



# CITY OF GREELEY ENERGY ACTION PLAN

An Element of the Imagine Greeley  
Comprehensive Plan



## Acknowledgements

Thanks to the following organizations and individuals for participating in developing this Energy Action Plan.

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

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## Executive Summary

This Energy Action Plan outlines tangible steps for the City of Greeley to move the community toward its development and energy efficiency goals. Xcel Energy's Partners in Energy facilitated a series of workshops with the Energy Action Team in the spring and summer of 2019, to develop this plan.

## Our Vision

***Greeley promotes a healthy and diverse economy and a high quality of life that is responsive to all its residents, businesses, and neighborhoods. Through Xcel Energy Partners in Energy, the community will create an affordable and reliable energy future based on increased residential, commercial, and industrial energy efficiency and alternative energy opportunities to improve economic health and stimulate growth.***

## Our Goals

The City of Greeley aspires to achieve the following energy goals:

- Encourage 2,700 or more City of Greeley households implement at least one energy efficiency or renewable energy measure annually.
- Encourage 270 or more businesses to participate in an energy efficiency or renewable energy program through Xcel Energy each year.
- Develop outreach channels to students to increase awareness of and engagement in energy efficiency and renewable energy opportunities.
- Complete energy audits in targeted municipal facilities and implement at least one energy efficiency measure in each targeted facility, as recommended by the energy audits.

## How Will We Get There?

To move toward its goals, the City of Greeley's Energy Action Team identified strategic initiatives and targets for four important focus areas. These focus areas and strategic initiatives are the working elements of the Energy Action Plan and will generate concrete actions and impacts.

### Focus Areas for City of Greeley's Energy Action Plan

#### Residential

- Conduct outreach at community events and activities.
- Develop and conduct residential outreach campaigns to under-resourced families, renters, and homeowners.

#### Business

- Host an annual Greeley business energy efficiency expo.
- Conduct sector-based small business outreach to restaurants, offices, retail, and eco-friendly companies.

#### Educational Institutions

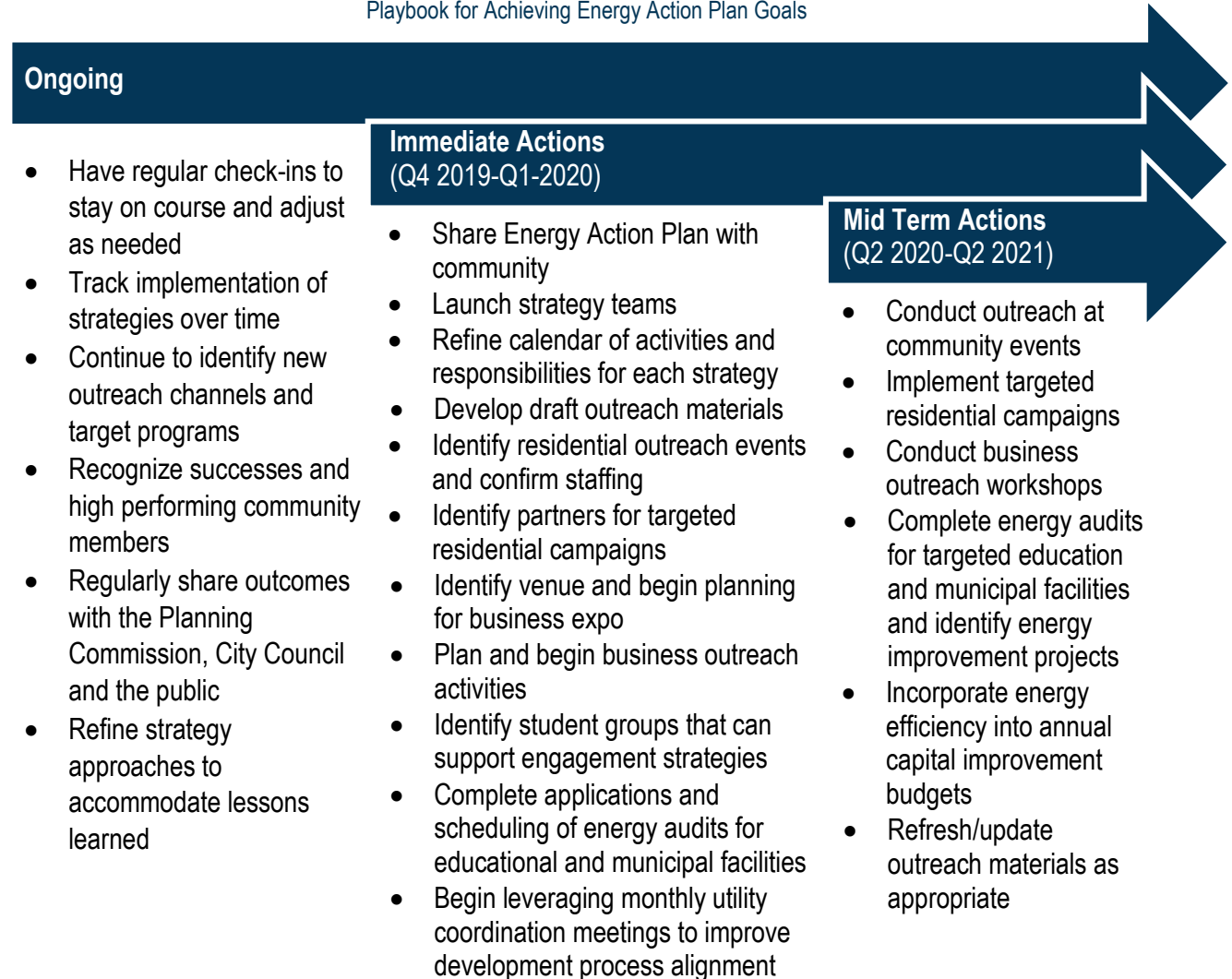
- Engage students in energy efficiency opportunities.
- Complete energy audits and efficiency improvements at targeted facilities.

#### Municipal

- Complete energy audits and efficiency improvements at targeted facilities.
- Align processes to integrate energy efficiency and renewable energy information into new construction and development review processes.

The playbook outlining key actions and timing, as well as what follows the Partners in Energy implementation support period is summarized below.

Playbook for Achieving Energy Action Plan Goals



## Introduction

This Energy Action Plan outlines tangible steps for the City of Greeley to move the community towards its energy efficiency and cost savings goals while fostering relationships and partnerships with its utility providers. The community’s main energy priorities are outlined below:

- Create an affordable and reliable energy future.
- Increase residential, commercial, and industrial energy efficiency and alternative energy opportunities.
- Improve economic health and stimulate growth.

This plan begins with documentation of the Xcel Energy Partners in Energy planning process, an overview of the City of Greeley’s demographics, and the community’s baseline energy use and profile. Next it introduces the energy vision, supporting energy focus areas, and community goals. The strategies provide more specific direction for the coordination, steps, and timelines necessary to achieve the goals. Finally, the plan concludes with information about ongoing plan monitoring and maintenance.

## Xcel Energy Partners in Energy

Xcel Energy is the main electric utility serving the City of Greeley. In the summer of 2014, Xcel Energy launched Partners in Energy to support communities, such as Greeley, in developing and implementing energy action plans that supplement existing sustainability plans, strategies, and tools.

## Plan Development Process

The content of this plan was derived from a series of four, 2-hour stakeholder workshops held in the spring of 2019. The stakeholder group, or Energy Action Team, included representatives from the City of Greeley, local businesses, area institutions, and community organizations. See Figure 1 for a summary of the process that the Partners in Energy facilitators guided the group through to develop the Energy Action Plan.

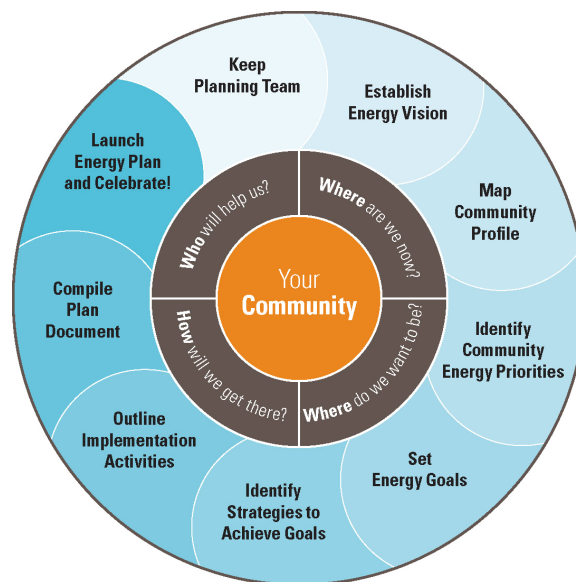


Figure 1. Partners in Energy Process for Success

The Partners in Energy facilitators led the drafting and development of the plan and refined the content in coordination with Energy Action Team participants. The City sought feedback on the plan at a public open house with specific outreach to major stakeholders. Additionally, work sessions with Planning Commission and City Council were held prior to adoption to facilitate an opportunity to garner feedback from community leaders.

Successful implementation of the plan and achievement of the goals will require extensive public involvement and participation. While a draft of the Energy Action Plan was available for public comment, the team will focus on engaging community members in the implementation of the plan.

### Implementation Support

Partners in Energy will work with the City of Greeley to support implementation of the Energy Action Plan, especially in the early stages. See Figure 2 for Partners in Energy resources available to support implementation.



Figure 2. Resources from Xcel Energy for Implementation

A Memorandum of Understanding (MOU) between the City of Greeley and Xcel Energy will detail the specific commitments of each entity and the implementation support provided. The Implementation MOU will be valid for a period of up to 18 months following the Energy Action Plan adoption and will likely include time for Partners in Energy facilitators to provide staffing to support project management and strategy deployment, as well as funding for reimbursable expenses associated with strategy implementation.

### Relationship to Comprehensive Plan

The *Imagine Greeley* Comprehensive Plan describes the need to create and adopt supplemental plans as additional elements of *Imagine Greeley* to provide more detailed planning and direction around specific issues. Multiple objectives in the *Imagine Greeley* Comprehensive Plan relate to energy, and envisions the community increasing efficiency and conservation efforts. Because of its location, history, and prominence in energy development in Colorado, the time is ripe for Greeley to develop a plan for an energy future that facilitates the growth of its economy and meets the needs of a growing population. A plan for energy



efficiency and renewable energy growth fits the vision, core values and goals and objectives set forth in *Imagine Greeley*, the recently adopted update of the Comprehensive Plan.

### *Imagine Greeley Vision*

Greeley values and respects the diversity of its people, cultures, neighborhoods, and resources in a manner that creates and sustains a safe, unique, united, vibrant, and rewarding place in which to live, work, learn, grow, and play. The community promotes a healthy and diverse economy, and a high quality of life that is responsive to all its residents, businesses and neighborhoods.

### *Imagine Greeley Core Values*

Of the twelve core values identified in *Imagine Greeley*, the Energy Action Plan directly supports four: proactive, progressive, and balanced economic development; responsible stewardship of natural resources and the environment; high-quality infrastructure and services; public/private cooperation to achieve and maintain exceptional community benefits.

### *Imagine Greeley Goals and Objectives*

More specifically this Energy Action Plan supports the following goals and objectives outlined in *Imagine Greeley*.

**NR-4:** Use resources efficiently and sustainably.

- Provide community leadership through example by maximizing energy and water efficiency in all City operations, facilities, programs, and equipment.
- Encourage the efficient use and conservation of energy.
- Promote the incorporation of renewable resources throughout the community. Expand opportunities to capture waste energy to supply local utility needs and drive the local economic development engine.

**EH-4** Support and collaborate with the city's school districts.

**HO-1.5** Provide new and prospective home buyers with information to support a successful transition from renting to ownership.

**NR-3** Demonstrate stewardship of the environment

**NR-5** Engage all members of the community in the process of supporting the stewardship of our natural and built environments.

**PS-3.3** Explore the feasibility of adopting minimum standards for the condition of rental housing properties.

### **Energy Action Plan Element**

This Energy Action Plan is intended to serve as an element of *Imagine Greeley*. It contains an energy vision statement that aligns and builds upon the *Image Greeley* vision and core values, supports the *Imagine Greeley* goals and objectives, and it prioritizes and details energy efficiency and renewable energy strategies to support implementation.

### **Xcel Energy and City of Greeley Coordination**

Through the planning process, the Energy Action Team identified several opportunities for improved coordination and communication between Xcel Energy and the City of Greeley, summarized below.

### Utility Coordination

The City of Greeley and Xcel Energy meet routinely to coordinate on utility infrastructure and operational issues. In the past, these meetings occurred monthly; however, through this planning process it was discovered that these utility coordination meetings were not happening monthly as intended. The City of Greeley has recently created a new Utility Coordinator position who will be responsible for organizing and facilitating these monthly utility coordination meetings. Xcel Energy will participate in these meetings to continue to improve alignment and communication on electric system operations and infrastructure. These meetings provide an opportunity to discuss topics such as decision-making criteria for the use of City undergrounding funds, site coordination, and regional service and capacity planning.

