gigawatt-hours (GWh), 48 percent of which was consumed by Xcel Energy premises and the remaining 52 percent of which was consumed by United Power premises. The associated sector electricity usage by utility type differs, as shown in Figure 5.

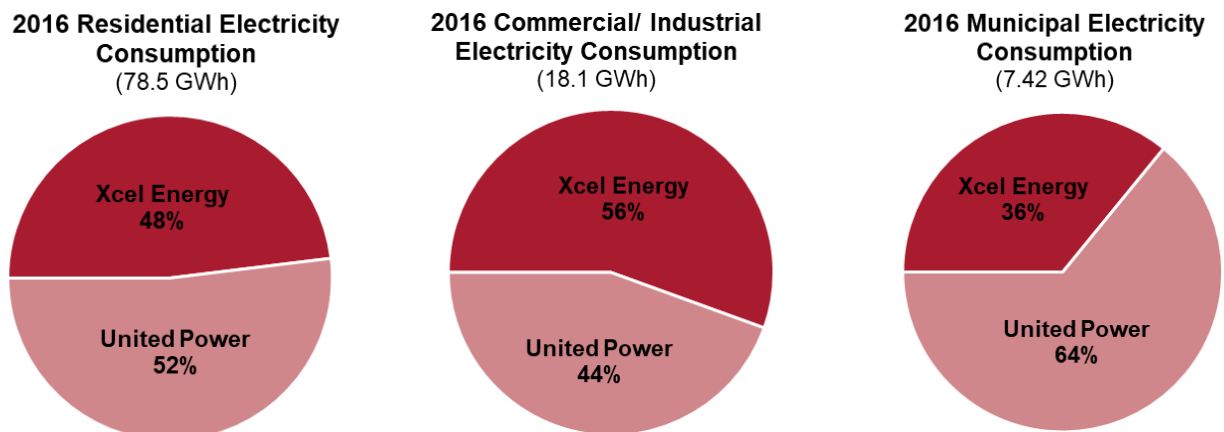


Figure 5. Electricity Consumption by Utility and Sector in 2016

<sup>7</sup> This total reflects electric premises only to negate the potential of double counting premises receiving utility services from two distinct providers. For comparison, natural gas premises served by Xcel Energy in 2016 totaled 8,042.

<sup>8</sup> Note, the United Power data cited in the 2016 annual totals do not include oil wells or public street and highway lighting. Xcel Energy data cited does not include street lighting.

Similarly, considering energy consumption by sector, residential premises consumed the majority of electricity (76 percent) and natural gas (90 percent) in 2016. The commercial and industrial sector was the next largest energy user followed by the municipal sector. Energy consumption by sector is shown in Figure 6.

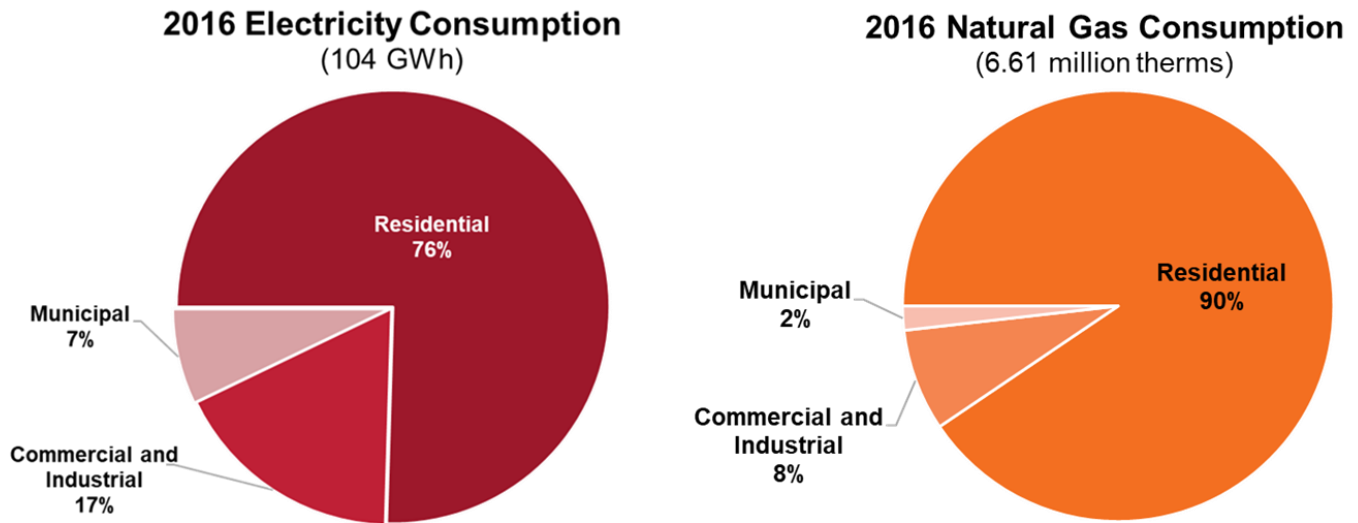


Figure 6. Electricity and Natural Gas Consumption by sector in 2016

Energy use in the Erie community has grown moderately from 2014 to 2016.<sup>9</sup> Overall electricity used has remained relatively steady, increasing four percent over the three years (Figure 7). Over the same period, natural gas use community-wide has declined less than one percent (Figure 8).

