

An Energy Action Plan for **Rosemount**



May 23, 2018

Acknowledgements

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

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Glossary of Terms

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.

GreenStep Cities: Minnesota GreenStep Cities is a voluntary challenge, assistance and recognition program managed by a public-private partnership to help cities achieve their sustainability and quality-of-life goals. More information is available at: greenstep.pca.state.mn.us/

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

MMBtu (million British thermal units): A unit of energy consumption that allows both electricity and natural gas consumption to be combined.

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.

STAR Communities: STAR communities is a rating system managed by ICLEI – Local Governments for Sustainability. It serves to elevate, improve, and certify sustainable communities. More information can be found at: www.starcommunities.org.

Therm: A unit of natural gas consumption.

Trade Ally: Trade Allies, or Business Trade Partners, are vendors and contractors who work with business and residential customers servicing, installing, and providing consulting services regarding the equipment associated with utility rebate programs. Their support for utility programs can range from providing equipment, assisting with rebate paperwork, to receiving rebates for equipment sold.

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Executive Summary

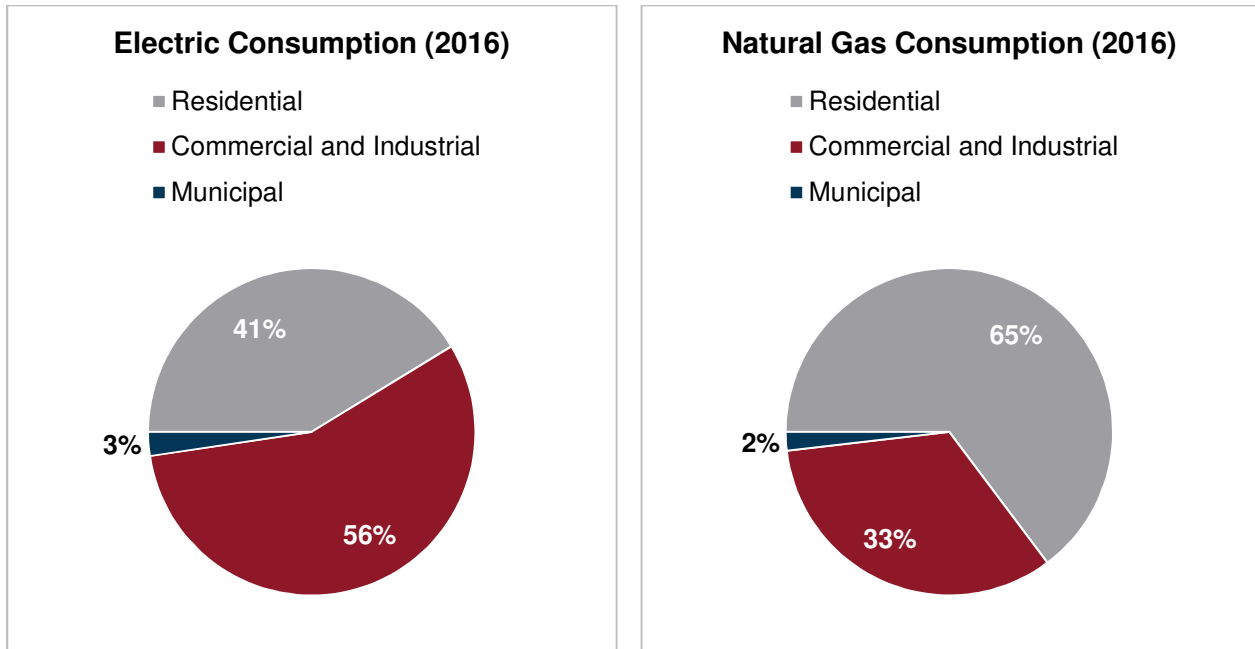
Rosemount is projected to grow significantly in the coming decades, and is committed to ensuring that growth is sustainable. Over the past few years, Rosemount made initial progress toward this end through a variety of actions. This plan represents renewed goals and priorities that will help propel Rosemount toward a more sustainable and affordable energy future. It offers a clear direction, based in data-informed decisions made by members of the Rosemount community.

Rosemount's Energy Action Plan sets measurable targets that will reduce energy use and save on energy costs, and outlines action steps to achieve them. The Rosemount Environment and Sustainability Task Force (REST) and City staff will lead implementation of this plan, with active engagement from residents, businesses and schools, as well as faith-based and community organizations. Working together, Rosemount will achieve environmental, social, and economic progress that will ultimately benefit future generations.



Community Energy Use

Rosemount is served by four utilities – Xcel Energy and Dakota Electric provide electricity, and Xcel Energy, Minnesota Energy Resources, and CenterPoint Energy provide natural gas service. While residences in Rosemount comprise the vast majority of premises, or locations of electricity or natural gas service, commercial and industrial customers consumed the majority (55 percent) of overall energy in 2016. Municipal facilities represent about 2 percent of the community's total energy consumption.



Our Vision

Our vision is that Rosemount will continue to foster pride in the community by becoming a leader in sustainability and energy conservation. Residents and businesses will demonstrate widespread support for renewable energy generation, as well as new, smart efficiency technologies. Energy efficiency will help the City of Rosemount and its residents save money, and broad community participation will ensure that savings benefit all. As a result, energy costs are kept low, ensuring the community remains affordable in the long-term.