### Key Site Coordination

In addition to illuminating process improvements for utility coordination meetings, the Partners in Energy process also highlighted the opportunity to have more direct communication and coordination on key economic development sites in the community. It was suggested that the City of Greeley and Xcel Energy operations staff work together on a quarterly (or similar basis) to review key opportunity sites and align expectations and/or pursue site certifications.

### Account Management

Xcel Energy's account manager and area service manager will remain the ongoing and primary points of contact for the City of Greeley for any operational and/or infrastructure planning or coordination needs. They are committed to supporting ongoing efforts to enhance and build relationships between the City of Greeley and Xcel Energy (e.g., operations, account managers, etc.), and improving alignment and communication with specific customers and/or targeted geographic locations within the community that may have unique energy needs.

## Who Are We? – Community Background

Greeley was founded in 1869, when the original settlers envisioned a utopian community on the high plains of northern Colorado. The community was founded on the principles of temperance, religion, education, agriculture, irrigation, cooperation, and family values. In the 150 years since incorporating, the community has grown into the 12th largest city in Colorado with a population of 108,000 people and is projected to continue growing in area and population.

## Geography, Population, and Demographics

Greeley was located near the confluence of the Cache la Poudre and South Platte Rivers to take advantage of water for irrigated agriculture. Located approximately 50 miles north of Denver, Greeley is close to other large cities in northern Colorado, such as Fort Collins and Loveland. US Highway 34 links the city with I-25, and US Highway 85 provides access to destinations north and south of the community.

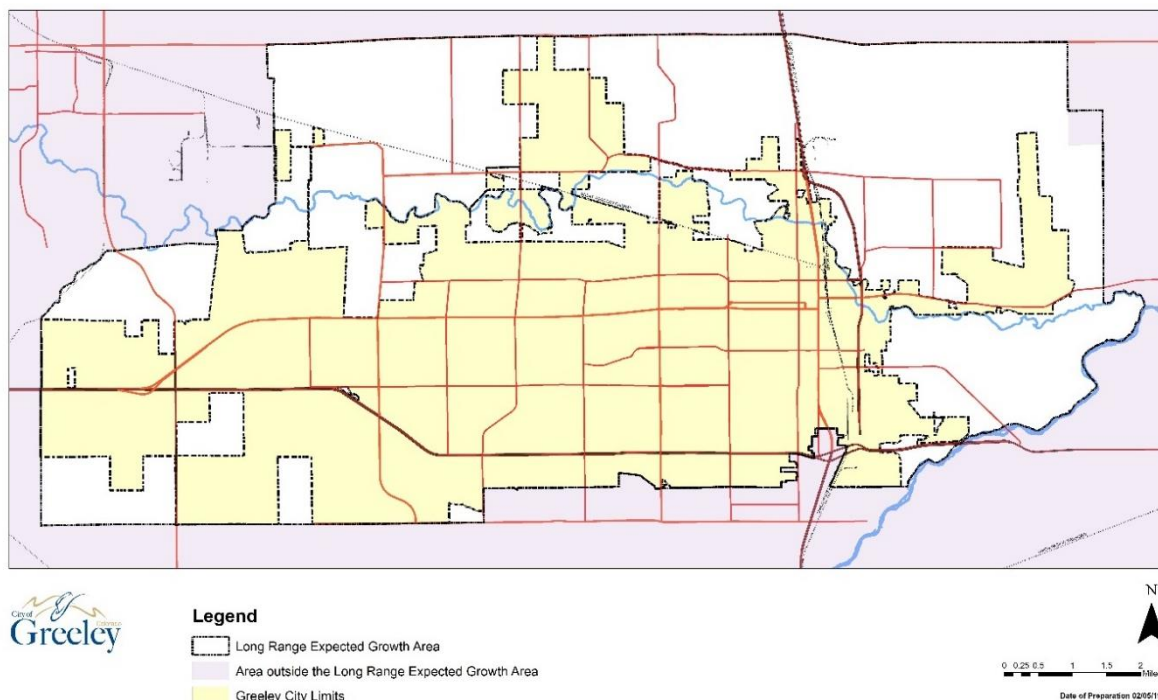


Figure 3. Greeley Planning Area

Figure 3 shows the planning area for this Partners in Energy Plan. It includes the City of Greeley and Greeley's adopted Long Range Expected Growth Area.

Greeley's population is expected to continue to grow at a rate of approximately 1.8 percent per year through 2040, which could coincide with an increase in energy consumption over the same time. In 2040, the population in the Long Range Expected Growth Area is projected to be 156,000 people. According to the US Census Bureau, Greeley's 2018 population identifies as 62 percent white, 17 percent Hispanic or Latino, 12 percent black/African American, and 5 percent Asian, while 2 percent identify as two or more races. Since Greeley has a diverse community, communication around energy consumption and strategy will need to be facilitated through several different channels. In addition, accommodation should be made

for about 1 in 4 residents who speak a language other than English, the majority of which are Spanish-speaking.

Compared to the rest of Northern Colorado, the City of Greeley has a relatively young age profile, with a median age of 30.7. Of the total population, 74 percent is over 18 years of age while only 12 percent is over 65.

The median household income in Greeley for 2018 was \$50,483, lower than state average of \$62,520. According to the 2012-2017 American Community Survey 5-year Estimates (ACS), 15 percent of the population live below the poverty level. However, Greeley is about 15 percent more affordable than the State of Colorado overall, likely owing to relatively lower housing costs.

### Housing

As of 2019, Greeley had an estimated total of 39,897 housing units (City of Greeley data). Single family homes account for 64 percent of all units, and most of the housing (65 percent) was built between 1970 and 2009. The decades 1970-1979 and 2000-2009 saw the largest growth in the housing stock (see Figure 4), showing that Greeley has a mix of older housing that are likely due for efficiency and appliance upgrades as well as newer units that are likely more efficient, but still may have opportunities for upgrades. Greeley also has a mix of owner occupied (58 percent) and renter occupied units (42 percent).

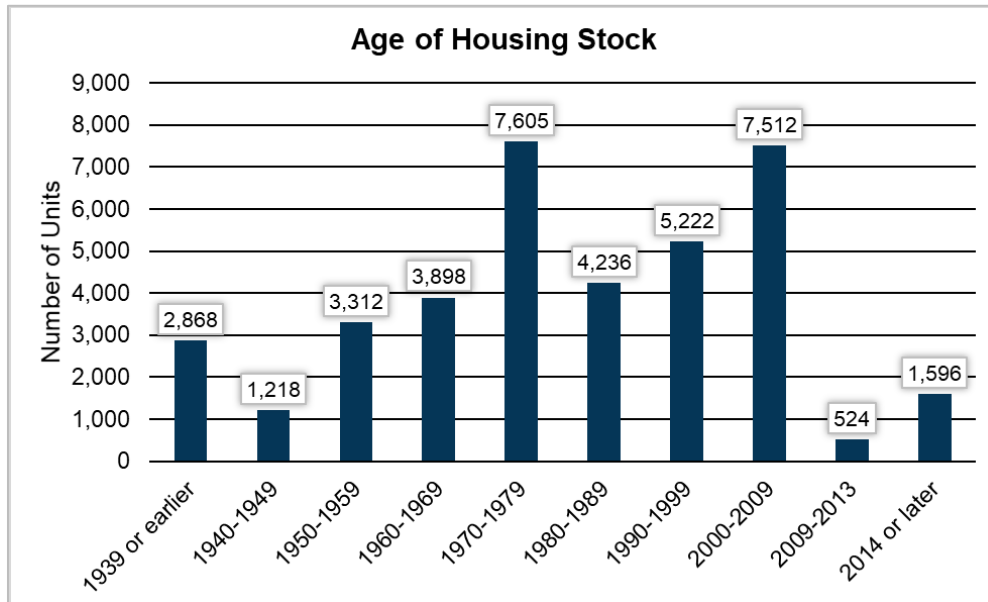


Figure 4. Age of Housing Stock

During the recession, the rate of new residential construction was below the long-term average rate of construction, leading to a shortfall of total residential units. Over the last decade, the housing stock percentage of multi-family housing has increased while the percentage of single-family housing has decreased, helping to make up for this shortfall (Figure 5). As the population grows and home sale prices rise, the City of Greeley expects new multi-family construction will continue to increase as percentage of the total housing stock.

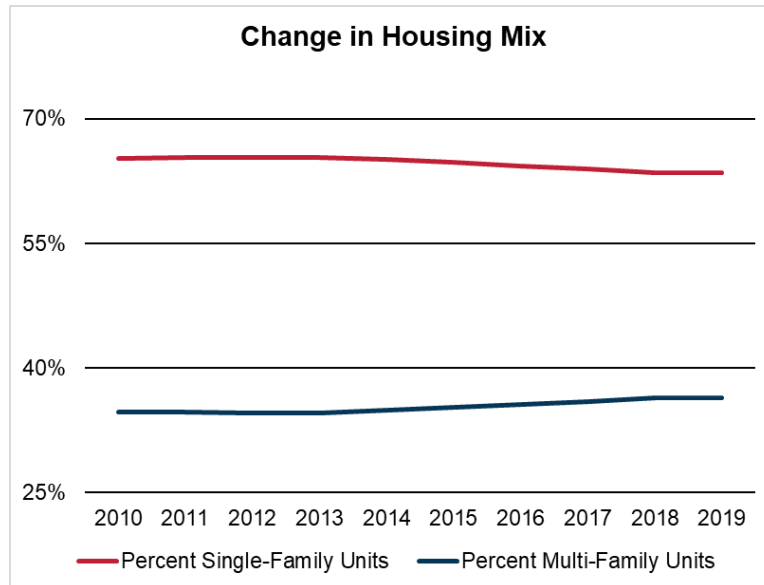


Figure 5. Percent Change in Housing Mix

## Business and Economy

Greeley has developed into a cultural and academic hub, hosting educational institutions such as the University of Northern Colorado and Aims Community College. According to the US Census Bureau, in 2018, 44,555 people were employed in Greeley. The top five industries are: education and healthcare (21 percent); retail trade (12 percent); arts, entertainment and recreation (11 percent); manufacturing (10 percent); and professional services (9 percent). Overall the City of Greeley has over 7,400 registered businesses. These large industry groups are good channels for energy efficiency information due to the number of employees and facilities in the community.

The unemployment rate is low, at 3.0 percent (Bureau of Labor and Statistics). Focusing on energy efficiency and renewable energy training and improvements can continue to enhance economic vitality, since supporting workforce development and create meaningful employment opportunities that benefit the community.

Greeley also boasts a relatively affordable cost of living and high quality of life, a combination not found in many other communities along the Front Range.



## Where Are We Now?

### The Case for an Energy Action Plan

Through plans, programs, and policies, the City of Greeley encourages the responsible stewardship of natural resources and the environment. Greeley's water conservation efforts have been particularly successful in ensuring that the community has ample water resources for generations to come. Similarly, the City also encourages the efficient use and conservation of energy and promotes the incorporation of renewable resources throughout the community.

An Energy Action Plan can help support these existing plans, such as *Imagine Greeley*, and move the City's energy efficiency goals forward as the community grows. By assisting supporting families and businesses with energy efficiency measures, programs, and education, the entire community can benefit from energy and cost savings, improved air quality, and increased community resiliency.

### Baseline Energy Analysis

An introductory step in the Partners in Energy planning process (see Figure 1) is to develop a community energy profile. The Partners in Energy team analyzed historical electricity data in Greeley by sector (residential, commercial and industrial, municipal). Three years of data (2016-2018) were used for the analysis, and 2018 serves as the baseline year for this plan. Only Xcel Energy electricity data are presented in the following baseline analysis.

Poudre Valley Rural Electric Association (PVREA) provides electrical service to the western most portion of Greeley. As of 2017, PVREA customers made up about 6% of the total residential electricity use and 4% of the total commercial electricity use in the City. While this is a small portion of the total electricity use, the number of residential electricity customers in PVREA grew by almost 60% between 2015 and 2017. Since this area of Greeley is rapidly growing, it represents a good opportunity to build in energy efficiency from the beginning. PVREA data was unavailable for 2018.

Atmos Energy is the natural gas provider for the City of Greeley for both residential and commercial premises. Atmos Energy did not provide data to inform the baseline analysis, but are supporting strategy implementation.

### Community Energy Use and Trending

In 2018, Greeley had 41,432 residential, commercial and industrial, and municipal premises (Figure 6). A premise is a unique identifier for the location of electricity or natural gas service. In most cases, it is a meter location. This total includes premises served by electricity, natural gas, or both. Residential premises make up 87 percent of the overall community, but they account for 36 percent of the total electricity consumption in the community in 2018 (Figure 7).