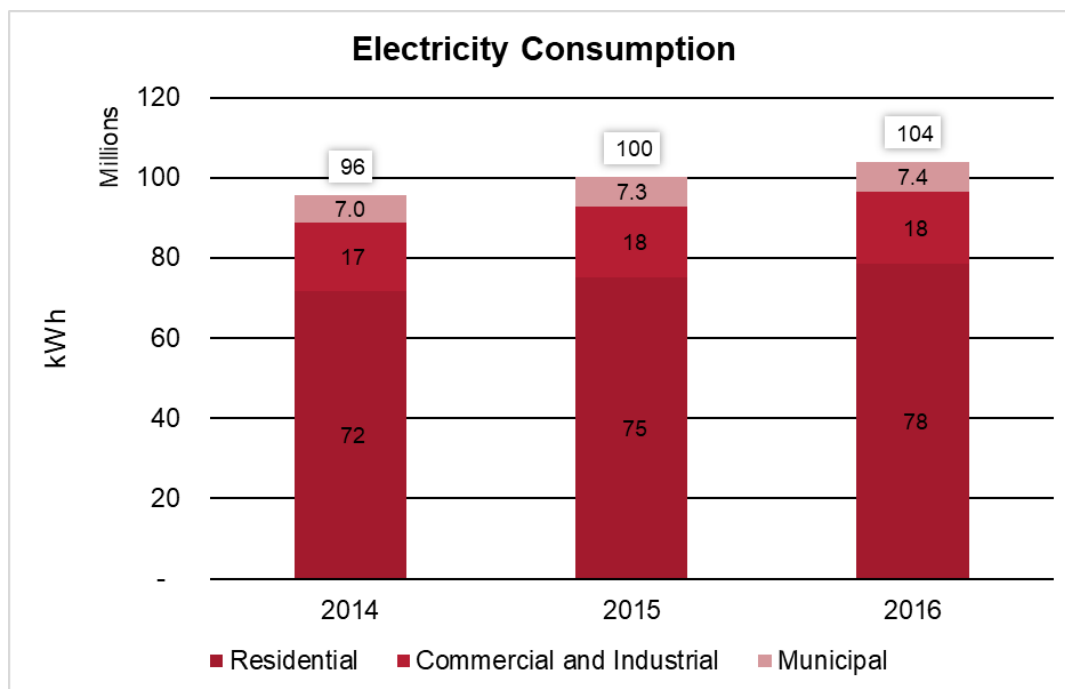


Figure 7. Electricity Use from 2014-2016

<sup>9</sup> Note that Erie's energy data was not normalized for weather or other factors.

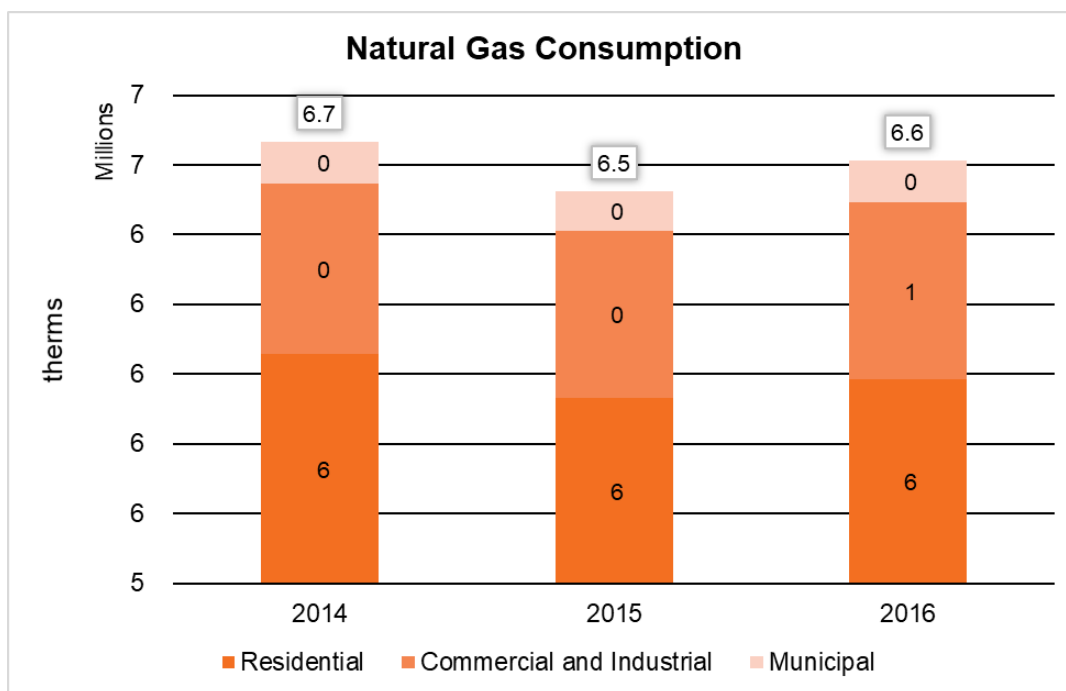


Figure 8. Natural Gas Use from 2014-2016

Weather trends affirm these energy use trends in Erie. Heating Degree Days (HDD), the number of degrees that a given day's average temperature is below 65°F and for which buildings need to be heated, decreased from 2014 to 2016. Cooling Degree Days (CDD), the number of degrees that a given day's average temperature is above 65°F and for which buildings need to be cooled, increased over the same period.<sup>10</sup> Table 2 summarizes the weather trends in Erie over the three-year period.

Table 2. 2014-2016 Weather Trends

	2014	2015	2016
<b>HDD</b>	4645	4291	4209
<b>CDD</b>	1353	1514	1502

<sup>10</sup> <http://www.weatherdepot.com/>

## Energy Costs

In 2016, the Erie community spent an estimated \$14.4 million in total energy costs (electricity and natural gas). Per residential premise, this amounts to an average of about \$1,757 spent annually, or a monthly expense of about \$146. Per commercial and industrial premise, this amounts to an average of about \$2,817 spent annually, or a monthly expense of about \$235. Electricity accounts for over half of annual energy costs.

Total municipal energy costs in 2016 were an estimated \$473,929. Per municipal premise, an average of \$19,959 was spent annually, equating to a monthly expense of about \$1,660. Electricity accounts for 99 percent of municipal total energy costs. Figure 9 displays the annual costs by sector in 2016.

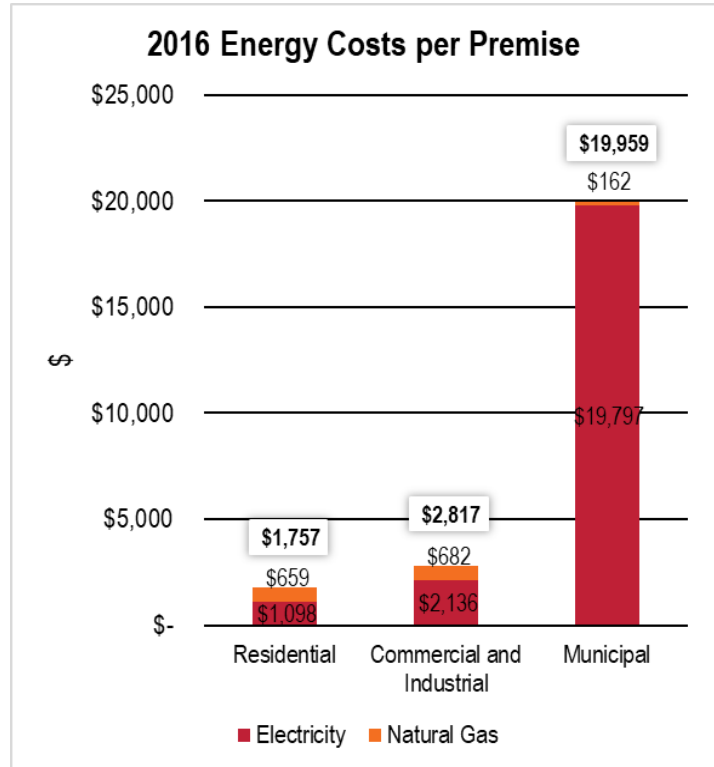


Figure 9. 2016 Energy Costs per Premise

## Energy Efficiency Program Participation

Baseline data gathered in helping this plan includes historic Xcel Energy demand-side-management (DSM) rebate program participation counts and actual energy savings for Erie. These data provide a snapshot of what types of programs Erie residents and businesses are using and to what degree. They also show opportunities for greater participation in the available DSM programs and the need for increased education and awareness.