Community-Wide Goal

Rosemount’s overall energy goal, which addresses both electricity and natural gas use, is to **reduce energy use by 5 percent by 2020, and 15 percent by 2030**. To achieve this goal, Rosemount identified four key areas of focus: Residential energy, municipal energy, large energy users, and small- and medium-size businesses. In addition to the community-wide goal, specific goals and targets were set for each of these four areas. Over the next 18 months, Rosemount will take initial steps to achieve these goals with the support of Xcel Energy’s Partners in Energy.

Focus Area Goals

Residential Energy	Goal: <ul style="list-style-type: none"> • Increase residential program participation 5% in year 1, and 10% in year 2 of implementation
Municipal Energy	Goals: <ul style="list-style-type: none"> • Reduce City energy use 10% by 2020 • Generate 75% of the City's energy with renewables
Large Energy Users	Goal: <ul style="list-style-type: none"> • 85% of the top 20% of energy users participate in energy conservation by 2020
Small and Medium-size Business	Goals: <ul style="list-style-type: none"> • Reduce small- and medium-size business electricity use by 2% per year • 25 small- and medium-size businesses participate in natural gas conservation programs

Impact

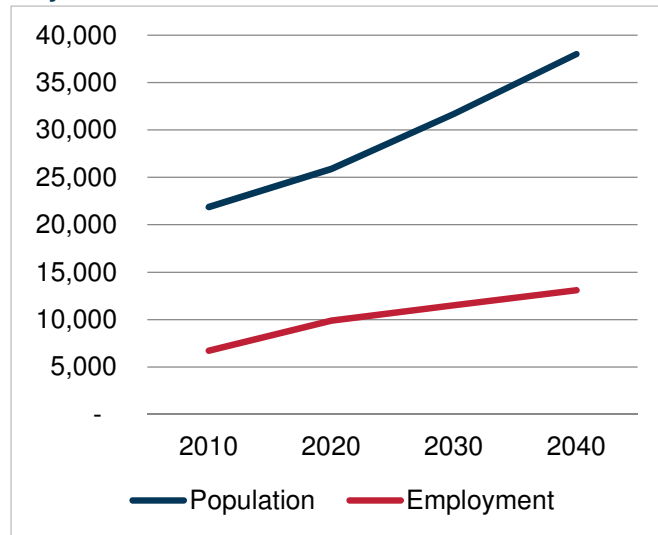
Rosemount spent an estimated \$28.7 million on energy across all sectors in 2016. Achieving all of the community's energy goals will save Rosemount residents and businesses more than \$1 million over the next three years. It will also reduce the community's annual carbon footprint by more than 19,000 metric tons of carbon dioxide equivalent (MTCO_{2e}), approximately equivalent to the carbon emitted from 4,100 passenger vehicles in one year.¹ In addition, achieving Rosemount's energy goals will form new and lasting partnerships to support action. Outreach and events will raise awareness about energy and cost saving opportunities. This will result in long-term, active participation from a broad array of community members.

¹ US Environmental Protection Agency (March 13, 2018). Greenhouse gas equivalencies calculator. Retrieved from <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>

Introduction

Rosemount is projected to grow significantly in the coming decades (Figure 1). This Energy Action Plan represents the community's commitment to ensure growth is sustainable. Rosemount made initial progress toward this end over the past few years, including adopting an alternative energy ordinance and establishing an Environment and Sustainability Task Force. Now is the time for residents, businesses, and the municipal government to take the next leap forward in achieving progress that will sustain economic growth, protect the environment, and benefit future generations.

Figure 1: Projected population and employment growth for city of Rosemount²



Rosemount's Energy Action Plan identifies many cost-effective opportunities to improve energy sustainability in Rosemount. New developments can integrate energy efficiency and sustainability into building construction. Current residents can invest in their homes,



Rosemount's Steeple Center

reducing energy use and saving money on energy costs. Businesses can take action to help achieve energy goals while improving their bottom line. The City can set the standard for prioritizing energy efficiency and renewable energy by making investments in its own facilities. Working together, residents, businesses, schools, faith communities, elected officials, and the City can help build the community's reputation as an energy leader. This will help attract new residents and businesses to the community who are interested in being part of a better vision for the future.

This plan offers a clear direction, based in data-informed decisions made by members of the Rosemount community. It sets forth measurable

² Metropolitan Council (July 8, 2015). Council Forecasts. Retrieved from <https://metro council.org/forecasts>

targets and outlines action steps to achieve them. The goals and strategies laid out in this plan are achievable and represent an important next step toward a vision of Rosemount's energy future. They seek to take advantage of available programs and resources offered by the four utilities serving Rosemount, and link residents and businesses to opportunities that will save them money on their utility bills. The plan makes recommendations for different types of energy improvements, with the understanding that all recommended improvements are examined and assessed for a positive return on investment. After the first year of implementation, progress toward goals will be evaluated to determine whether to stay the course or take even more ambitious steps toward a sustainable energy future.

Rosemount's Commitment to Sustainability

Rosemount has already taken several steps that demonstrate a commitment to sustainability, with early actions largely driven by rapid growth and development. A timeline summarizing these actions can be found in Figure 2. The City's 2030 Comprehensive Plan includes several priorities aimed at ensuring the environment and natural resources are protected, and that growth takes place in a way that can support the current needs of residents and the needs of future generations. Rosemount has been part of GreenStep Cities, a statewide voluntary challenge, assistance and recognition program to help cities achieve their sustainability and quality-of-life goals, since December of 2011, and is currently at Step 2. The city also joined more than 1,000 mayors in signing the US Conference of Mayors Climate Protection agreement in 2011. The community's first Greenhouse Gas Reduction Plan was published in 2014, with support from the Resilient Communities Project and the University of Minnesota. The plan identified reducing electricity use as the best way for Rosemount to reduce emissions, and called out the unique opportunity presented by pursuing sustainable growth in future years.