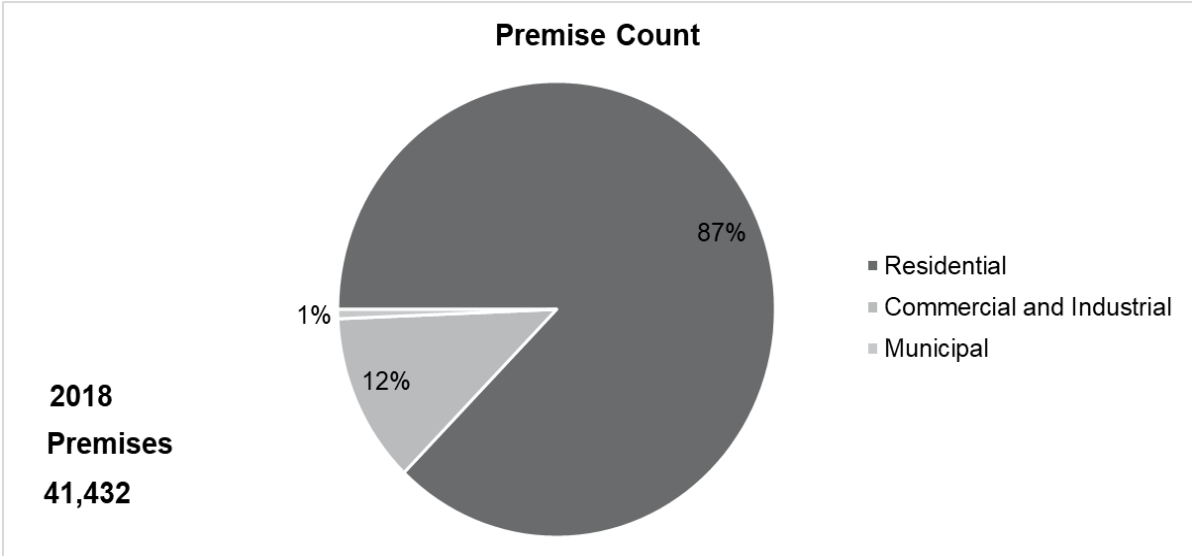


Figure 6. 2018 Premise Count

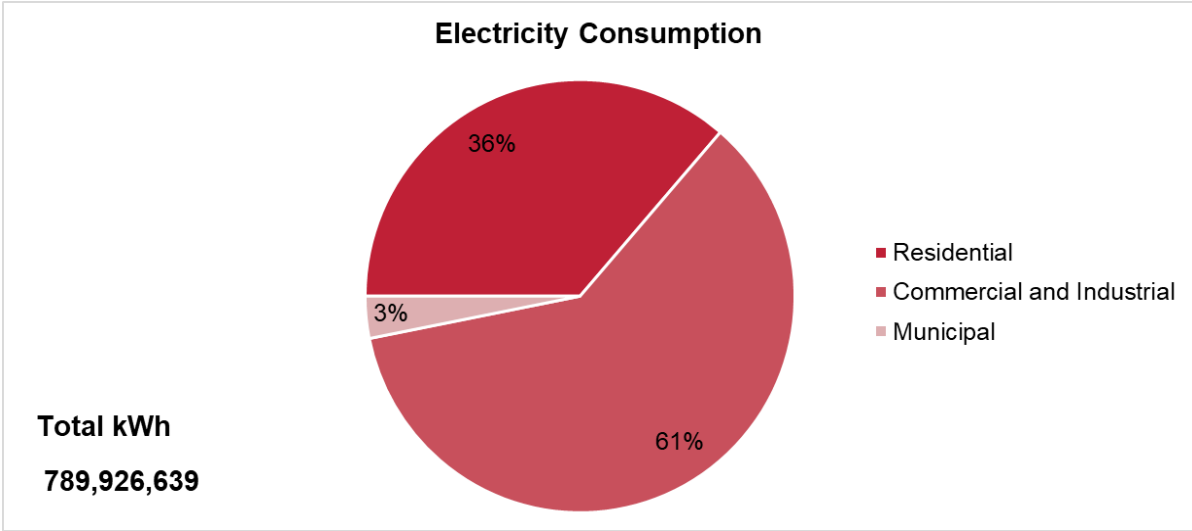


Figure 7. 2018 Electricity Consumption by Sector

While the number of commercial and industrial and municipal premises is small compared to the residential sector, together these sectors account for 64 percent of the total electricity consumption in the community (Figure 7) and 58 percent of the overall electricity costs (Figure 8).

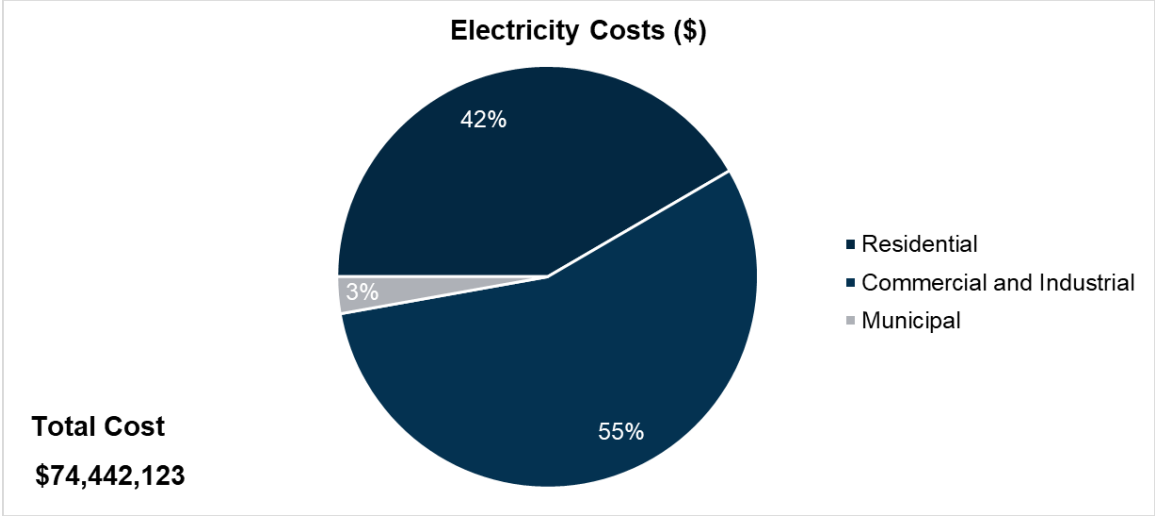


Figure 8. 2018 Electricity Costs by Sector

Figure 9 shows the cost per premise in 2018 for electricity. Although municipal facilities make up a small portion of the total energy costs, they have the highest annual cost per premise, presenting opportunities for savings in this sector.

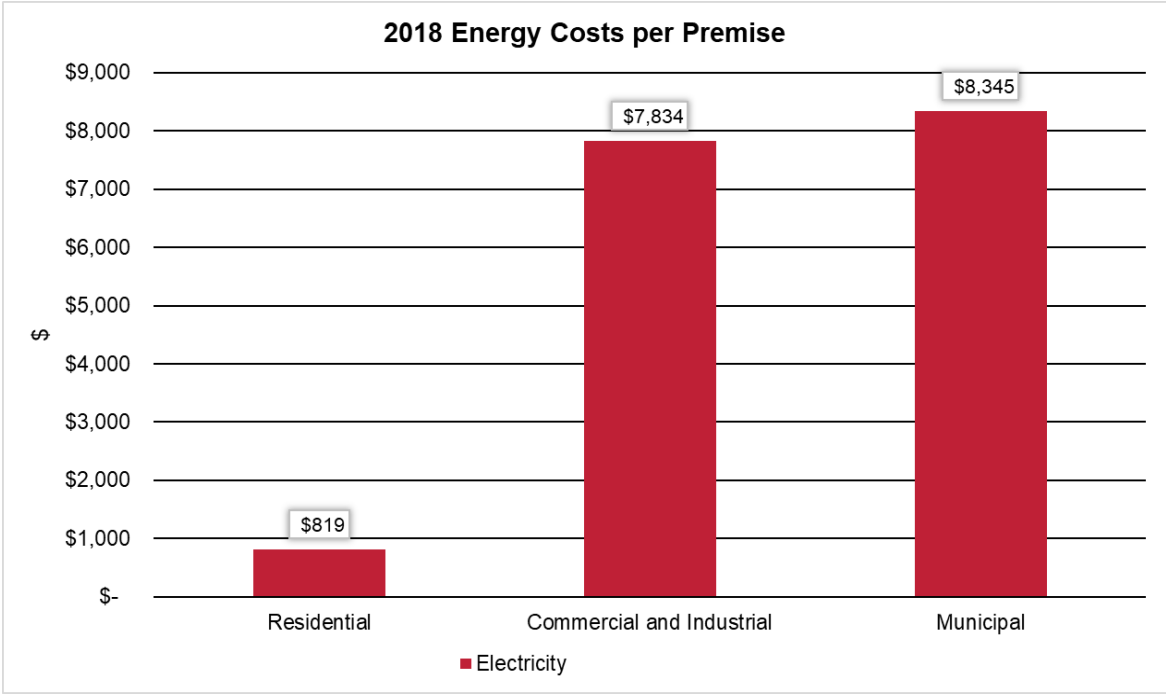


Figure 9. 2018 Electricity Costs per Premise

In total, approximately 790 million kilowatt hours (kWh) of electricity were consumed by residents and businesses in the City of Greeley in 2018. The commercial and industrial sector consumed most of the electricity in the community, accounting for nearly 478 million kWh (61 percent), while the residential sector consumed 287 million kWh (36 percent), and the municipal sector (encompassing all City of Greeley

municipal premises) consumed 25 million kWh (3 percent) (Figure 10). Electricity use in Greeley in each of the three sectors has increased slightly over the last three years from 2016 to 2018 (Figure 10).

The municipal sector saw an increase in electricity consumption of about 12 percent across the 274 premises that are included in this analysis from 2016-2018 (Figure 10). During the same time frame, a 3 percent increase in residential sector electricity consumption was compounded by a 1 percent increase in the commercial and industrial sector (Figure 10). Overall, electricity consumption increased 2 percent across the community between 2016 and 2018 while the while the number of premises in Greeley went up by 1.3 percent. This means that the average energy use per premise has increased.

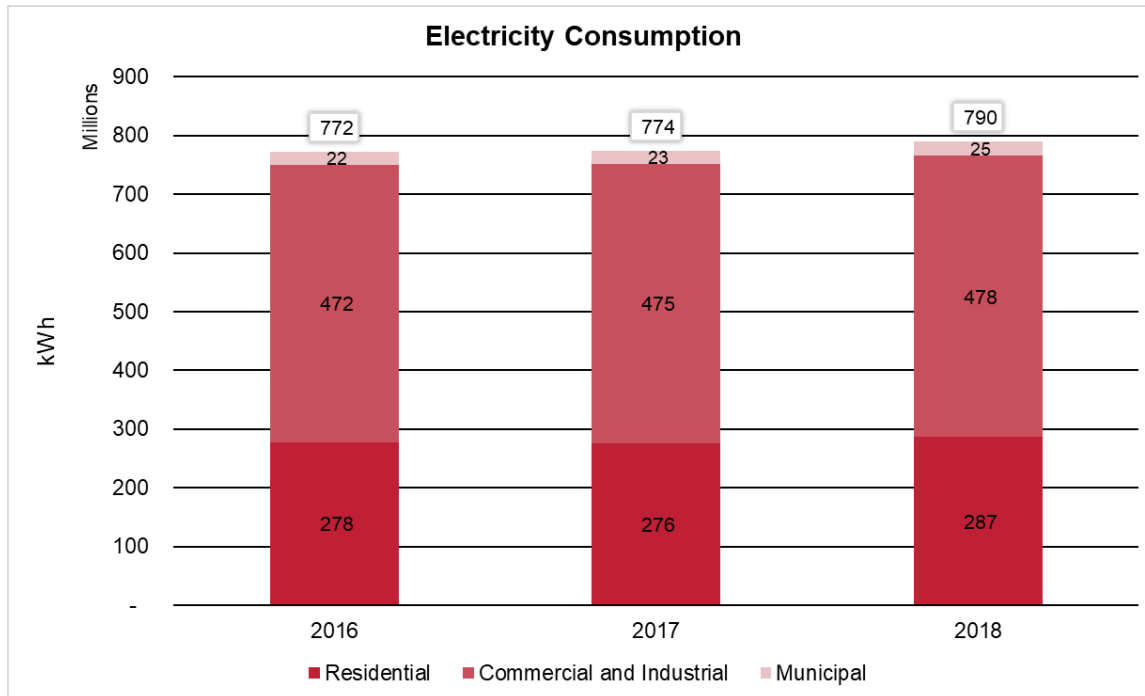


Figure 10. Three Year Trend in Electricity Consumption by Sector

### Efficiency Program Participation

Part of the community energy profile includes Xcel Energy's historic demand-side-management (DSM) and renewable energy program participation and associated energy savings for the residents and businesses of Greeley. These data provide a snapshot of what types of programs customers are using and to what extent. The data also show opportunities for greater participation in the available programs and the need for increased education and awareness.