On average, 0.9 percent of residents have historically participated in an Xcel Energy DSM program. In 2016, residents saved nearly 155,800 kWh and 177,100 therms by participating in an efficiency program. This equates to an average energy cost savings of \$120 per participating residence. Figure 10 shows the residential program participation for three historic years, 2014 through 2016.

**Demand-side-management (DSM)** refers to activities that primarily lower energy use at any given time (demand) to limit the need for overall generation capacity. DSM activities include energy efficiency which lowers both demand and consumption as well as activities designed to limit demand at peak times, such as cycling air conditioners on and off during the hottest part of hot days when they experience the greatest use.



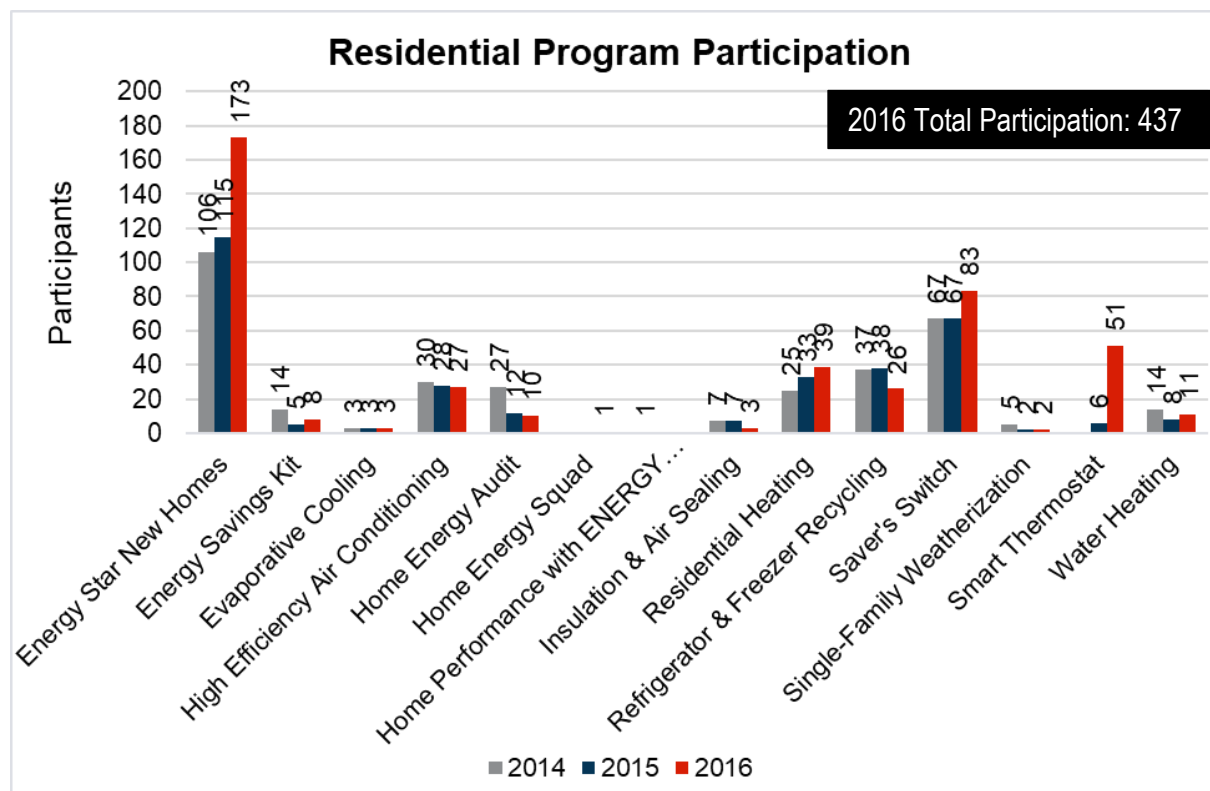


Figure 10. Residential Historic DSM Program Participation

In 2016, one local business saved nearly 1,923 kWh and approximately \$170 in energy costs by participating in the Small Business Lighting program. Figure 11 shows the business program participation for three historic years, 2014 through 2016.