Rosemount was an early participant in STAR Communities, a rating system sponsored by ICLEI – Local Governments for Sustainability, to help communities set sustainability goals and measure progress toward those goals. Rosemount was the first city in Minnesota and the smallest city in the country to obtain a star rating. Rosemount achieved 3-star status in 2015, as a result of a combination of actions in each of the eight evaluation areas. The community scored high in two of these eight areas: health and safety, and the built environment. However, many opportunities remain to take action and deepen impact in the area of climate and energy.

In March of 2014, Rosemount adopted an Alternative Energy Ordinance to expand opportunities for renewable energy development. The intention behind this zoning ordinance is to clarify rules around renewable energy installations and make the permitting process easier. Rosemount is home to a five megawatt community solar garden, as well as the Flint Hills Resources Pine Bend refinery combined heat and power plant, which will be completed in October 2018. The City covers 60 percent of

municipal electricity use through community solar subscriptions, and has researched the possibility of putting rooftop solar on its community center.

The greatest opportunity for Rosemount to pursue sustainability is in the development of UMore Park, a 5,000-acre property owned by the University of Minnesota. When fully developed, UMore Park will be home to an estimated 20,000-30,000 residents and businesses. A public engagement process established goals and principles for sustainable development of the site, with an emphasis on quality of life, equity and employment, sustainable food and water sources, net zero construction, and sustainable transportation options. Development will occur in phases over the next several decades, with the first phase completed over the next few years. In addition to UMore Park, other new developments are being built with sustainability features. As an example, Dunmore, a 90-home development currently under construction, will include electric vehicle-ready hookups in all homes, and half of homes will have their water heaters and air conditioners metered to take advantage of rates that encourage energy conservation.

The Rosemount Environment and Sustainability Task Force (REST) was formed in 2016 to advance issues of sustainability in the community. The purpose of the task force is to advise City Council on sustainability issues, and ensure the city is making progress on goals and actions related to its various commitments. The task force charter was recently extended another two years, with supporting implementation of this plan as one of the key components of their work. The City also received an Environmental Assistance grant from the Minnesota Pollution Control Agency to incorporate resiliency concepts into the 2040 Comprehensive Plan.

Figure 2: Community sustainability initiatives

- Rosemount Sustainability Initiatives**
- December 2011 – Joined GreenStep Cities**
 - Achieved Step 2 status through a variety of actions taken, including:
 - Land use planning
 - Efforts to support sustainable growth
 - Increasing access to a variety of transportation options
 - Environmental management, including urban forests/parks and water
 - Supporting local food production
- December 2011 – Signed US Conference of Mayors Climate Protection Agreement**
 - Included a commitment to meet or exceed a target of 7 percent reduction in greenhouse gas emissions below 1990 levels by 2012
- March 2012 – Completed UMore Park Aspirational Goals and Action Plan for Sustainability**
 - Public engagement process that established principles and goals for sustainable development of UMore Park
- January 2014 – Joined STAR Communities Network**
 - Achieved 3-star status in March of 2015
 - Score of 75.4/100 for Health & Safety, with high marks for community health and health system, safe communities, and emergency prevention and response
 - Score of 62.9/100 for Built Environment, with high marks for community water systems, public spaces, and transportation choices
 - Score of 46.4/100 for Education, Arts, & Community, with high marks for community cohesion
 - Score of 37.5/100 for Climate & Energy, with high marks for greenhouse gas mitigation and opportunities to improve building energy efficiency and renewable energy supply
- March 2014 – Adopted Alternative Energy Ordinance**
 - Expands opportunities for renewable energy development
 - Eases permitting process
- 2016 – Formed the Rosemount Environment and Sustainability Task Force**
 - Citizen group tasked with advising City Council on sustainability issues
- 2017 – Subscribed to Community Solar**
 - City commits to covering 60 percent of its electricity use with solar energy
- 2017 – Incorporating Resiliency Concepts into the 2040 Comprehensive Plan**
 - City is currently incorporating sustainable and resilient opportunities into the 2040 Comprehensive Plan

Xcel Energy’s Partners in Energy

Xcel Energy is one of four energy utilities providing natural gas or electricity services to the City of Rosemount. In the summer of 2014, Xcel Energy launched Partners in Energy to support communities like Rosemount in developing and implementing energy action plans that supplement existing sustainability plans, strategies and tools. The Partners in Energy process for success is diagrammed in Figure 3. The content of this plan is derived from a series of planning workshops held in the community with a planning team committed to representing local energy priorities and implementing plan strategies.

Partners in Energy will continue to work with Rosemount to coordinate initial implementation of the plan over the next 18 months. Partners in Energy and the City of Rosemount will develop a Memorandum of Understanding that outlines the specific support Xcel Energy will provide, including the resources as diagrammed in Figure 4, to help Rosemount deploy its strategies and achieve its goals.