In 2018, about 5 percent of eligible residents participated in Xcel Energy DSM and renewable energy programs, saving over 429 thousand kWh. This equates to an average annual electricity cost savings of \$21 per participant, in addition to rebates and other financial incentives associated with program participation. Figure 11 shows the average residential program participation rate from 2016 through 2018.

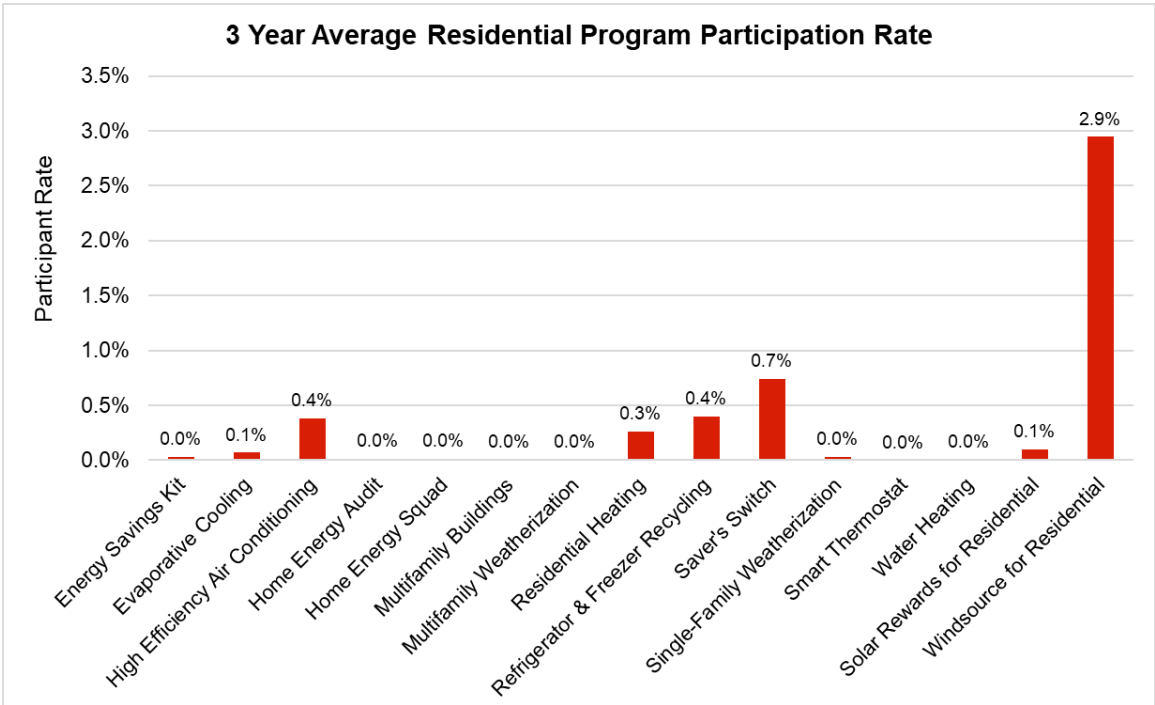


Figure 11. Three Year Average Residential Program Participation

In 2018, about 4 percent of businesses (including City facilities) participated in Xcel Energy programs, saving over 9 million kWh. This equates to an average annual energy cost savings of over \$4,000 per participant, in addition to rebates and other financial incentives associated with program participation. Figure 12 shows the average business program participation rate from 2016 through 2018.

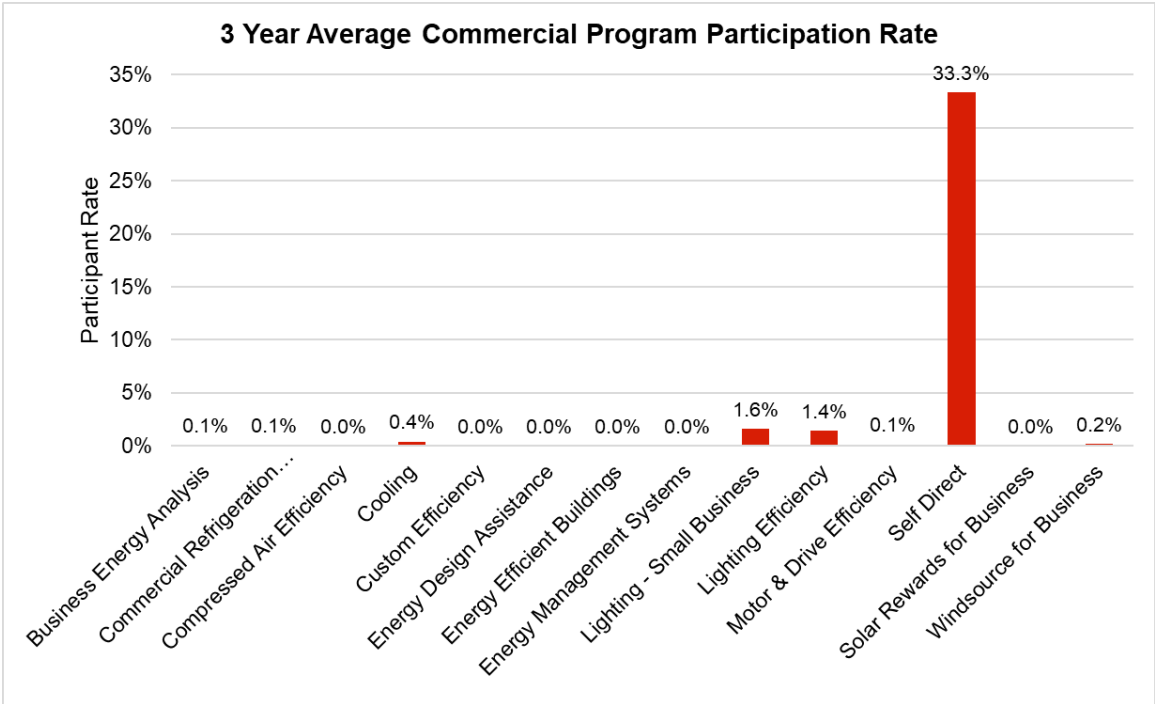


Figure 12. Three Year Average Commercial Program Participation



## Existing Energy Practices

Table 1. Community Energy Initiatives

City of Greeley
<ul style="list-style-type: none"> <li>• Solar arrays have been installed at four City facilities including Bellevue Water Treatment Plant, Boyd Lake Water Treatment Plant, the Greeley Water Pollution Control Facility, and the Family FunPlex.</li> <li>• LED Lighting has been installed in City buildings and outdoor streetlights.</li> <li>• New construction incorporates energy conservation practices. The City currently uses the 2009 International Energy Conservation Code and aims to adopt the 2018 update.</li> </ul>
University of Northern Colorado
<ul style="list-style-type: none"> <li>• 10kW solar PV system is installed on McKee Hall.</li> <li>• Parsons Hall (Facilities Building) is getting a new 170Kw solar array that will be installed summer 2019.</li> <li>• During the summer of 2019 lighting in residents' halls common areas and exterior fixtures are being converted to LEDs.</li> <li>• T-8 florescent fixtures have been converted to LED fixtures in 17 buildings.</li> <li>• Controls upgrades and scheduling upgrades have been implemented for HVAC equipment.</li> <li>• HID lighting in Butler Hancock gym has been upgrading to LED with new lighting controls and motion detectors.</li> <li>• Parking lot lights have been upgraded to LED in most lots.</li> <li>• Large destratification fans have been added to Butler Hancock gym and Rec Center gyms and workout areas to reduce energy consumption of the HVAC systems.</li> <li>• Induction lighting was installed on Central Campus walkways.</li> <li>• Variable frequency drives are used to control most pump and fan motors on campus.</li> <li>• New construction is designed to achieve LEED gold rating.</li> </ul>

## Local Outreach and Communication Channels

Engaging the community is critical to reaching the Energy Action Plan goals. Below are some of the ways that residents and businesses currently receive information. These communication channels will be helpful during implementation efforts.

Xcel Energy, the City of Greeley, and local educational institutions will work together where appropriate to coordinate on relevant events that are hosted by each organization to support the goals of the Energy Action Plan.

Table 2. Local Outreach

<b>Local Outreach Channels</b>	
<b>Digital Communications</b>	
<ul style="list-style-type: none"> <li>• City of Greeley <a href="#">Facebook</a></li> <li>• <a href="#">@greeleygov</a> Twitter</li> <li>• <a href="#">@cityofgreeley</a> Instagram</li> <li>• Targeted emails from Xcel Energy</li> <li>• Nextdoor</li> <li>• Press Releases</li> <li>• City of Greeley Events Calendar webpage</li> </ul>	<ul style="list-style-type: none"> <li>• City of Greeley News Updates webpage</li> <li>• City of Greeley eNewsletter</li> <li>• Greeley Area Chamber of Commerce newsletter</li> <li>• City of Greeley Utility Bills (City Connect)</li> </ul>
<b>Events</b>	
<ul style="list-style-type: none"> <li>• Friday Fest</li> <li>• Greeley Stampede</li> <li>• Greeley Blues Jam</li> <li>• Weld County Fair</li> <li>• Colorado Farm Show</li> <li>• Greeley Farmers Market</li> </ul>	<ul style="list-style-type: none"> <li>• Greeley Business Energy Expo</li> <li>• Potato Day</li> <li>• Greeley Lights the Night Parade</li> <li>• Greeley Arts Picnic</li> <li>• Weld Project Connect</li> <li>• UNC Move-in Day</li> </ul>
<b>Community Spaces for Collateral Distribution</b>	
<ul style="list-style-type: none"> <li>• Union Colony Civic Center</li> <li>• Island Grove Park facilities</li> <li>• Libraries</li> <li>• Greeley Family FunPlex</li> </ul>	<ul style="list-style-type: none"> <li>• City of Greeley Park Shelters</li> <li>• Retirement Communities</li> <li>• University of Northern Colorado facilities</li> <li>• Greeley Recreation Center</li> </ul>

## Where Do We Want to Go?

### Our Energy Vision

During the first planning workshop, team members worked together to craft an energy vision statement that expresses the Greeley's energy intentions and values:

***Greeley promotes a healthy and diverse economy and a high quality of life that is responsive to all its residents, businesses, and neighborhoods. Through Xcel Energy Partners in Energy, the community will create an affordable and reliable energy future based on increased residential, commercial, and industrial energy efficiency and alternative energy opportunities to improve economic health and stimulate growth.***

### Focus Areas and Goals

Greeley will work to achieve its energy vision by establishing ambitious but achievable goals and implementing strategies across the four focus areas: residential, business, educational, and municipal.

#### Focus Area 1: Residential

The residential sector in Greeley accounts for 87 percent of Xcel Energy premises, and 36 percent of electricity consumption, as discussed in the Baseline Energy Analysis section of this document. This customer group represents a significant opportunity to reduce energy consumption and save money in Greeley by impacting how residents view and consume energy. The aging housing stock in Greeley also represents a significant opportunity, as many homes are likely able to realize savings through efficiency upgrades.

#### Historical Program Participation

Figure 13 shows participation in each of Xcel Energy's residential efficiency and renewable programs over the last three years. In 2018, there were 1,827 participants, representing 5 percent of the residential premises in Greeley. The planning team used this information to inform the residential focus area goals, primarily focusing on increasing participation rates and overall community energy savings.

Note that programs like Home Energy Squad® present tremendous opportunities for Greeley residents to foray into energy efficiency improvements. For just \$50, the Home Energy Squad will visit homes and make it more efficient for residents. Program offerings include swapping out traditional bulbs for LEDs, installing a programmable thermostat, weather-stripping a drafty door, and installing energy-efficient showerheads and faucet aerators. Installation, labor, and materials are valued at \$200. Spanish-speaking technicians are available.