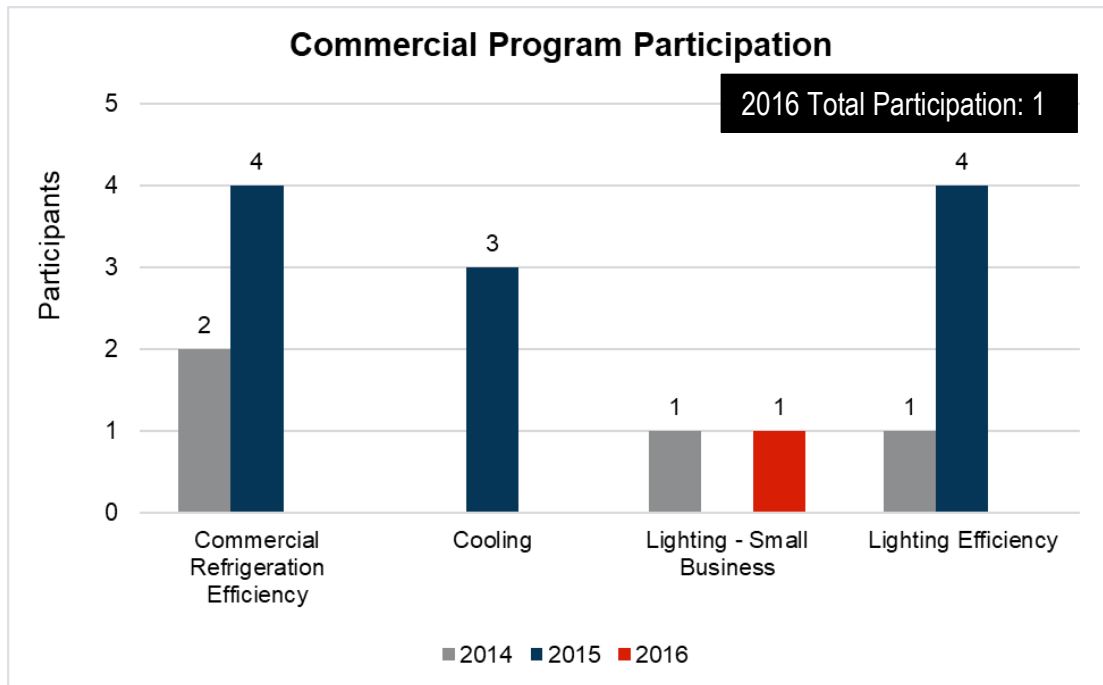


Figure 11. Commercial and Industrial Historic DSM Participation

## Existing Energy Practices

In addition to Erie's residents and business participating in Xcel Energy DSM and renewable energy programs, the Town of Erie, St. Vrain Valley School District, Boulder Valley School District, and others in the community have already undertaken or started various energy-related initiatives, summarized in Table 3.

Table 3. Community Energy Initiatives

### Community Energy Initiatives

#### Town of Erie

- Municipal Facilities
  - Lighting sensors and controls installed in Town facilities
  - Capital project to upgrade all lighting to LEDs
  - Select LED streetlight conversion in partnership with Xcel Energy
  - Installed variable frequency drive motors at the North Water Reclamation Facility
- Renewable Energy
  - Solar PV installed on Leon A. Wurl Service Center in 2010
  - Hydronic solar thermal collectors pre-heat water at Erie Community Center
- Town Fleet
  - Purchased a hybrid vehicle for staff use in 2017
  - GPS optimization for snow plows
  - Replace fleet vehicles with more efficient models as needed
- Innovative Technology
  - In 2011, the landfill to gas energy facility began converting decomposing waste materials within the Front Range Landfill and Denver Regional Landfills to produce enough energy to power approximately 3,300 local homes
- Established a Sustainability Ad-Hoc Committee in 2016

**St. Vrain Valley School District**

- Installed seven EV charging stations and is transitioning the District fleet that now includes two electric vehicles
- In 2017, solar was installed at Red Hawk Elementary School and Erie Middle School

**Boulder Valley School District**

- In 2017, Meadowlark PK-8 school opened which is net zero energy capable and modeled to be the best performing school in the District
- Received or been approved for over \$500,000 in rebates by Xcel Energy for energy efficiency projects to-date

**Local Outreach and Communication Channels**

Engaging the community is critical to reaching this plan's goals. Below are some of the ways that residents and businesses currently receive information. These communication channels, in addition to others, will be helpful to engage and utilize during implementation efforts.

Table 4. Local Outreach

**Local Outreach Channels****Digital Communications**

- Town of Erie Facebook Page
- @erielcolorado Twitter Feed
- Town of Erie YouTube Channel  
(<https://www.youtube.com/user/erielcolorado>)
- Erie Stuff mobile app
- Email Blasts to Town Mailing List
- EnergySmart quarterly email updates
- Partner websites
- Targeted email from Xcel Energy
- BizWest
- LinkedIn
- NextDoor

**Events**

- Erie Town Fair
- Concert in the Park
- Erie Farmers Market
- Downtown Neighborhood Block Party
- National Night Out
- Arbor Day
- Earth Day
- Great Erie Outdoor Adventure

**Community Spaces for Collateral Distribution**

- Erie Town Hall
- Erie Community Library
- Erie Community Center

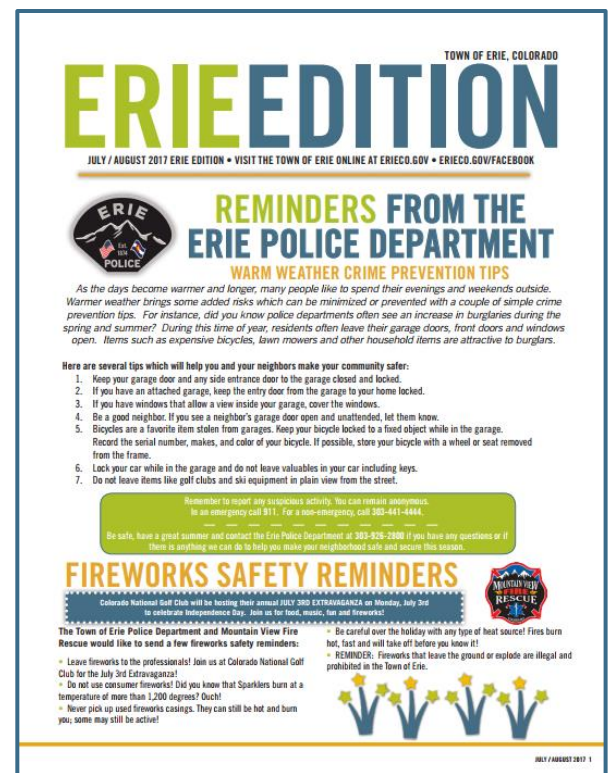


Figure 12. Erie Edition Newsletter

## Where Do We Want to Go?

### Our Energy Vision

An energy vision statement is an expression of the Town of Erie's energy intention. In the development and refinement of Erie's energy vision, relevant guiding documents, like the Comprehensive Plan 2015 Update, and targeted survey results, were synthesized to align with community intentions. The Energy Action Team crafted the following as a vision for Erie's energy future:

***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.***

### Goals

The Energy Action Team established energy reduction targets per focus area that were aggregated to give a sense of the potential total energy reduction over the 18-month implementation period. The team further identified aspirational targets during the implementation period that would result in a stretch goal designed to illustrate what a comprehensive culture shift might look like (illustrated **in red text** throughout the document). Targets for each focus area will be revisited and adjusted throughout the implementation period.

Given that Erie is anticipated to grow at an estimated rate of 4 percent over the implementation period, and energy use is assumed to track population growth, energy reduction goals were established as an offset from projected business-as-usual growth. Erie aims to achieve an offset energy savings goal of 1.5 percent (1.45 GWh). If achieved this will reduce anticipated growth during the implementation period (18-months) to 2.5 percent. The **stretch goal** would be an offset of 3.0 percent (3.03 GWh), an additional 1.5 percent from the energy savings goal, reducing anticipated energy growth over the same period to 1 percent.

Hitting these savings goals would reduce Erie's annual carbon footprint by 1,079/**2,719** MTCO<sub>2e</sub>, approximately equivalent to the carbon emitted from 231/**582** passenger vehicles annually, per energy savings goal and **stretch energy savings goal**, respectively. These savings goals have the potential to save the Erie community \$137,300/**\$279,600** annually in projected energy costs. Table 5 illustrates potential electricity savings goals per focus area.