Figure 3: Partners in Energy process for success




Figure 4: Resources from Xcel Energy for implementation

The Case for a Community Energy Action Plan

Sustainability is a priority for Rosemount. In a 2014 survey of residents, energy conservation was the second highest sustainability priority identified, after protecting and preserving environmental quality. Previous efforts have made great strides in the areas of land use and water protection, as well as initial progress in reducing energy-related greenhouse gas emissions from City buildings. The next big opportunity for Rosemount is to focus on reducing energy use in the built environment, while continuing to support the development of renewable energy resources.

A 2016 resident survey at a community event listed energy efficiency as the second highest priority after water conservation among environmental initiatives for REST to focus on. In pursuing engagement with Partners in Energy, REST saw an opportunity to advance sustainability by identifying creative ways to engage residents and businesses in improving their community. As stated in their Partners in Energy application, REST was interested in practical ways to increase energy efficiency, "...starting with the simplest and easiest items first [and] then moving on to improve energy efficiency in City-owned buildings ... new construction, and businesses." The Rosemount Environment and Sustainability Task Force wanted to help residents overcome obstacles to taking action, and is committed to playing a leadership role in plan implementation.

APPLICATION
COLORADO | MINNESOTA



PARTNERS IN ENERGY
AN XCEL ENERGY COMMUNITY PARTNERSHIP

Partners in Energy

Partners in Energy offers tools and expertise to support communities as they develop and implement Energy Action Plans. These Energy Action Plans belong to the communities and become roadmaps for successfully achieving their energy goals, including outlining responsibility, ownership and the metrics to define success. As with other planning documents in a community, the Energy Action Plans and associated work products will be public and can be shared with community members and other communities who may be participating in or considering Partners in Energy.

Partners in Energy is offered at no cost to participating communities, with the expectation that both the Xcel Energy and the community will invest in the process. This investment will include staff and financial resources from Xcel Energy during both the planning and implementation phases, as well as the community providing staff time during both the planning and implementation phases and financial support as necessary for the implementation of the plan.

Xcel Energy wants to work with motivated, engaged, and action-oriented communities and champions who are willing to commit to the process and the outcomes. This application will help us better determine good community alignment for our limited, but valuable, resources. While completing the application does not guarantee acceptance as a participant, your application will be evaluated against other applicants using criteria that include, but may not be limited to, community size and structure, planning experience, stakeholder capacity, available resources (staff and otherwise), and willingness to share results publicly.

If you have questions about the application or the opportunity, please visit xcelenergy.com/PartnersInEnergy, email us at PartnersInEnergy@xcelenergy.com or call 1-800-369-4362.

SUBMIT COMPLETED APPLICATION VIA EMAIL TO: PartnersInEnergy@xcelenergy.com. Return this application by 5:00 p.m. CST on October 14, 2016.

Qualifying Customers
Communities in Colorado and Minnesota with retail energy services from Xcel Energy qualify to participate in Partners in Energy.

COMMUNITY CUSTOMER INFORMATION

Community name City of Rosemount

Community jurisdiction (e.g., city, association, partnerships, county): City

Contact name Derick Anderson

Title Senior Engineer Technician Phone 651-322-2055

Address 2875 145th Street W

City Rosemount Email derick.anderson@ci.rosemount.mn.us

COMMUNITY PROFILE

Approximate business count 399* Approximate household count 7,852*

Approximate population 22,490* (* Figures from Minnesota Department of Employment 2014 estimate)

Approximate area in square miles 35

Would you be able to provide a GIS a shapefile of your community that would define the geographic boundaries of the area?
 Yes No

Rosemount's Partners in Energy Application, First Page

Plan Development Process

To develop Rosemount's energy action plan, REST recruited a diverse group of business representatives, residents, City staff, school district representatives, and representatives of other organizations and institutions in the community, as well as representatives of utilities serving the community. See the Acknowledgements section at the beginning of this document for a complete list of participants. This Energy Action Team met over the course of six months to review community energy use data, set priorities and goals, and develop strategies to meet those goals. A summary of the workshops can be found in Figure 5. Between workshops, a core team of City staff and task force members met regularly, and Energy Action Team members completed surveys to provide additional input on goals and strategies.



Rosemount's Energy Action Team

Figure 5: Overview of plan development process

Planning Workshop Summary	
Workshop 1 October 30, 2017	<ul style="list-style-type: none"> • Team introductions and Partners in Energy process overview • Reviewed baseline energy data including past city and community energy initiatives. • Discussed community energy vision and priorities.
Workshop 2 December 6, 2017	<ul style="list-style-type: none"> • Prioritized focus areas that emerged from workshop 1 and the pre-workshop 2 survey. • Introduced the group to the goal setting process and sample community goals. • Provided an overview of available utility programs and incentives. • Set initial goals for each focus area and begin brainstorming strategies.
Workshop 3 January 8, 2018	<ul style="list-style-type: none"> • Identified available communication channels available in Rosemount. • Reviewed examples of strategies implemented in other Partners in Energy communities. • Broke into focus area groups and continued discussing goals and strategies.
Workshop 4 February 12, 2018	<ul style="list-style-type: none"> • Established parameters for community-wide energy goal. • Completed an impact and feasibility assessment for proposed focus area strategies. • Discussed implementation resource requirements.
Workshop 5 March 19, 2017	<ul style="list-style-type: none"> • Finalized goals and strategies, and highlighted implementers and timelines for each focus area strategy. • Assessed necessary resources for implementation of plan strategies. • Completed a SWOT (strengths, weakness, opportunities, threats) analysis of the Energy Action Plan.