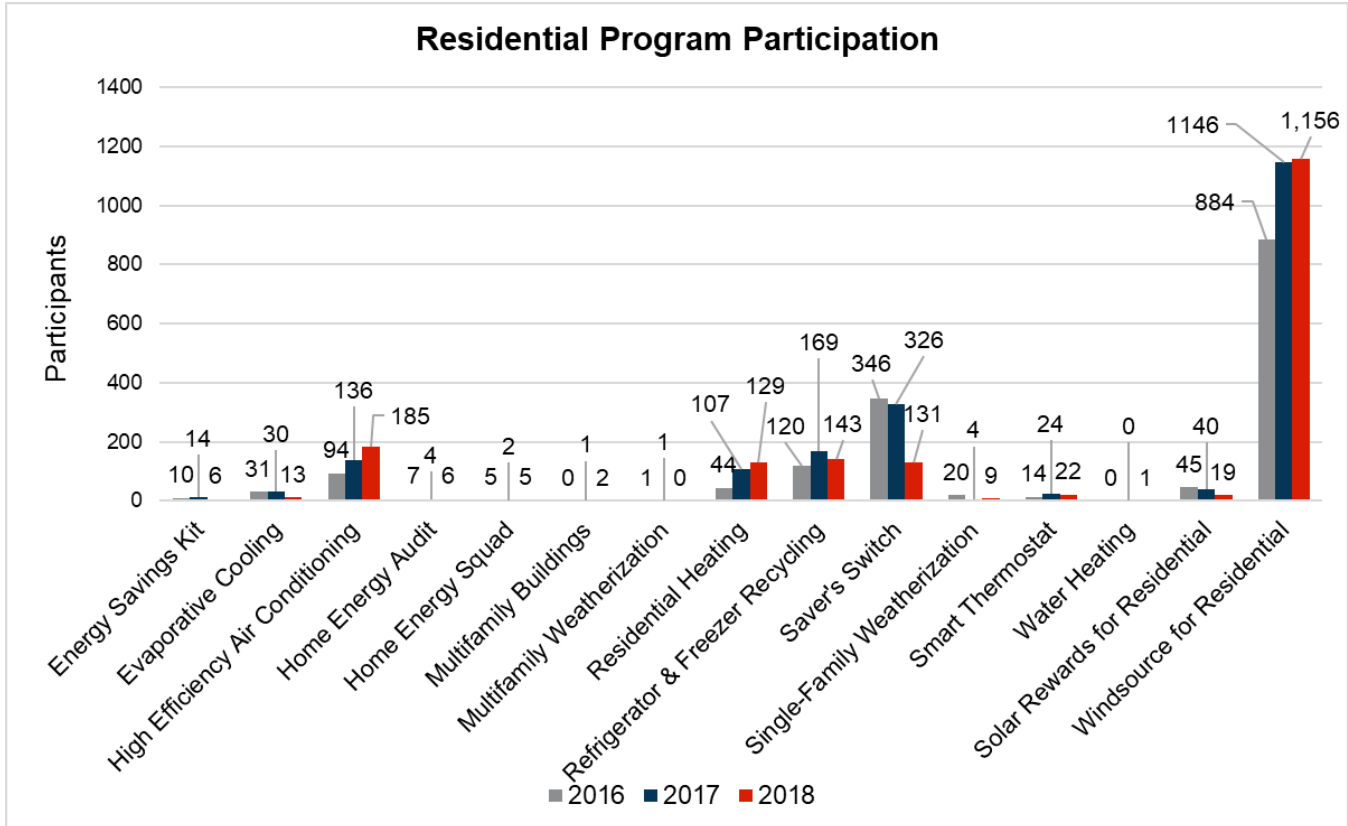


Figure 13. Three Year Residential Program Participation

Goal

Greeley’s residential goal is for 2,700 households to implement one energy efficiency or renewable energy measure annually. This equates to approximately 7.5 percent of residential premises or Greeley households participating in a residential DSM or renewable energy program through Xcel Energy. Achieving this goal would increase the residential 3-year average program participation (1,817 from 2016 to 2018) by 50 percent.

Impact

Achieving these goals would result in approximately 598,000 kWh in electricity savings annually. This translates to approximately \$81,000 in energy cost savings and 430 metric tons of carbon dioxide equivalent (MTCO2e) in greenhouse gas emissions reductions in the first year.

**Focus Area 2: Business**

As identified in the Baseline Energy Analysis section of this document, business facilities in Xcel Energy’s service territory represent only 13 percent of total Xcel Energy premises, but 64 percent of total electricity consumption in Greeley. There are about 5,000 Xcel Energy business premises in Greeley and relatively low participation in energy efficiency and renewable energy programs, representing a sizeable opportunity to achieve energy and cost savings. While this focus area presents challenges since businesses are busy and it can be difficult to connect with decision makers on energy matters, a simple and impactful targeted approach will allow this sector to benefit from and contribute to overall community energy efforts. This focus area includes strategies targeting large businesses and small and medium businesses. Outreach

messaging will focus on cost savings through energy efficiency improvements as well as the co-benefits of efficiency upgrades such as improved comfort and reliability.

Historical Program Participation

Over the past 3 years an average of 202 commercial and industrial facilities in Greeley participated in Xcel Energy programs, representing about 4 percent of all businesses. This resulted in a 2 percent reduction in electricity use across the business community. Most participation is in the Small Business Lighting and Lighting Efficiency programs (Figure 14), and the relatively low levels of participation compared to the number of business present continued opportunities for further engagement. The 3-year average participation rates were used to inform the commercial and industrial focus area goals.

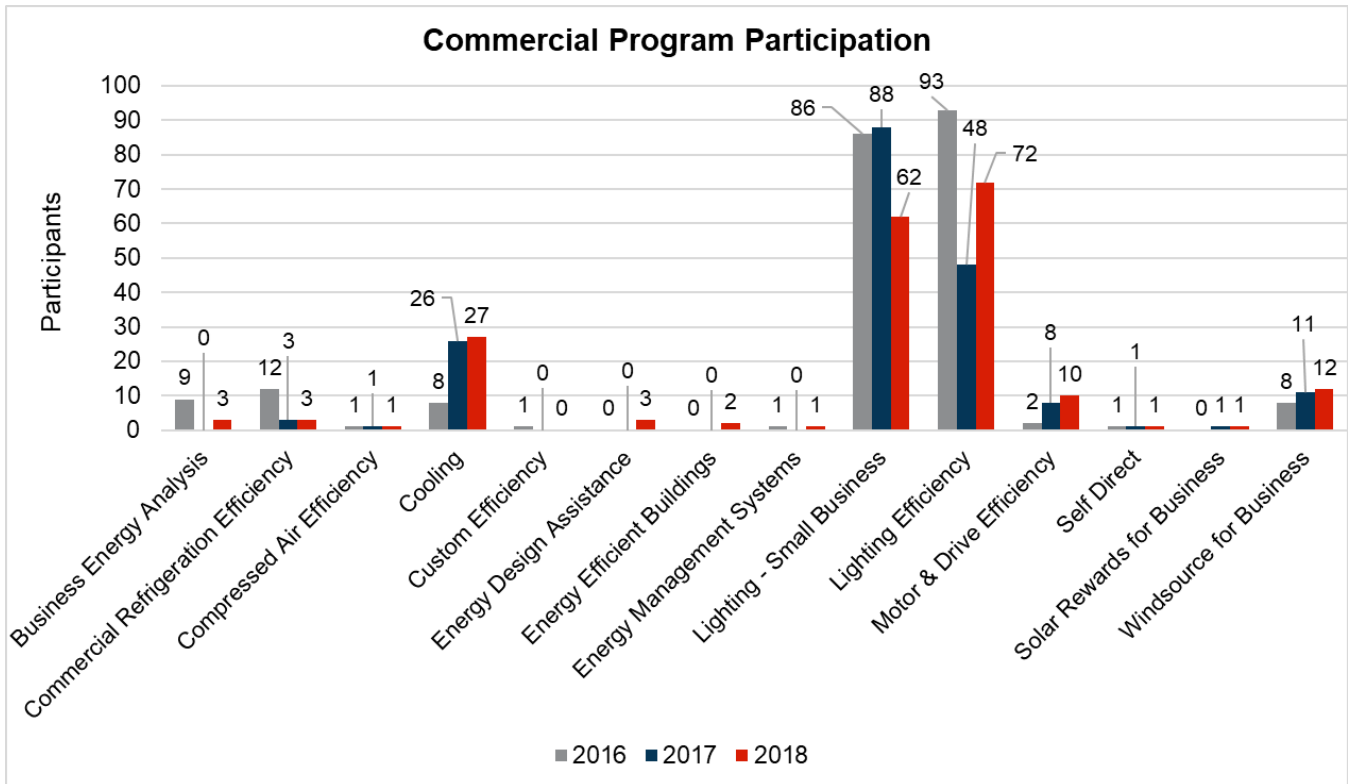


Figure 14. Three Year Commercial Program Participation

Goal

The City’s goal for business energy efficiency is to encourage 270 businesses to participate in an energy efficiency or renewable energy program through Xcel Energy each year. This is a 35% increase over the 3-year average participation rate of about 200 businesses.

Impact

Achieving these goals would result in approximately 8.4 million kWh in electricity savings each year. This translates to approximately \$700,000 in energy cost savings and 4,200 metric tons of carbon dioxide equivalent (MTCO2e) in greenhouse gas emissions reductions annually.



### Focus Area 3: Educational Institutions

The energy use and energy savings from the facilities at Greeley's educational institutions is captured in commercial data, but these institutions play an integral role in developing a culture of conscientious use of resources in the community. This focus area included K-12 education as well as higher education institutions.

#### Goals

Develop outreach channels to students to 1) encourage energy efficiency behaviors, 2) increase understanding of electricity generation sources in Greeley, 3) establish internships to promote workforce development for energy efficiency and renewable energy fields, and 4) encourage student engagement with their community.

#### Impact

Quantifiable impact on energy use, cost savings, and greenhouse gas emissions will be captured in the data for residential and commercial efforts but working to develop a culture of resource conservation is invaluable in the long-term success of energy efficiency and renewable energy efforts.

### Focus Area 4: Municipal

The City of Greeley already conserves energy by upgrading lighting to LED wherever feasible and incorporating energy efficiency into the design of new facilities. Although municipal facilities represent about 3 percent of energy use in Greeley (Figure 7), there is an opportunity to lead by example within City facilities to showcase a commitment to energy conservation and innovative technologies. Further, energy savings in these facilities has an impact on all Greeley community members by saving and making efficient use of taxpayer dollars.

#### Historical Program Participation

Community facilities program participation is included in commercial participation, which is shown in Figure 12. There are 274 total premises in the municipal category, including major and minor City of Greeley facilities such as the City Center, Island Grove, Greeley Urban Renewal Authority, water distribution, police, fire department, parks, and recreation.

Informing staff about energy use in buildings, providing small reminder cues like light switch stickers, and sharing potential energy savings with facility employees can help encourage participation in programs and foster a culture of energy conservation for those who may have busy schedules or who feel their actions will not have any impact.

#### Municipal Goals

The City's goal for municipal energy efficiency is to complete energy audits in targeted municipal facilities, and implement one energy measure in each targeted facility, as recommended by the energy audits.

#### Impact

Hitting these goals would reduce Greeley's electricity consumption by 21,000 kWh in the first year, translating to approximately \$1,500 energy cost savings and 12 MTCO<sub>2</sub>e in greenhouse gas emissions reductions.

## How Are We Going to Get There?

Strategies are specific actions Greeley will take to achieve its vision and goals. The Energy Action Team explored strategy concepts during its second and third workshops. To develop strategies, the team started by identifying one or two desired energy behaviors to encourage. Then they explored the benefits and reasons to participate in this behavior, as well as the top reasons and challenges preventing the behavior. Next, they brainstormed ways to address the identified challenges, examined what other opportunities and resources could be leveraged to communicate with target participants, and discussed other timing and resource considerations. With the ideas from the team discussions, the Partners in Energy facilitators drafted preliminary strategies for detailed review and refinement at the fourth workshop. Following the last workshop, the Partners in Energy facilitators worked with the Energy Action Team members individually to refine the strategies to address their comments and concerns.

*Note that the strategies in this Energy Action Plan will include implementation support from the Partners in Energy facilitation team for a period of 18 months following the Energy Action Plan adoption. A Memorandum of Understanding (MOU) between the City of Greeley and Xcel Energy will detail the specific commitments of each entity and the implementation support provided.*

### Residential Strategies

For the residential sector, the desired behaviors identified included making smart energy choices and improvements at home (i.e., turning off the lights when not in use, upgrading to LED lights, and investing in high efficiency equipment when making upgrades). Benefits of engaging in these behaviors include lower energy costs, increased home comfort, and often longer lasting equipment. Reasons why residents may not engage in energy efficient behaviors or improvements include lack of time, lack of information or expertise, lack of financial resources to invest in home improvements, and for some rental or multi-family households, lack of control of their equipment.

To address these challenges, the Energy Action Team identified the importance of making things simple to participate and providing no and low-cost resources and technical expertise. Xcel Energy resources to leverage to address these challenges include the Home Energy Squad program, an assortment of residential equipment rebates, and free giveaways like conservation kits and LED bulbs. Other resources and opportunities to leverage include engaging school-aged students and aligning energy efficiency with other utility programs and conservation efforts (e.g., the Mayor's Water Challenge).