Table 5. Focus Areas with Goals

Focus Area	Electricity Savings Goal (kWh)	Stretch Electricity Savings Goal (kWh)
New Construction	119,560	<b>350,330</b>
Existing Businesses	656,500	<b>1,387,470</b>
Municipal Energy Leadership	677,030	<b>1,294,430</b>
<b>Total</b>	<b>1,453,090 kWh</b>	<b>3,032,230 kWh</b>

Goal projections beyond the implementation period will be addressed during future plan updates given the success of this plan and to align with other Town processes. More details on the individual strategies and

targets for each focus area that comprise the energy savings goals are presented in the subsequent section.

## How Are We Going to Get There?

To achieve the goals outlined above, the Energy Action Team proposes the following focus areas: new construction, existing businesses, and municipal energy leadership. Each focus area begins with a summary of why it was selected as a priority and supporting information about the focus area, including focus area specific goal details. Note, the stretch energy savings goal details are differentiated in **red**. Next, detailed strategies to support the achievement of the goals are organized into tables for each focus area. Each strategy includes a general description, numeric targets to keep the plan on track, scope details, delineation of responsibilities and roles, draft timeline, identification of resources, and measurements of success.

### Focus Area 1: New Construction

As stated previously, Erie anticipates new growth in both residential and commercial sectors over the next decade. New residential builds are planned to include a greater variety of housing types and address diversifying lifestyles and housing prices. From 2017 to 2025, total housing units are projected to increase upwards of 45 percent. Furthermore, Erie is uniquely positioned to attract businesses for its quality of life, amenities, location, and developable land available. This focus area has an electricity savings goal of 119,560 kWh or **350,330 kWh** with additional energy savings through the adoption of up-to-date energy codes. By adopting and implementing new building codes, new construction in Erie will be over 30 percent more energy efficient than buildings built to the code in 2017. As an officially adopted municipal baseline, the energy savings from that action will be tracked, but only the efforts of this strategy directly relating to their compliance and use will be credited towards the energy savings.

Table 6. Residential New Construction Energy Efficiency

<b>Strategy 1: Residential New Construction Energy Efficiency</b>	
<b>Description</b>	This strategy aims to reduce energy use of residential new construction a minimum of 20 percent by mid-2019 through educating prospective home builders and homebuyers, policy updates and adoption, and collaboration.
<b>Targets</b>	<ul style="list-style-type: none"> <li>• Town of Erie to adopt 2015 or newer IECC codes in 2018               <ul style="list-style-type: none"> <li>○ If adopted:                   <ul style="list-style-type: none"> <li>▪ Increase participation in Xcel Energy ENERGY STAR® for New Homes by 50 percent prior to new code adoption                       <ul style="list-style-type: none"> <li>• Do not maintain average historic program participation after adoption</li> <li>• <b>Maintain average historic program participation after adoption</b></li> </ul> </li> <li>▪ Convene/present at 3 events to share benefits of utility rebates as part of new residential code compliance</li> <li>▪ Support code compliance and trainings</li> </ul> </li> <li>○ If not adopted:                   <ul style="list-style-type: none"> <li>▪ Increase participation in Xcel Energy ENERGY STAR® for New Homes 50 percent annually by mid-2019</li> </ul> </li> </ul> </li> </ul>
<b>Scope</b>	

A select team will support the Town of Erie in pursuing adoption of up-to-date energy codes. Potential energy savings and other benefits will be shared to encourage and inform decision-making by the Town Board. In tandem, the proposed code updates will be reviewed to identify opportunities for complementary utility program rebates. Outreach will extend to the Town's building department, homebuilders, and most importantly, prospective homebuyers, to share information on available utility programs and rebates for new construction projects along with benefits of implementing energy efficiency measures. Outreach techniques will include code and compliance trainings, customized flyers, social media posts, website content, and in-person events.

### **Responsible Parties and Roles**

- Town of Erie
  - Identify homebuilders and initiate contact
  - Share information at point of permit
  - Pursue process to adopt 2015 or newer IECC codes
  - Leverage existing communication channels to disseminate information
  - Share information with homebuilder community
- Partners in Energy Team
  - Review proposed energy code(s)
  - Lead development of outreach materials
  - Support dissemination of information
  - Coordinate and support code training (with Colorado Energy Office)
  - Support homebuilder engagement
  - Assist in homebuilder trainings
- Area Homebuilders
  - Voluntarily participate in implementation efforts
  - Share information with buyers and others involved with home building and purchasing
- Erie Sustainability Ad-Hoc Committee
  - Support dissemination of information
  - Support development of outreach materials
  - Support new code adoption
  - Align strategy with Sustainability Plan

### **Timeline**

#### Winter 2018

- Convene strategy team and establish regular check-in meetings
- Identify roles and immediate actions
- Develop contact list of major area homebuilders
- Develop customized collateral
- Review codes and provide analysis

#### Spring – Summer 2018

- Continue to develop custom collateral
- Plan and host code trainings
- Outreach to area homebuilders

#### Summer 2018 – Fall 2018

- Continue homebuilder outreach and encourage utility rebate participation
- Provide support for code enforcement and compliance

#### Fall 2018 – Winter 2019

- Evaluate progress and adjust strategy as needed

#### Winter 2019 – Summer 2019

- Continue to encourage and track savings, reach out to next round of homebuilders and institutionalize processes

### Resources

#### Town of Erie

- Homebuilder contact information and lists
- Printing of flyers for outreach activities
- Access to outreach channels

#### Erie Chamber of Commerce

- Share information in relevant publications, events
- Post information to social media accounts and webpage
- Advertising space for recognition and information sharing

#### Partners in Energy

- Xcel Energy staff to support code webinars, training, and events (as needed and as appropriate)
- Customized outreach collateral

### Partners

Energy Codes Training Contractor – Shaunna Mozingo

Partners in Energy – Conor Merrigan

Town of Erie – Development Services, Building /Administration

Boulder County EnergySmart – Dave Hatchimonji

United Power – Bill Meier

Homebuilder Representative(s) – TBD

Erie Sustainability Ad-Hoc Committee Liaison – Tom Doyle

### Measurement

Success will be measured by:

- Utility program participation
- Number of fliers distributed
- Attributable energy savings
- New code adopted (yes/no)

Table 7. Commercial New Construction Energy Efficiency

## Strategy 2: Commercial New Construction Energy Efficiency

### Description

This strategy aims to reduce energy use of commercial new construction a minimum of 20 percent by mid-2019 through educating the business community, policy updates and adoption, and collaboration.