Baseline Community Energy Use

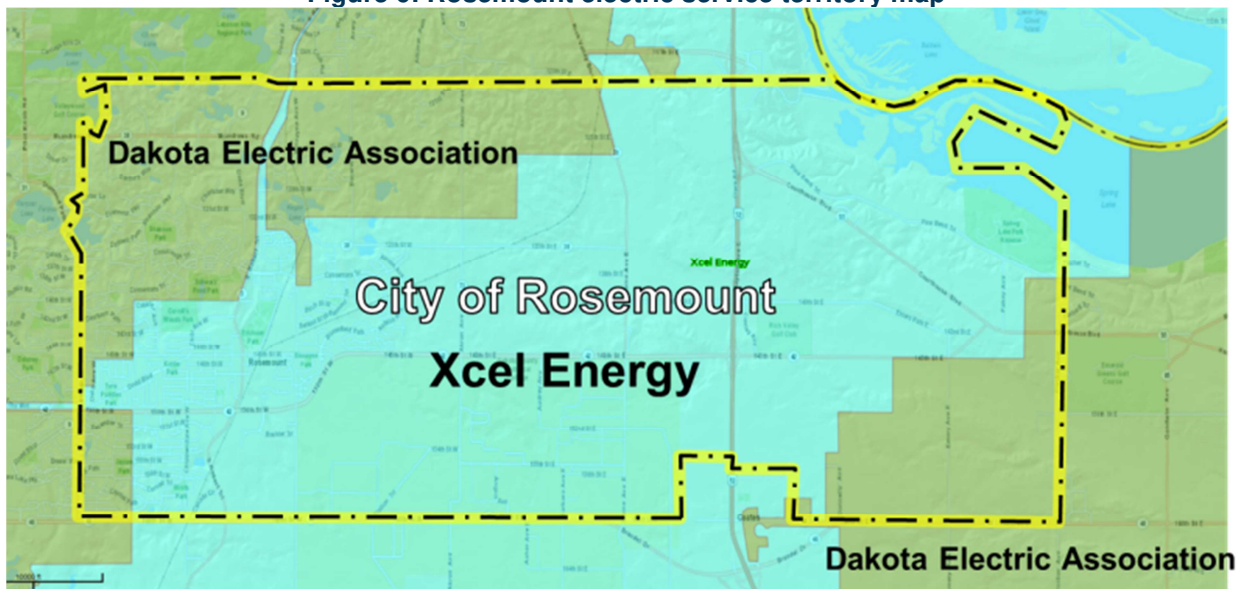
Energy Data Overview

An integral part of the energy planning workshops was energy and program participation data provided by Xcel Energy, combined with data from other utilities that serve the community. These data enabled the Energy Action Team to decide where to focus Rosemount's energy efforts and allowed the team to forecast the impact of proposed energy goals.

Energy Utility Service Territories

Rosemount is served by four utilities – Xcel Energy and Dakota Electric provide electricity, and Xcel Energy, Minnesota Energy Resources, and CenterPoint Energy provide natural gas service. Figure 6 below outlines the electric utility service territories in Rosemount. Dakota Electric serves the northwestern and southeastern parts of Rosemount, while Xcel Energy provides electric service to the central parts of the city as well as to the northeastern corner.