The residential strategies developed to leverage these resources and maximize community participation and benefits include (1) general outreach at community events/activities and (2) targeted residential outreach campaigns. The details for these strategies are outlined on the following pages.

## Strategy 1: Community Events & Activities

### Description

This strategy is designed to leverage existing community events and/or school activities to provide information about energy efficiency and renewable energy resources that are available to community members. The Energy Action Team will share information, provide collateral and giveaways, answer questions, and encourage participants to learn more about energy opportunities.

### Targets

- Conduct outreach at up to four community events or activities annually
- Connect with at least 50 residents and engage 20 percent (10) in Xcel Energy programs with each event

### Scope

The strategy begins with identifying community events or activities that are good candidates for energy outreach. Next, the team will recruit and confirm staffing for each event and develop materials to support event delivery. During events, the team will need to track metrics and interact with community members. Following events, the team will report metrics and share feedback to improve future events.

### Responsible Parties

#### Leadership Roles:

- City of Greeley
  - Lead event/activity selection.
  - Identify City of Greeley staff to support each event.
  - Support material development and finalization.
  - Support event/activity planning and delivery.
- Partners in Energy
  - Support event/activity planning and delivery.
  - Lead material development and finalization.
  - Lead event volunteer training.
- Xcel Energy
  - Support material development and finalization.
  - Support event planning and delivery.

#### Potential Supporting Partners:

- Weld County Extension, University of Northern Colorado, Greeley School District, Aims Community College, Atmos Energy, Poudre Valley REA
  - Identify events that might be suitable to support outreach
  - Support event/activity planning and delivery
- Home Energy Squad®
  - Attend select events to share information about the offering and sign residents up for visits

### Timeline

- Q4 2019 – Q2 2020
  - Identify potential events/activities for 2020
  - Confirm staffing and begin material development

### Strategy 1: Community Events & Activities

- Q3-Q4 2020
  - Deliver event(s)
  - Identify events/activities for Q1-Q2 2021
- Q1-Q2 2021
  - Deliver event(s)
  - Discuss approach/need for ongoing event/activity delivery after Partners in Energy implementation support is complete

#### Resources

- Event/activity materials (e.g., flyers, tabling supplies, speaking points, giveaway prizes, etc.)
- Students and/or interns might be a potential option for event/activity staffing

#### Outreach Channels

- See Table 2. Local Outreach

#### Measurement

- Number of contacts made
- Number of materials distributed
- Enrollment for programs at/following events/activities

### Strategy 2: Targeted Residential Campaigns

#### Description

This strategy involves developing three tailored outreach campaigns to reach different sectors of Greeley's residential community, including (1) cost-burdened homes including Spanish-speaking households, (2) students and rental households, and (3) households looking to fix up their homes and/or "green" their energy choices through renewable energy options.

The outreach campaigns will highlight how the sector can engage in different energy programs and benefit from various energy efficiency and renewable energy activities. To the extent possible, the campaigns will be aligned with other utility rebates and the Mayor's Water Challenge messaging and activities to maximize opportunities for residential conservation and renewable energy participation.

#### Targets

- Reach at least 2,500 cost burdened households and engage 125 (5 percent) in Xcel Energy programs. Targeted programs for this residential sector might include Home Energy Squad®, Energy Saving kits, and weatherization. Outreach materials will be provided in English and Spanish to include Spanish-speaking households.
- Reach at least 7,500 rental and/or student households and engage 375 (5 percent) in Xcel energy programs. Targeted programs for this residential sector might include Home Energy Squad®, Saver's Switch, and multi-family building efficiency improvements.
- Reach all of Greeley's 35,000 households and engage 2,160 (~6 percent) in Xcel Energy programs. Targeted programs for this residential sector might include Home Energy Squad® Plus, refrigerator and freezer recycling, high efficiency heating and cooling, and AC Rewards Windsorce® and Solar Rewards.

## Strategy 2: Targeted Residential Campaigns

### Scope

Each outreach campaign would include customized community collateral that tailors messaging to the unique energy challenges of the sector, identifies the Xcel Energy programs that are most applicable/relevant to the sector, and highlights the benefits of taking action. Collateral to be developed includes flyers, website text, newsletter content, and social media content.

The Energy Action Team members will work with local organizations and trusted messengers to help disseminate materials and help spread the messages of the different outreach campaigns.

### Responsible Parties

#### Leadership Roles:

- City of Greeley
  - Lead outreach campaign delivery through municipal communications channels (website, newsletters, social media, etc.)
  - Help support collateral development and finalization
- Partners in Energy
  - Lead collateral development and finalization
  - Support outreach campaign planning and delivery
- Xcel Energy, Atmos Energy and Poudre Valley REA
  - Support collateral development and finalization
  - Support outreach campaign planning and delivery

**Potential Supporting Partners** (support content development and help conduct outreach campaign through existing communication channels and activities):

- Student & Rental Outreach
  - Higher Education Institutions (e.g., Aims, UNC)
  - Greeley-Evans School District 6
  - Weld County Extension
- Cost-Burdened & Spanish Outreach
  - East Memorial community planning efforts
  - Energy Outreach Colorado
  - Catholic Charities – Weld County
  - Weld County Extension
  - Major employers (e.g., Swift, Leprino, etc.)
- Home Improvement & Green Energy Outreach
  - City of Greeley Code Compliance and Building Department
  - Contractors
  - Homeowners Associations
  - Greeley-Evans School District 6
  - Weld County Extension
  - Mayor's Water Challenge
  - Other local green or sustainability groups (e.g., Sierra Club, Northern Colorado Renewable Energy Society)

## Strategy 2: Targeted Residential Campaigns

### Timeline

- Q4 2019:
  - Identify and confirm partners for outreach campaigns
  - Finalize schedule for delivery of each targeted campaign
  - Begin material and campaign development
- Q1-Q2 2020:
  - Finalize materials and campaign details for campaign #1
  - Begin campaign #1
  - Plan campaign #2 and begin material development
- Q3-Q4 2020
  - Finalize materials and campaign details for campaign #2
  - Begin campaign #2
  - Plan campaign #3 and begin material development
- Q1-Q2 2021
  - Finalize materials and campaign details for campaign #3
  - Begin campaign #3
  - Discuss approach/need for ongoing campaign development and delivery after Partners in Energy implementation support is complete

### Resources

- Event/activity materials (e.g., flyers, giveaway prizes, etc.)
- Students and/or interns might be a potential option for outreach support

### Outreach Channels

- See Table 2. Local Outreach

### Measurement

- Number of contacts made for each targeted sector
- Number of Conservation Kits distributed
- Program participation in targeted programs

## Business Strategies

For the business sector, the desired behaviors identified included ensuring all equipment upgrades are energy efficient and companies invest in energy efficiency upgrades that make good business sense. Benefits of engaging in these behaviors include lower energy costs as well as increased reliability and productivity. Energy Action Team members identified a few reasons businesses may not make energy efficiency a focus of their business plan, which include lack of time to understand the benefits of efficiency upgrades and difficulty navigating the rebate process.

The main strategy to overcoming barriers to participation is to better connect the business community to the support staff available at their utility providers, which at Xcel Energy includes the account manager for larger accounts and the business solutions center representatives for smaller businesses. The City will also coordinate events to allow businesses to learn about the benefits of energy efficiency upgrades from each other. During these events, businesses can share energy efficiency upgrades they have done and highlight not only the cost benefits of these projects, but also any co-benefits from the project such as improved customer experience, reduced maintenance costs, or increased productivity.

### Strategy 3: Annual Greeley Business Expo

#### Description

This strategy involves hosting a local event to highlight energy efficiency efforts of Greeley businesses and allow them to learn from each other. The event would be held at a local business that has a commitment to energy efficiency and could include a building tour to spotlight the hosts efficiency projects. There would also be one highlighted organization for that year that would give a short presentation about their project, lessons learned, co-benefits from project (e.g., increased production), and any next steps. Other organizations would be invited to have posters of their projects with some basic information: short project description, energy savings, incentives, co-benefits, and lessons learned (science fair style). While this event would focus on businesses in Greeley, there would be an open invitation to businesses in neighboring communities.

Local contractors specializing in HVAC, envelope upgrades, solar installations, and other energy efficiency or renewable energy work would also be invited. This will allow local contractors to understand what utility rebate programs are available that may support their businesses and help contractor connect to businesses looking to complete projects.

During the event there will be the large account manager(s) from Xcel Energy to engage with their accounts as well as representatives from the business solutions center to support unmanaged accounts. This event will be used to kick-off the year of outreach to a specific small business sector as described in Strategy 4. During the event, attendees would be asked to make a pledge to do something energy efficiency-related in the coming year.

#### Targets

- Engage 50 new businesses in efficiency programs including business energy analysis, commercial refrigeration efficiency, compressed air efficiency, cooling efficiency, lighting efficiency, recommissioning, custom efficiency, Solar Rewards®, and Windsource®.
  - Target 20 projects stemming from pledges at the event



- The remaining 30 projects will develop throughout the year as a result of conversations between peers and with contractors following this event.

### Scope

- Determine event date, time and venue.
- Coordinate invitations through outreach channels identified.
- Plan event activities, which may include:
  - Facility tour
  - Project highlight – 10-15-minute presentation
  - Networking and posters for other projects
  - Sign a pledge for coming year. Pledges will be displayed on the wall and have a thermostat showing the number of pledges – set a goal based on RSVP list.
    - Incentivize employees to do something at home (e.g. reimburse 5 percent of employees to do HomeEnergy Squad visit, provide LED bulbs to all employees)
    - Compressed air study
    - Small business lighting/energy audit (free)
    - Other: opportunity for custom project pledge
  - In the second year, recognize companies that fulfilled their pledge.
  - Appropriate Xcel Energy account representatives
    - Use the reps to extend invitations to large users
  - Table with all utility Xcel Energy rebates and small business center representatives
    - Choose a sector to highlight options and target event outreach (e.g., restaurants, offices)
  - Representatives from Poudre Valley REA and Atmos Energy with program and rebate information.
- Hold the event.
- Solicit feedback to inform future event planning.

### Responsible Parties

#### Leadership Roles:

- City of Greeley
  - Community Engagement: Lead outreach campaign delivery through municipal communications channels (website, newsletters, social media, etc.).
  - Facilities: Provide an example project poster based on recent efforts.
  - Economic Development and Business Licensing: Support outreach efforts.
- Partners in Energy
  - Organize event logistics.
  - Support event delivery.
- Xcel Energy, Atmos Energy and Poudre Valley REA
  - Provide outreach support for invitations
  - Representatives at the event to help customers with available opportunities

**Potential Site Hosts:**

- University of Northern Colorado
- City of Greeley
- WeldWerks Brewery
- Leprino (not a Partners in Energy stakeholder but strong commitment to sustainability that other Energy Action Team members referenced)

**Timeline**

This event will be used to kick-off implementation phase.

- January/February 2020
  - Choose event time/date/location
  - Identify outreach strategies
  - Send out invitations
  - Identify business to present featured efficiency project
  - Invite other businesses to create posters for their projects
    - Provide poster template
    - Request required data/info for poster development
- March/April 2020
  - Send out event reminders
  - Create and print posters
  - Coordinate event logistics (food, chairs etc.) as needed
  - Hold event
- Summer 2020
  - Review event
    - What went well
    - What should change next year
  - Outline schedule for next year's event based on review including potential of ongoing support from City staff, Xcel Energy, Chamber, and other local business organizations.

**Resources**

- Need to explore venue options that will work for a group and accommodate a possible facilities tour.
- Plan for tables, refreshments, collateral materials.
- Explore potential door prizes or giveaways from utility providers.

**Outreach Channels**

- Xcel Energy: Large account managers
- Chamber
- DDA
- City Twitter
- City Facebook
- Business license counter
- Economic development department

**Measurement**

- Number of attendees

- Number of pledges for action
- Energy and cost savings from projects showcased

## Strategy 4: Sector-based Small Business Outreach

### Description

Partner with the Downtown Development Authority and Chamber of Commerce to incorporate presentations on benefits of energy efficiency and renewable energy projects at your business highlighting available rebates and other funding opportunities. The target will be to provide 3-4 presentations in 2020 each focusing on a different business sector: 1) restaurants, 2) small offices, 3) retail, and 4) eco-friendly companies. The target audiences may be adjusted based on interest from the business community.

### Targets

- Engage 20 small or medium-sized businesses in programs relevant to presentations (likely energy audits, small business lighting, lighting efficiency, motor and drive efficiency, Windsource®, and cooling efficiency).

### Scope

- Identify existing or potential new DDA and/or Chamber activities or events that would be suitable for presentations.
- Develop presentation content and supporting collateral materials.
- Deliver presentations and follow-up with participating businesses and others in target sector.