### Targets

- Town of Erie to adopt 2015 or newer IECC codes in 2018
- Support energy code compliance and share rebate eligibility and applicability
- Support at least 1/2 new construction projects in Xcel Energy territory to take advantage of the Energy Design Assistance program or Energy Efficient Buildings program by mid-2019
- **Enable a new construction project to take advantage of CPACE Financing in Boulder County (or Weld County if they opt in)**

### Scope

A select team will support the Town of Erie in pursuing adoption of up-to-date energy codes. Potential energy savings and other benefits will be shared to encourage and inform decision-making by the Town Board. In tandem, the proposed code updates will be reviewed to identify opportunities for complementary utility program rebates. Outreach will extend to the Town's building department, local developers, architects, and contractors to share information on available utility programs for new construction projects,



benefits of implementing energy efficiency measures, and financing mechanisms (e.g., CPACE Financing). Outreach techniques will include code and compliance trainings, customized flyers, social media, website content, and in-person events.

### Responsible Parties and Roles

- Town of Erie
  - Identify projects and project sites
  - Pursue process to adopt 2015 or newer IECC codes
  - Recognize high performers
  - Leverage existing communication channels to disseminate information
- Erie Chamber of Commerce
  - Share information with prospective members or members looking to build new facilities
  - Recognize high performers
- Erie Sustainability Ad-Hoc Committee
  - Support new code adoption
  - Align strategy with Sustainability Plan
- Partners in Energy Team
  - Review proposed energy code(s)
  - Lead development of outreach materials
  - Support dissemination of information
  - Coordinate and support code training (with Colorado Energy Office)
- United Power
  - Provide applicable program information
  - Outreach to customers

### Timeline

#### Winter 2018

- Convene strategy team and establish regular check-in meetings
- Identify roles and immediate actions
- Develop customized collateral
- Review codes and provide analysis

#### Spring – Summer 2018

- Plan and host code trainings
- Direct outreach to developers

#### Summer 2018 – Fall 2018

- Train permitting staff and provide collateral
- Recognize first adopters

#### Fall 2018 – Winter 2019

- Continue engagement; review process and optimize as needed

#### Winter 2019 – Summer 2019

- Institutionalize process
- Re-train and recognize participants

### Resources

#### Town of Erie

- Post information to social media accounts and webpage
- Share information with building department and economic development department

#### Erie Chamber of Commerce

- Share information in relevant publications, events

- Post information to social media accounts and webpage
- Advertising space for recognition and information sharing

#### Partners in Energy

- Rebates and outreach
- Event support (e.g., food)

#### United Power

- Rebates and outreach

#### Partners

Energy Codes Training Contractor – Shaunna Mozingo

Partners in Energy – Conor Merrigan

Town of Erie – Development Services, Building /Administration, Economic Development

Erie Chamber of Commerce – Elle Cabbage

Developer Representative – TBD

Erie Sustainability Ad-Hoc Committee Liaison – Tom Doyle

#### Measurement

Success will be measured by:

- Utility program participation
- Number of collateral pieces developed
- Number of collateral pieces given away
- New code adopted (yes/no)
- Number of trainings

## Focus Area 2: Existing Businesses

Erie's business community consists of over 300 companies and organizations and approximately 954 distinct Xcel Energy and United Power premises. Engaging the business community is critical to reaching this plan's goals. Within this focus area, the Energy Action Team prioritized two strategies to inform, engage, and recognize the Erie business community. This focus area has an electricity savings goal of 656,500 kWh or **1,387,470 kWh**. Hitting this goal could save the Erie business community at least \$50,600 annually in avoided energy costs with sustained energy and additional cost savings over time. Specifically, participating businesses could save an average of \$42 (25 percent) on their monthly energy bill.

Table 8. Business Outreach Campaign

### Strategy 3: Business Outreach Campaign

#### Description

This strategy aims to develop an outreach campaign targeting the Erie businesses community. The outreach campaign will focus on sharing information about and promoting energy efficiency and renewable energy opportunities as well as financing options for small to medium business and local trade partners.

#### Target

Engage 100 Erie businesses, serviced by Xcel Energy, in completing an energy achievement by mid-2019. An energy achievement includes participation in an Xcel Energy (or United Power) energy efficiency program and/or renewable energy subscription or installation. This engagement goal is equivalent to about 1 in 10 Erie business premises making an energy achievement.

#### Scope

A small team will define key messages, identify applicable programs, and determine final outreach activities and logistics (including calendar of activities and responsibilities). Outreach techniques will likely

include flyers/postcards, in-person events, e-newsletter content, case study stories, and door-to-door activities (see Table 4 on page 12 for a list of outreach channels).

### **Responsible Parties and Roles**

- Town of Erie
  - Support development of outreach materials and approve all materials before distributed
  - Leverage existing communication channels to disseminate information
  - Support outreach activities and logistics
- Erie Chamber of Commerce
  - Support development of outreach materials
  - Conduct direct outreach and leverage existing communication channels to disseminate information
  - Plan and host annual event
- Erie Sustainability Ad Hoc Committee
  - Support dissemination of information
- Partners in Energy Team
  - Lead development of outreach materials
  - Support dissemination of information
  - Support outreach activity planning and development
- United Power
  - Provide applicable program information
  - Review developed materials before distributed

### **Timeline**

#### Winter 2018

- Develop key messages for businesses and associated programs to promote
- Finalize calendar of activities and responsibilities (including hosting an annual business and trade event and a small business downtown lighting blitz)
- Develop first round of outreach materials
- Plan business and trade event

#### Spring 2018

- Finalize event logistics and materials
- Host business and trade event (March)
- Plan small business downtown lighting blitz logistics

#### Summer 2018

- Hold small business downtown lighting blitz
- Outreach activities and tracking of outcomes

#### Fall 2018 –Summer 2019

- Refresh/update outreach materials as appropriate
- Continue outreach activities and tracking of outcomes

### **Resources**

#### Town of Erie

- Provide business contact information and lists
- Printing of flyers for outreach activities

#### Erie Chamber of Commerce

- Provide business contact information and lists
- Printing of flyers for outreach activities

#### Partners in Energy

- Customized outreach collateral
- Direct mailings (as needed and as appropriate)
- Xcel Energy staff to support outreach events (as needed and as appropriate)

#### United Power

- Visit businesses and spread information
- Participate in program development

#### Partners

Town of Erie - Development Service – Building / Administration – Economic Development

Erie Chamber of Commerce – Elle Cabbage

Erie Sustainability Ad-Hoc Committee Liaison – Tom Doyle

Partners in Energy – Ellie Troxell/Conor Merrigan

United Power – Bill Meier

#### Measurement

Success will be measured by:

- Number of event attendees
- Number of businesses engaged in direct outreach activities
- Xcel Energy and United Power program participation

Table 9. Business Energy Achievement Recognition

### Strategy 4: Business Energy Achievement Recognition

#### Description

This strategy supports the existing business outreach campaign strategy by providing businesses a mechanism to log their energy achievements and be recognized locally for demonstrating a commitment and leadership in Erie achieving its energy goals.