Figure 6: Rosemount electric service territory map³

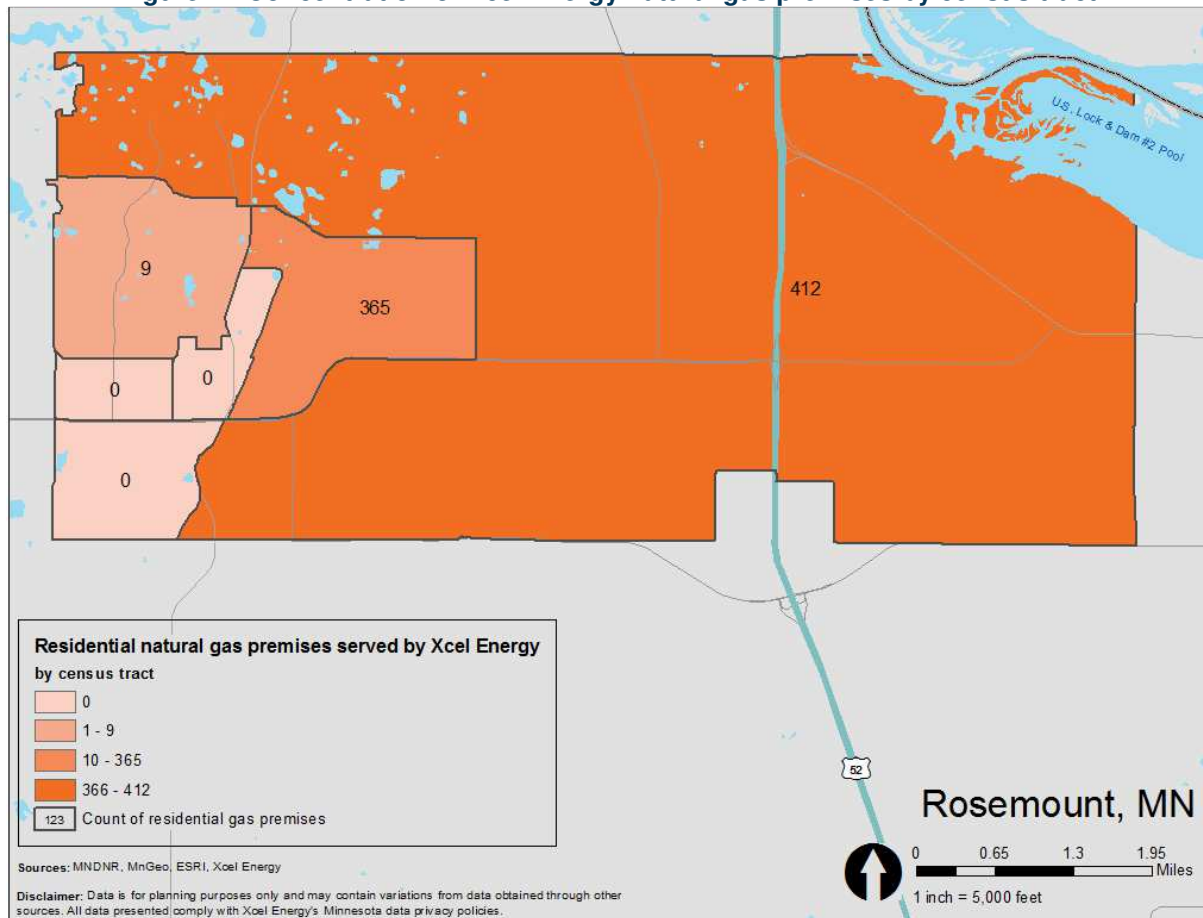


The map shown in Figure 7 below outlines the distribution of Xcel Energy natural gas premises by census tract in Rosemount. As can be seen on the map, the sections of the city where most of the residents and businesses are concentrated are served by other utilities - primarily Minnesota Energy Resources. CenterPoint Energy serves a small

³ Minnesota Public Utilities Commission (January 2018). Electric Utility Service Areas. Retrieved from <http://minnesota.maps.arcgis.com/apps/webappviewer/index.html?id=95ae13000e0b4d53a793423df1176514>

segment of residential premises in the southwest corner of the city. The majority of new development in the community will likely be in areas where natural gas service is provided by Xcel Energy. This includes UMore Park, which is located in the southern section of the city.

Figure 7: Concentration of Xcel Energy natural gas premises by census tract



Energy Data Sources

Energy data specific to Rosemount and documented in this plan comes from all four utilities serving the community. Xcel Energy data includes both residential and commercial energy use and program participation covering three years (2014-2016). Dakota Electric data includes both residential and commercial electric energy use for three years (2014-2016) and conservation program participation for two years (2015-2016). Minnesota Energy Resources Corporation (MERC) covers residential and commercial natural gas use for 2016, and conservation program participation and savings for two years (2015-2016). CenterPoint Energy data covers residential energy use for three years (2014-2016) and residential program participation and savings for

two years (2015-2016). Commercial energy use for CenterPoint Energy customers, as well as program participation and savings, could not be reported due to 15x15 data privacy rules.⁴ In addition to the commercial premise removed from CenterPoint Energy data, one commercial electric premise and six residential gas premises were removed from Xcel Energy baseline data as a result of violating the 15x15 rule.

Baseline Energy Analysis

This section summarizes community-wide energy use, conservation program participation, and historic energy savings. It establishes a baseline against which progress toward goals will be compared in the future.

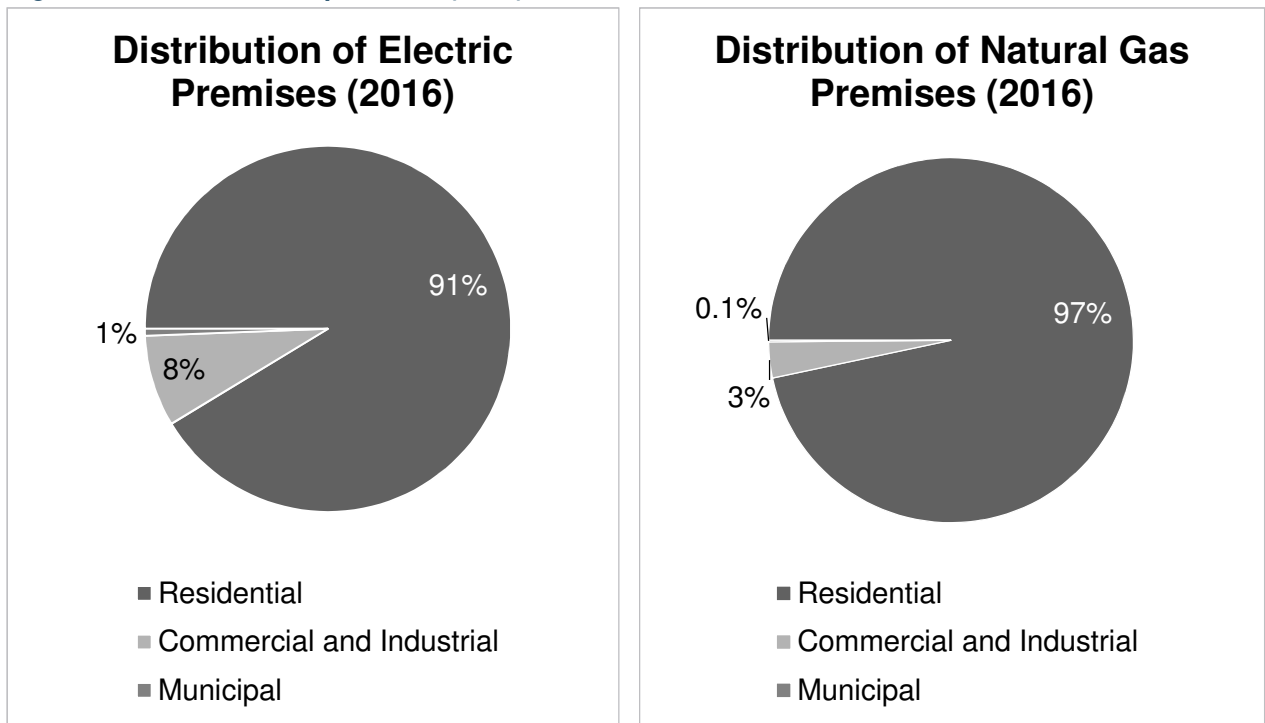
Detailed data tables summarizing information received from all four utilities are included in Appendix 3.