### Responsible Parties

- Partners in Energy
  - Develop presentation content and lead or support presentations.
- Xcel Energy, Atmos Energy and Poudre Valley REA
  - Provide information on applicable programs and channels for business support.
  - Support presentation delivery.
- Chamber and DDA
  - Provide meeting space and room on agenda for standing meetings.
  - Outreach to business community to attend presentations.

### Timeline

Present schedule of presentations at the Greeley Business Expo in Spring 2020 and target one presentation per quarter.

- Q1 2020: Restaurant Energy Efficiency
  - Low/no cost operational adjustments
  - Prioritizing equipment upgrades
  - How can energy efficiency improve customer and employee experience?
- Q2 2020: Small Office Energy Efficiency
  - Low and no cost operational adjustments
  - Best investments
  - Employee engagement
  - How does energy efficiency affect productivity?
- Q3 2020: Retail Energy Efficiency
  - Low/no cost operational adjustments
  - Best investments

- How to use energy efficiency to improve customer experience and boost sales.
- Q4 2020: Eco-Friendly Businesses
  - Renewable energy options
  - EV charging infrastructure
  - How to highlight your commitments to grow your brand.

At the end of the year, evaluate the effectiveness of the presentations and feedback from the community. If good success and strong support for continuing the series, plan next year's presentations and work on lining up presenters.

### **Resources**

- Meeting space
- Rebate and other program materials
- Refreshments for meetings

### **Outreach Channels**

- Chamber
- DDA
- City Twitter
- City Facebook

### **Measurement**

- Number of businesses contacted
- Number of workshop participants

## Educational Institution Strategies

The educational institution focus area includes not only energy efficiency upgrades to the institution's facilities, but also engaging students to promote energy efficiency and renewable energy. Benefits of energy efficiency upgrades in facilities include utility cost savings and often an improved learning environment for students. Educational institutions are often long-term building occupants, so energy efficiency upgrades are often a longer-term benefit that reduce ongoing operating costs. The resulting utility cost savings can often be used to reinvest in student learning opportunities or other building upgrades. Major barrier for implementation of energy efficiency measures can be upfront capital and staff time required to identify efficiency upgrades. By taking advantage of energy audit programs provided by Xcel Energy, staff time to identify and vet possible projects is significantly reduced and financial assistance in the form of rebates is also available.

### Strategy 5: Student Engagement

#### Description

The educational institutions will outreach to students to build a culture of resource conservation in Greeley. This outreach might include information and kits to increase energy efficiency in their homes, involving campus groups in outreach events identified in this plan, and/or internship opportunities with energy efficiency or renewable energy partners.

#### Targets

- Engage 5,000 students in Energy Action Plan activities.

#### Scope

- Outreach to students at move-in day and/or orientation to provide information of activities they can do to support energy efficiency and renewable energy in Greeley.
- Provide information about low-income programs to students through orientation or financial assistance offices.
- Work with institutions to identify opportunities for Green Teams or other campus groups to support Energy Action Plan implementation, including supporting residential outreach as appropriate.
- **University of Northern Colorado:** Provide campus tours of mechanical areas to educate students on complexities of HVAC and plumbing systems, where energy is used, and what measures have been implemented to improve energy efficiency. Possible partnership with Greeley School District.

#### Responsible Parties

- Xcel Energy Partners in Energy
  - Coordinate student orientation outreach and provide materials.
  - Coordinate campus teams and provide training on supporting plan initiatives.
- Educational Institutions (UNC, AIMS, Greeley-Evans School District 6)
  - Provide outreach materials to students during orientation.
  - Identify on campus teams that may want to help with plan implementation.

#### Timeline

- Spring Semester 2020: Engage Student Groups
  - Identify student groups interested in supporting plan activities.

### Strategy 5: Student Engagement

- Engage groups in expo planning.
- Student outreach during spring events as applicable.
- Fall Semester 2020: Student Outreach
  - Through strategy 1 outreach to new students about energy efficiency and renewable energy options in their new rental homes.
  - Engage on-campus teams to encourage participation.

At the end of the year, evaluate the effectiveness of student engagement programs and revise the programs as needed for implementation next year.

#### Resources

- A Campus liaison for each participating institution will help ensure success.

#### Outreach Channels

- University of Northern Colorado
- Greeley School District
- AIMS Community College

#### Measurement

- Number of students engaged

### Strategy 6: Targeted Energy Audits

#### Description

Leverage Xcel Energy's audit program to schedule and complete audits in the largest and most energy intensive buildings on the institution's campus. Coordinate with facilities staff to develop a priority list of improvements per the audit reports. Once prioritized, staff will have the option to choose one energy efficiency project to complete each year and to keep a record of resulting savings to build success stories to share within and outside the community. Consider using local contractors to perform energy efficiency improvements to maximize local economic benefits and workforce growth. For facilities under 50,000 square feet, Xcel Energy offers free energy audits to identify opportunities for energy savings.

#### Targets

- Each institution will perform 1 energy audit at a targeted facility.
- Implement at least 1 identified energy efficiency measure in every targeted facility.

#### Scope

- Identify targeted facilities.
- Schedule energy audits.
- Prioritize energy project list based on results.
- Identify funding for one priority project.
- Establish a timeline for completion.



## Strategy 6: Targeted Energy Audits

### Responsible Parties

- Educational Institutions (UNC, AIMS, Greeley-Evans School District 6)
  - Identify targeted facilities for audits and make final determination of energy projects to implement.
- Xcel Energy Partners in Energy
  - Support identification of targeted facilities list and support energy audit review for prioritization of opportunity and costs.

### Timeline

- Coordination with Xcel Energy to begin in 2019
- Target 2020 for audits

### Resources

Xcel Energy offers on-site energy audits at varying costs dependent on building size to evaluate lighting, heating, cooling and motors & drives equipment and provides energy conservation opportunities and associated costs, rebates, savings and payback:

- Buildings <50,000 square feet: Free
- Buildings 50,000 – 150,000 square feet: \$250
- Buildings > 150,000 square feet: \$500

Funding to cover cost of audit and any capital improvements resulting from the audit is to be determined by each institution.

### University of Northern Colorado

The University has used a combination of funding sources including performance contracting and reinvesting energy rebates to fund past energy efficiency efforts. Energy efficiency audits and the identified projects will likely be funded by similar mechanisms.

### Outreach Channels

The University of Colorado has historically learned about energy efficiency opportunities through the following channels. These successful outreach channels will be used to share additional opportunities and outreach to other educational institution:

- Xcel Energy account representative
- ESCO's funding (performance contracting)

### Measurement

- Number of audits performed
- Number of efficiency projects completed – savings will be captured in commercial energy data.

## Municipal Strategies

For the municipal sector, the desired behaviors identified include ensuring equipment upgrades as well as designs for the construction of new facilities are efficient and increasing the focus of highlighting past successes in efficiency through various media outlets. Benefits of engaging in these behaviors include lower energy and operating costs, decreased cost of installation through incentives, and increased recognition of the City of Greeley as an energy-conscious community. Reasons why municipalities may not engage in energy efficient behaviors or improvements include a time-intensive utility incentive process and lack of information or expertise navigating the rebate programs.

To address these challenges, the Energy Action Team will involve key decision makers in conversations around energy efficiency and will seek opportunities to inform and use local contractors who are familiar with rebate processes and programs to facilitate energy efficiency implementation. Outlined below are strategies that the City of Greeley will focus on to improve energy efficiency in municipal buildings and facilities.

### Strategy 7: Targeted Energy Audits

#### Description

Leverage Xcel Energy's audit program to schedule and complete audits in the largest and most energy intensive municipal facilities. Xcel Energy will work with City staff to develop a priority list of improvements per the audit reports. Once prioritized, the City will aim to complete at least one efficiency project per facility. They will keep a record of resulting savings to build case studies and success stories to share within and outside the community – ideally these savings will be leveraged to complete other municipal energy improvement projects as well. The City will also consider using local contractors to perform energy efficiency improvements to maximize local economic benefits and workforce growth.

Additionally, Xcel Energy will partner with the City of Greeley through their Strategic Energy Management Program to coordinate project implementation through engagement with City staff to help Greeley overcome challenges associated with efficiency projects. This program offers rebate assistance to ensure that rebate opportunities are captured and benefits to the City are maximized. In addition, for facilities under 50,000 square feet, Xcel Energy offers free energy audits to identify opportunities for energy savings.

#### Targets

- Perform 1 energy audit for each targeted municipal property in Greeley.
- Implement at least 1 identified energy efficiency measure in every targeted facility.

#### Scope

- Identify targeted City of Greeley facilities.
- Schedule energy audits at targeted facilities.
- Prioritize energy project list based on results.
- Choose top projects to implement each year.
- Coordinate with local contractors to complete projects and take advantage of Xcel Energy program opportunities.

### Strategy 7: Targeted Energy Audits

- Coordinate with local educational institutions to engage student population in an opportunity to learn and gain experience in performing audits by including interested students on audit walkthroughs, calculations, etc.

### Responsible Parties

- City of Greeley
  - Identify targeted City of Greeley facilities for audits, and schedule audits and complete the energy audits.
  - Once audits are complete, City of Greeley to make final determination of energy projects to implement.
  - Track savings from energy efficiency improvement projects to inform case study development.
- Partners in Energy
  - Support identification of targeted facilities list and support energy audit review for prioritization of opportunity and costs.
  - Support case study development to showcase improvements at City facilities.
- Xcel Energy
  - Utilize the Strategic Energy Management Program to partner with City staff on energy saving opportunities, facilitating rebate opportunities.

### Timeline

- Coordination with Xcel Energy is ongoing
- Q1 2020: Audit applications and scheduling
- Q2-4 2020: Audit completion and review

### Resources

Xcel Energy offers on-site energy audits at varying costs dependent on building size to evaluate lighting, heating, cooling and motors & drives equipment and provides energy conservation opportunities and associated costs, rebates, savings and payback:

- Buildings <50,000 square feet: Free
- Buildings 50,000 – 150,000 square feet: \$250
- Buildings > 150,000 square feet: \$500

For smaller buildings, Xcel Energy offers recommissioning tune-up audits, identifying low- and no-cost measures for existing systems, dependent on building size:

- Buildings 5,000 – 25,000 square feet: \$250
- Buildings 25,001 – 50,000 square feet: \$500

### Partners

- Xcel Energy
- Partner with educational institutions in support of Strategy 5

### Outreach Channels

- City Social Media

### Strategy 7: Targeted Energy Audits

- City eNewsletter
- Other news sources, PR

#### Measurement

- Metered building energy data used to track impact and verify savings
- Number of audits performed

### Strategy 8: New Construction Process Alignment

#### Description

Develop a well-defined process for City staff to follow from proposal to occupancy to better integrate energy efficiency and renewable energy program and rebate opportunities into new development projects. Xcel Energy offers project development assistance and coordination and new construction rebates at various milestones in the process. City staff, Xcel Energy, community members and prospective businesses in Greeley will benefit from unified messaging and process alignment through this strategy.

With timely and ongoing coordination, project electric capacity concerns can be addressed upfront to inform preliminary development proposals. Once project design begins, Xcel Energy can provide several resources along the way to help developers save energy and build resiliency over the life of the project.

#### Targets

- All major development proposals and projects receive information about Xcel Energy programs as well as other applicable rebate programs from Atmos Energy and Poudre Valley REA.

#### Scope

- Develop and provide a summary of coordination points between Xcel Energy and City of Greeley during development and construction processes.
- Identify and train City of Greeley staff on Xcel Energy rebate program opportunities at various process phases.

#### Responsible Parties

- City of Greeley
  - Coordinate with Xcel Energy at ongoing utility coordination and/or key site coordination meetings.
  - Identify and communicate development opportunities and proposals to Xcel Energy on an ongoing basis.
- Partners in Energy
  - Support and/or facilitate training to City of Greeley on Xcel rebate program opportunities.
- Xcel Energy Representatives
  - Lead training and outreach for City staff.
  - Assist City of Greeley on rebate program identification.

#### Timeline

- Q4 2019

- Begin coordination by utilizing existing monthly utility coordination and/or key site coordination meetings.
- Q1 2020
  - Research and discuss coordination opportunities and potential process improvements.
- Q2 2020
  - Provide a summary of development/construction coordination points between Xcel Energy and City of Greeley.
  - Conduct City of Greeley staff training if necessary.

### **Outreach Channels**

- City of Greeley website
- Utility coordination and development review meetings

## How Are We Going to Stay on Course?

The Energy Action Team has worked hard to develop ambitious and achievable goals that align with the energy vision. To achieve the targets and energy goals outlined in this plan, the City of Greeley and its partners identified in the strategies above will work to maintain consistent and clear communication among themselves and with the community at large. Each strategy will have sub-teams that will communicate regularly to work out the details of implementation, carry through on identified actions, and share progress and results. In the first months of implementation, the Energy Action Team will meet as a large group via online meetings to ensure effective group coordination and communication.