#### Targets

- Recognize at least one business for exhibiting energy leadership
- Provide digital recognition of all businesses that log their energy achievements

#### Scope

Digital recognition will be given to businesses that log an energy achievement (upon their request to be recognized). Recognition will include listing of the business name on the Erie Chamber of Commerce website (<http://www.eriechamber.org/>), linking to the Town of Erie informational portal, periodic social media posts, and access to a physical and digital decal.

#### Responsible Parties and Roles

- Erie Chamber of Commerce
  - Co-lead webpage content development
  - Host and maintain webpage on website including monthly updates of recognized businesses
  - Share successes on social media
- Town of Erie
  - Provide link to informational portal
- Partners in Energy Team
  - Develop and maintain survey instrument for logging energy achievements
  - Physical/ digital decal development
  - Support webpage development

#### Timeline

Winter 2018

- Determine webpage parameters and site logistics

- Create an instrument for businesses to “log” their energy achievements

Spring 2018

- Launch webpage

Ongoing (monthly)

- Download list of businesses who have logged actions and recognize on website and social media
- Share digital decal and social media hashtag with participating businesses

### Resources

Erie Chamber of Commerce

- Host webpage with mobile app capability for business recognition

Town of Erie

- Post and maintain link to Erie Chamber of Commerce recognition webpage
- Re-share successes on social media

Partners in Energy

- Survey instrument for logging energy actions
- Decal and hashtag development
- Collect business names for recognition site monthly and share digital decal and social media hashtag with participating businesses

### Partners

Erie Chamber of Commerce – Elle Cabbage

Town of Erie – Administration

Partners in Energy – Ellie Troxell

Erie Sustainability Ad-Hoc Committee Liaison – Tom Doyle

### Measurement

Success will be measured by:

- Number of energy achievements logged
- Xcel Energy and United Power program participation

## Focus Area 3: Municipal Energy Leadership

The third focus area is the Town of Erie demonstrating leadership in energy efficiency activities, while also reducing energy consumption and energy costs. Likewise, the Town has a platform to support greater understanding, awareness, and action around energy efficiency and renewable energy opportunities and initiatives in the community. This focus area has a savings goal of 677,030 kWh or **1,294,430 kWh**. In achieving this goal, the Town could save at least \$71,300 annually in avoided energy costs, and see additional energy savings and cost savings over time.

Table 10. Municipal Benchmarking and Energy Audits

### Strategy 5: Municipal Benchmarking and Energy Audits

#### Description

This strategy aims to complete energy audits on identified Town facilities to identify energy efficiency opportunities, and enrolling all facilities in energy benchmarking to monitor and assess energy trends. For facilities that have an energy audit completed, the Town will aim to complete at least one energy-saving action for each facility based on audit recommendations (subject to budget availability and other facility maintenance priorities). Beyond energy efficiency, the Town will consider other innovative technologies to pursue during project processes.

#### Targets

- Town of Erie facilities to undergo an energy audit and enroll in energy benchmarking by mid-2019

- Any facility that undergoes an audit completes at least one energy-saving action within one year of audit completion
- Achieve at least 20/40 percent energy savings through implemented energy saving actions

### Scope

All Town of Erie facilities within the Xcel Energy territory over 5,000 square feet will be benchmarked in Portfolio Manager using Xcel Energy's Energy Benchmarking program. Concurrently, or as determined after viewing the benchmarking results, all identified Town of Erie facilities will apply to have an on-site energy audit or study (e.g., Building Tune-Up program through Xcel Energy). Finally, for those select facilities that have an energy audit, at least one energy-saving action for each facility will be prioritized for implementation within one year of receiving the audit (subject to budget availability and other facility maintenance priorities). Select project(s) will be highlighted on the Town of Erie's informational portal and through case studies or other developed materials. In parallel, municipal project scope protocol will be modified to account for greater consideration of innovative technologies and partnerships to pursue.

### Responsible Parties and Roles

- Town of Erie
  - Identify facilities to receive an on-site energy audit or study
  - Submit applications for identified facilities
  - Review audit recommendations and prioritize list of improvements (including at least one improvement to implement near-term)
  - Enroll facilities in energy benchmarking program and monitor results on a quarterly-basis or similar
  - Implement priority energy efficiency improvements
  - Modify project scope protocol to consider innovative technologies and/or partnerships early in the design development process
- United Power
  - Support program enrollment (as applicable)
- Partners in Energy Team
  - Program support
  - Support facility identification
  - Support audit review and project prioritization
  - Support energy benchmarking enrollment and monitoring

### Timeline

#### Winter 2018

- Enroll facilities in energy benchmarking (or equivalent United Power program)
- Identify facilities to receive an on-site energy audit or study
- Look into the ability to modify project scope protocol to consider innovative technologies and/or partnerships early in the design development process

#### Spring 2018

- Finalize list of facilities and submit applications
- Modify project scope protocol to consider innovative technologies and/or partnerships early in the design development process

#### Summer 2018 - Fall 2018

- Complete energy audits and review results
- Develop priority list of energy improvements for each facility

#### Ongoing (quarterly)

- Review list of priority improvements and implement projects (include in budget requests as applicable)

- Review energy benchmarking results and share with team
- Share projects to highlight (e.g., case study) in coordination with community outreach and awareness strategy
- Identify best practices from projects and energy benchmarking results to improve other municipal operations

### Resources

Town of Erie

- Facility list and access
- Energy audit or Building Tune-Up applications and fees

Boulder County

- Rebates and technical resources for Boulder County facilities

Xcel Energy

- Rebates and Programs for DSM savings and renewables in Xcel territory

United Power

- Rebates and Programs for DSM savings and renewables in United Power Territory

### Partners

Town of Erie – Development Services, Project Management

Partners in Energy – Ellie Troxell

United Power – Bill Meier

### Measurement

Success will be measured by:

- Number of audits completed
- Number of facilities participating in energy benchmarking
- Energy efficiency project implementation and associated savings

Table 11. Community Awareness Campaign

## Strategy 6: Community Awareness Campaign

### Description

This strategy supports all other strategies detailed in this plan with an emphasis on providing a central portal of information and education about energy efficiency, renewable energy, and other opportunities for all Erie community members. This will both: (1) allow the community to highlight existing leadership actions, as well as (2) demonstrate the community's willingness to engage in additional efforts to lead as the community grows.