Energy Utility Premises

There are a total of 9,475 electric premises and 8,270 natural gas premises in Rosemount. The vast majority of both electric (91 percent) and natural gas (97 percent) premises are residential, as depicted in Figure 8.

A **premise** is a unique identifier for the location of electricity or natural gas service. In most cases it is a facility or building location.

⁴ The electricity data in this plan complies with Xcel Energy's 15 x15 privacy rules, which require all data summary statistics to contain at least 15 entities, with no single entity responsible for more than 15 percent of the total. Following these rules, if an entity is responsible for more than 15 percent of the total for that data set, they are removed from the summary.

Figure 8: Distribution of premises (2016)⁵

A breakdown of type and number of premises provided with each service (electric only, gas only, or electric and gas combined), and which utility those premises are served by, is shown in Figure 9 below. Xcel Energy serves 64 percent of residential electric premises, and most of the commercial electric premises in the community. The remaining residential and commercial electric premises are served by Dakota Electric. Minnesota Energy Resources serves 90 percent of residential natural gas premises, and all but one of the commercial natural gas premises in the community. CenterPoint Energy serves 15 residential premises and only one commercial premise in the community.

⁵ Includes data from Xcel Energy, Dakota Electric, Minnesota Energy Resources, and CenterPoint Energy

Figure 9: Premises served by Rosemount utilities (2016)

Premises	Xcel Energy	Minnesota Energy Resources Corp (MERC)	Dakota Electric	CenterPoint Energy
Residential Electric Only	5,190	n/a	3,081	n/a
Residential Gas Only	400	7,473	n/a	15
Residential Electric + Gas	382	n/a	n/a	n/a
Commercial Electric Only	704 ⁶	n/a	155	n/a
Commercial Gas Only	n/a	284	n/a	1
Commercial Electric + Gas	n/a	n/a	n/a	n/a

Multifamily buildings can be represented as either residential or commercial premises, or a combination of both, depending on how they are metered. If units are individually metered, those units would be counted as residential premises. If buildings have a common meter, or a separate meter for common areas, that would be counted as a commercial premise. For example, a 20-unit building that is metered individually for electric service, but has one common meter for natural gas service would count as 20 residential electric premises and one commercial natural gas premise.

Energy Consumption

While residences comprise the vast majority of premises in Rosemount, they consumed just 45 percent of overall energy in 2016. Broken down by fuel source, residential customers consumed 41 percent of electricity, and 65 percent of natural gas in 2016, and commercial and industrial customers consumed 56 percent of electricity and 33 percent of natural gas (Figure 10 and Figure 11). Municipal facilities represent about 2 percent of the community's total energy consumption. Combined, Rosemount spent an estimated \$28.7 million on energy in 2016.