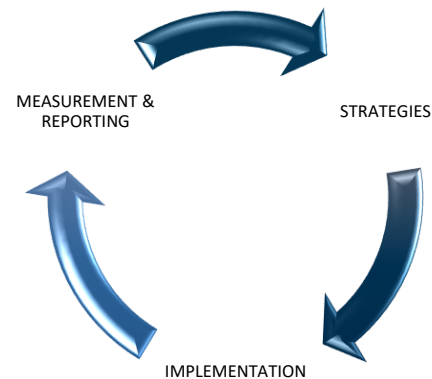


Figure 15. Actions and Tracking

### Operational Actions and Tracking

Partners in Energy staff will track Xcel Energy program participation data and associated electricity savings for Greeley on a bi-annual basis (typically February and August) and will report out on quantifiable progress. Once a year (typically February) the Partners in Energy staff will provide a summary of total electricity consumption for the community.

Each strategy leader or team also will track supplemental quantitative and qualitative information about implementation, such as number of activities, number of materials distributed, event dates, and estimated participants, etc.

### Communication and Reporting

The City of Greeley and other community organizations have established communication channels as outlined previously in this plan. The Energy Action Team and Partners in Energy facilitators will coordinate the use of the various communication channels to support the strategies with outreach efforts, updates, progress, and successes.

At the end of the implementation support period, the Partners in Energy team will provide a summary of the progress made, including quantitative and qualitative estimates of impacts on energy goals.

### Changing Course: Corrective Action

Even though this Energy Action Plan is designed for greatest impact over the next 18 months, the residual effect and momentum gained by showcasing efficiency, raising awareness, and leveraging resources will have long-term positive implications. An effective energy plan is cyclical in nature (see Figure 15). In addition, the nature of implementation requires staging, flexibility, and course adjustments when necessary to be successful and to sustain progress. To ensure this plan remains on track, the Energy Action Team will review bi-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.

To accommodate the fluid nature of action and implementation and learn from experience early in the process, the regularly scheduled team meetings as well as the bi-annual data check-ins will be a forum for

agreeing on course adjustments or new approaches necessary to hit plan targets. Any adjustments will be documented and shared with the broader group and community as they occur.

During the implementation period, the best process for obtaining involvement from team members will be determined and lined up with appropriate cycles. These may include budget cycles, school calendars, start of the heating season, etc. As these cycles and the appropriate review points in these cycles are incorporated, there may be different times of the year that specific elements may change, and at a minimum there should be at least one time every year for the major stakeholders to review progress, weigh in, and suggest changes to direction.

### Sharing Progress

Strategies outlined in this plan have methods for measuring and recognizing success; however, it will be important to let the wider community know how things are progressing and to recognize the collaborative efforts of those involved in hitting the plan targets. At critical milestones, the City of Greeley and Xcel Energy will publish updates on progress, share successes, and congratulate participants and partners through various communication channels.

### Beyond the Plan Horizon

Looking forward beyond the plan horizon, it is recommended that Greeley reassess 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. Communities with a successful track record of implementing their goals are welcome and encouraged to apply to future Partners in Energy offerings if new community goals or opportunities arise.



## Appendix 1: Glossary of Terms

Use whichever appendices are appropriate. The following is a preliminary glossary.

**Community Data Mapping:** A baseline analysis of energy data in a geospatial (map) format across the community.

**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.

**Direct Installation:** Free energy-saving equipment installed by Xcel Energy or other organization for program participants that produces immediate energy savings.

**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.

**Greenhouse gas (GHG):** Gas in the atmosphere that absorbs and emits radiant energy within the thermal infrared range (primary GHGs include water vapor, carbon dioxide, methane, nitrous oxide, and ozone); GHGs are associated with affecting climate change.

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

**HOA:** Home owners' association.

**HVAC:** Heating, ventilation and air conditioning.

**LED:** light-emitting diode.

**kW:** kilowatt (1,000 watts); a unit of electric power.

**kWh (kilowatt-hour):** A unit of electric consumption

**MMBtu:** One million British Thermal Units; a measure of energy content in fuels.

**MTCO<sub>2e</sub>:** Metric tons of carbon dioxide equivalent (MTCO<sub>2</sub> Eq.); measure used to compare the emissions from different greenhouse gases based on their global warming potential (GWP). The carbon dioxide equivalent for a gas is derived by multiplying the tons of the gas by its associated GWP.

**MW:** Megawatt (1 million watts); a unit of electric power.

**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.

**RFP:** Request for proposals (solicitation of services).

**Solar Garden:** Shared solar array with grid-connected subscribers who receive bill credits for their subscriptions.

**Solar 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.

**Therm:** A unit of heat energy (natural gas).

**Weatherization:** Insulation, air sealing, weather stripping, etc., that improve the building envelope.

## Appendix 2: Implementation Memorandum of Understanding



### Memorandum of Understanding Phase 2 – Plan Implementation

City of Greeley  
1000 10th Street  
Greeley, Colorado 80631

The intent of this Memorandum of Understanding is to recognize the achievement of the City of Greeley (the City) in developing an Energy Action Plan. Xcel Energy, through its Partners in Energy offering, has supported the development of this Energy Action Plan. This document outlines how the City of Greeley and Xcel Energy will continue to work together to implement this Energy Action Plan. The term of this joint support, as defined in this document, will extend from December 1, 2019 through August 30, 2021.

**Xcel Energy will support the City of Greeley in achieving the goals of its Energy Action Plan in the following ways:**

#### Residential

- **Community Events and Activities**
  - Help coordinate and confirm event calendar
  - Help confirm event staffing
  - Lead material development and coordination with Atmos
  - Attend up to 4 community events annually
- **Targeted Residential Campaigns**
  - Outline campaign schedule and identify partners
  - Lead development of outreach material and coordination with Atmos
  - Support campaign implementation
  - Support coordination with Atmos

Support funded by Xcel Energy for this focus area is not to exceed 130 hours. These hours will include those provided through our Partners in Energy team from Brendle Group and do not include support provided by Xcel Energy internal program staff.

#### Business

- **Annual Greeley Business Expo**
  - Plan event including location, date, time, and speakers/tours
  - Lead invitation development
  - Support identification of outreach channels
  - Support event outreach through established City, Xcel Energy, and Atmos business communication channels
  - Lead coordination of logistics during the event

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- **Sector-based Small Business Outreach**
  - Help identify target sectors (3-4 sectors)
  - Lead development of outreach material and coordination with Atmos
  - Support presentation of sector specific energy efficiency information (3-4 sectors)
  - Support tracking and reporting progress to goals

Support funded by Xcel Energy for this focus area is not to exceed 125 hours. These hours will include those provided through our Partners in Energy team from Brendle Group and do not include support provided by Xcel Energy internal program staff.

**Educational Institutions**

- **Student Engagement**
  - Coordinate with identified student groups
  - Provide training and materials for student lead campaigns
  - Support student outreach
- **Institution – Targeted Energy Audits**
  - Support target building identification and audit scheduling
  - Support report review and project selection

Support funded by Xcel Energy for this focus area is not to exceed 55 hours. These hours will include those provided through our Partners in Energy team from Brendle Group and do not include support provided by Xcel Energy internal program staff.

**Municipal**

- **Municipal – Targeted Energy Audits**
  - Support target building identification and audit scheduling
  - Support report review and project selection
- **Municipal – New Construction Alignment**
  - Support development of key site list and process inputs
  - Help develop summary of construction coordination points

Support funded by Xcel Energy for this focus area is not to exceed 50 hours. These hours will include those provided through our Partners in Energy team from Brendle Group and do not include support provided by Xcel Energy internal program staff.

**Project Management, Reimbursed Expenses**

- Organize and facilitate monthly team calls
- Lead implementation tracking and reporting
- Provide data analysis and develop 3 community energy summaries
- Lead in-person graduation/debrief meeting at the end of the implementation support period
- Provide up to \$4,000 for reimbursed expenses related to printing and distribution of co-branded marketing materials, venue fees, food, and other related needs associated with

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outreach and education. Xcel Energy funding will not be provided for the purchase of alcohol.

Support funded by Xcel Energy for project management is not to exceed 60 hours. These hours will include those provided through our Partners in Energy team from Brendle Group and do not include support provided by Xcel Energy internal program staff.

**The City of Greeley commits to supporting the Energy Action Plan to the best of its ability by:**

- Achieving the energy savings impacts outlined in the energy action plan and shown in the table below:

**City of Greeley Conservation Goals**

	Electricity Savings (in kWh)
<b>Baseline Historic Energy Savings</b>	7,113,000
<b>Incremental Plan Energy Savings (12/1/19-9/30/21)</b>	1,953,500
<b>Total Plan Energy Savings (baseline + plan energy savings)</b>	9,066,500

- Performing the coordination, tracking, and outreach duties as outlined in the Energy Action Plan that include but are not limited to the following:

**Residential**

- **Community Events and Activities**
  - Lead event identification, selection, and registration logistics
  - Identify City of Greeley staff to attend each event
  - Support outreach material development and finalization
  - Support event/activity planning and delivery
- **Targeted Residential Campaigns**
  - Support development of campaign schedule
  - Support outreach and coordination with local partners
  - Support outreach material development, document review, and finalization
  - Lead outreach campaign through established City communications channels

**Business**

- **Annual Greeley Business Expo**
  - Support identification and securing of venue
  - Review and provide input on event agenda
  - Provide an example project board from a municipal energy efficiency project
  - Identify City staff to attend the event
  - Lead outreach campaign to advertise event to local businesses and contractors



## XCEL ENERGY PARTNERS IN ENERGY

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- Support event hosing logistics during the event
- **Sector-based Small Business Outreach**
  - Support sector identification
  - Help coordinate with DDA or Chamber for presentation scheduling and announcements
  - Outreach to local businesses about the event through existing City communications channels

**Educational Institutions**

- **Student Engagement**
  - Lead outreach to local educational institutions to identify student groups to be included in outreach efforts
  - Lead student outreach campaign with residential campaign above
- **Institutions – Targeted Energy Audits**
  - This strategy does not incorporate additional support from the City of Greeley

**Municipal**

- **Municipal – Targeted Energy Audits**
  - Identify target building and schedule energy audit
  - Identify efficiency measures to implement from report
  - Identify funding and implement chosen efficiency measure
- **Municipal – New Construction**
  - Provide permitting process information and identify opportunities for distributing Xcel Energy rebate information
  - Support material development and review final draft
  - Integrate recommendations and materials into City processes
  - Communicate key development sites with Xcel Energy representative

**Project Management**

- Participate in monthly check-in calls with community facilitator
- Support tracking and reporting progress to goals
- Attend identified outreach events
- Coordinate between City departments as needed to strategy outreach and support
- Provide Xcel Energy an opportunity to review marketing materials to assure accuracy when they incorporate the Xcel Energy logo or reference any of Xcel Energy's products or services.
- Share the plan document, supporting work documents, and implementation results from the Energy Action Plan with the public—the experience, successes, and lessons learned from this community will inform others looking at similar or expanded initiatives.

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**Legal Applicability and Waiver**

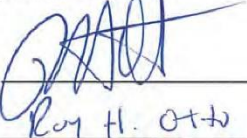
This is a voluntary agreement and not intended to be legally binding for either party. This Memorandum of Understanding has no impact, nor does it alter or modify any existing Franchise Agreement or other existing agreements between Xcel Energy and the City. Parties agree that this Memorandum of Understanding is to memorialize the intent of the Parties regarding Partners in Energy but does not create a legal agreement between the Parties. It is agreed by the Parties that nothing in this Memorandum of Understanding will be deemed or construed as creating a joint venture, trust, partnership, or any other legal relationship among the Parties. This Memorandum of Understanding is for the benefit of the Parties and does not create third party rights. Nothing in this Memorandum of Understanding constitutes a waiver of City of Greeley's ordinances, the City of Greeley's regulatory jurisdiction, or Colorado's utility regulatory jurisdiction.

**Single Points of Contact**

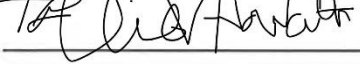
All communications pertaining to this agreement shall be directed to Caleb Jackson, on behalf of the City of Greeley, and Tami Gunderzik, on behalf of Xcel Energy.

Xcel Energy is excited about this opportunity to support the City of Greeley in advancing its goals. The resources outlined above and provided through Partners in Energy are provided as a part of our commitment to the communities we serve and Xcel Energy's support of energy efficiency and renewable energy as important resources to meet your future energy needs.

For the City of Greeley:

Signature:   
Name: Roy H. Otto  
Title: City Manager  
Date: 11/25/19

For Xcel Energy:

Signature:   
Name: Hollie Velasquez Horvath  
Title: Director, Community Relations  
Date: 12/3/2019