### Targets

Increase three-year average historic Xcel Energy program (residential and commercial) participation 20/40 percent by mid-2019.

### Scope

An informational web portal will be developed within the Town of Erie website. The portal will contain general information about energy efficiency opportunities and programs as well as renewable energy information and other applicable resources for Erie residents and businesses.

In coordination with the informational web portal, a robust community awareness campaign will be developed with the intent to inform and educate the public. Content of the campaign will focus on municipal energy leadership efforts and successes as well as highlighting actions taken by residents and businesses. Local schools will highlight their efforts as well as what actions parents and community members can and are taking.



The Town of Erie will also build on a long history of convening various jurisdictions and institutions (Counties, utilities, etc.) to find alignment to the extent possible on offerings and support for the entire Town of Erie.

### **Responsible Parties and Roles**

#### Town of Erie

- Co-lead web portal content development
- Lead web portal development and maintenance
- Printing of flyers for outreach activities
- Access to outreach channels
- Convene various stakeholders with geographical coverage in Erie to identify ways to serve the entire community

#### Erie Chamber of Commerce

- Coordinate with energy achievement log and webpage
- Share information at chamber events

#### Partners in Energy

- Co-lead web portal content development
- Support web portal development and maintenance
- Customized outreach collateral
- Xcel Energy staff to support outreach events (as needed and as appropriate)

#### United Power

- Share content and information on projects and rebates
- Continue to develop and promote community battery storage project

### **Timeline**

#### Winter 2018

- Determine portal parameters and site logistics
- Draft portal framework and content
- Develop key messages to promote
- Finalize calendar of activities and responsibilities
- Develop first round of outreach materials

#### Spring 2018

- Launch portal
- Outreach activities and tracking of outcomes

#### Summer 2018 – Summer 2019

- Refresh/update materials as appropriate and continue outreach activities

#### Ongoing (monthly)

- Maintain portal (aim for a monthly update)
- Evaluate website analytics

### **Resources**

#### Town of Erie

- Web portal access and links
- Printing of flyers for outreach activities
- Access to outreach channels

#### Boulder County

- EnergySmart and PACE services
- Boulder County Community Sustainability Grant

#### Weld County

- Resources to promote cross boundary energy efforts

United Power

- Program information and links

Partners in Energy

- Program information and links

### Partners

Town of Erie – Administration, Communications & Marketing

Erie Chamber of Commerce – Elle Cabbage

United Power – Bill Meier

Partners in Energy – Ellie Troxell

Boulder County – Lea Yancey

Weld County

BVSD – Jeff Medowitz

SVVSD – Dara Ward

### Measurement

Success will be measured by:

- Website analytics
- Utility program participation

## How Are We Going to Stay on Course?

To achieve the energy goal outlined in the preceding section, the Erie Energy Action Team will help the community reach its goals by maintaining consistent and clear communication between Energy Action Team leaders, community partners, and Partners in Energy community facilitators.

### Operational Actions and Tracking

On an annual basis, the full Energy Action Team will review the energy action strategies and timelines to make sure everyone remains on tasks and has the resources needed to complete the activities identified in this plan.

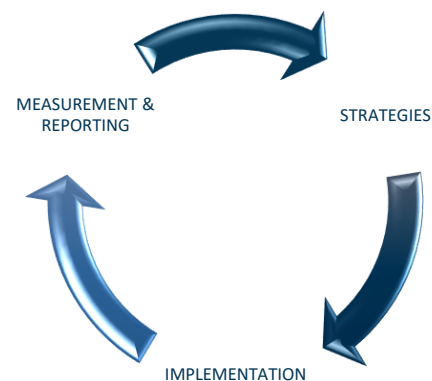


Figure 13. Actions and Tracking

Partners in Energy will provide annual tracking and reporting of participation in Xcel Energy's programs and the associated savings from program participants. Each strategy team will also be responsible for tracking supplemental quantitative and qualitative information about implementation, as applicable, such as website analytics, number of materials distributed, event dates, and estimated participants, etc.

### Communication and Reporting

Erie has a robust communications strategy and as a strategy of its own there will be significant coordination between program implementers and Town communications staff. The exact process and frequency will be determined in concert with the Town and will be supported by the Town's energy champion who will in turn be supported by the rest of the implementation team.

## Changing Course: Corrective Action

An effective energy plan is cyclical in nature (see Figure 13). To ensure this plan remains on track, the Energy Action Team will review annual tracking information and compare it against any supplemental strategy tracking metrics and information to assess whether the efforts appear to be making an impact. If the strategies appear to be off-course, it is possible that the strategy teams assess their progress and make corrective actions to get back on track. If the efforts appear to be surpassing expectations, the stretch targets may be used to illustrate the potential of continuing to push the envelope.

## Recognition for Achieving Goals

Each of the strategies outlined in this plan has its own methods for measuring and recognizing success. At critical milestones the Town of Erie and Xcel Energy, among other partners, will publish updates on progress, share successes, and congratulate participants and partners through various communication channels. Given achievement of the stretch goal, the Energy Action Team and community partner efforts will be recognized with particular distinction, as determined in the final Implementation Memorandum of Understanding.

## Beyond the Plan Horizon

Looking forward beyond the plan horizon, it is recommended that Erie readdress the energy efficiency goals and successes achieved over the implementation period. Future updates to this plan may be necessary as goals are achieved and new energy opportunities and ideas emerge.

## Appendix 1: Glossary of Terms

**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 Achievement:** An energy achievement includes participation in an Xcel Energy or United Power energy efficiency program and/or renewable energy subscription or installation.

**Energy Action Plan:** a written plan that includes an integrated approach to all aspects of energy management and efficiency. This includes both short- and long-term goals, strategies, and metrics to track performance.

**Goals:** the results toward which efforts and actions are directed. There can be a number of objectives and goals outlined in order to successfully implement a plan.

**kWh (kilowatt-hour):** a unit of electricity consumption

**Premise:** a unique identifier for the location of electricity or natural gas service. In most cases, it is a facility location. There can be multiple premises per building, and multiple premises per individual debtor.

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

**Therm:** a unit of natural gas consumption

## Appendix 2: Mapping