⁶ Includes premises with zero kWh use in 2016

Figure 10: Rosemount electricity consumption (2016)⁷

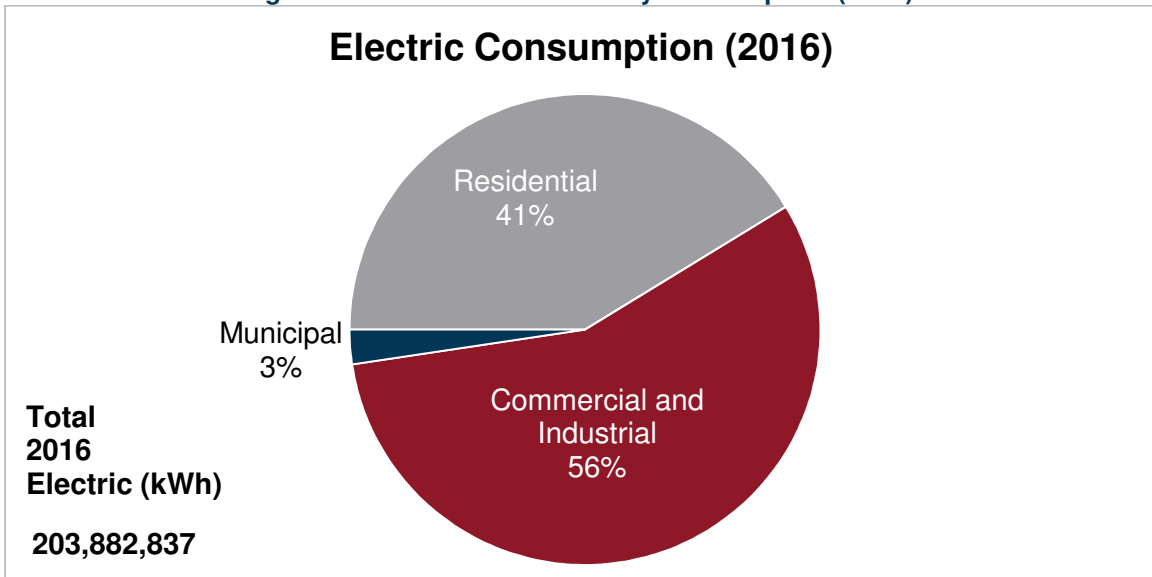
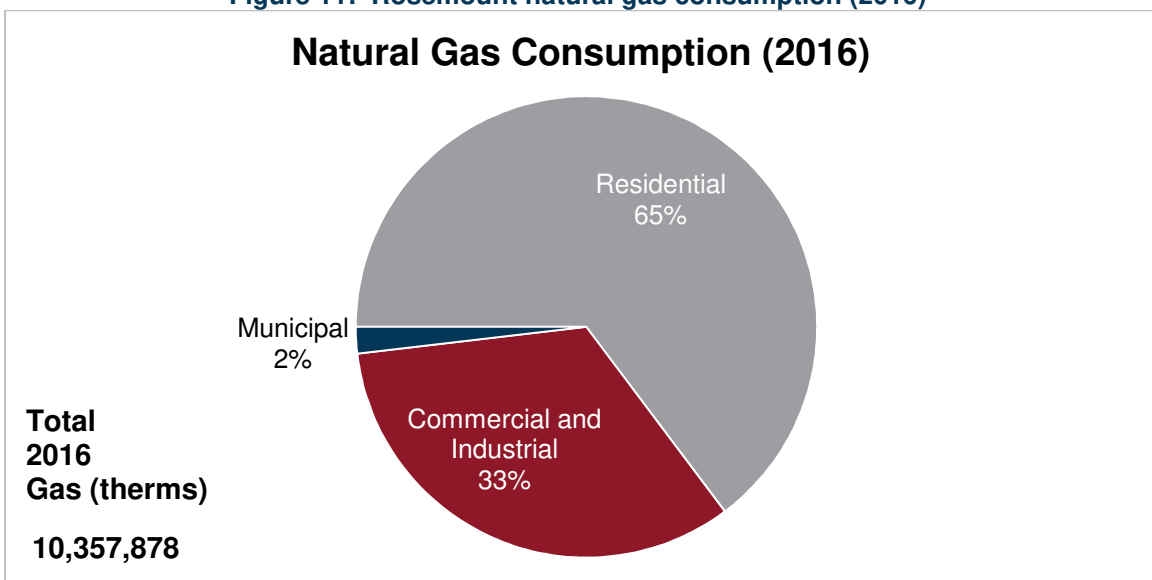


Figure 11: Rosemount natural gas consumption (2016)⁸



Rosemount homes used 9,723 kWh and 811 therms per premise in 2016, on average, and spent an estimated combined cost of \$1,568 per year, or \$130 per month, on energy. While not the highest average energy user in the Twin Cities Metropolitan area, Rosemount’s per household daily energy use is above that of many other suburban

⁷ Includes data from Xcel Energy and Dakota Electric

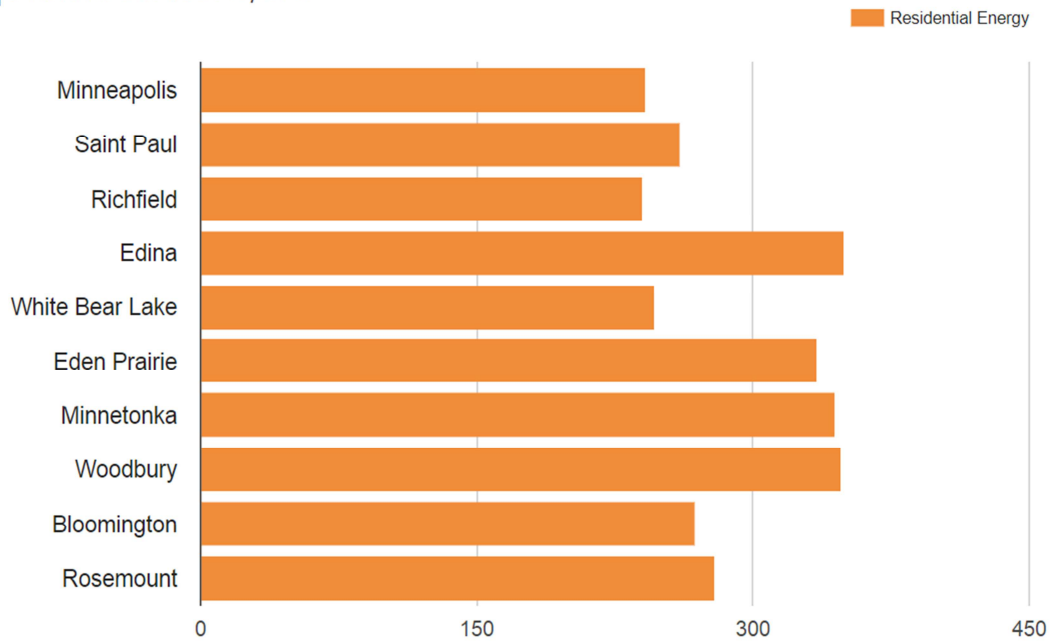
⁸ Includes data from Xcel Energy, Minnesota Energy Resources, and CenterPoint Energy

communities (Figure 12). Figure 13 shows where the highest residential energy users are concentrated.

Figure 12: Comparison of average residential energy use⁹

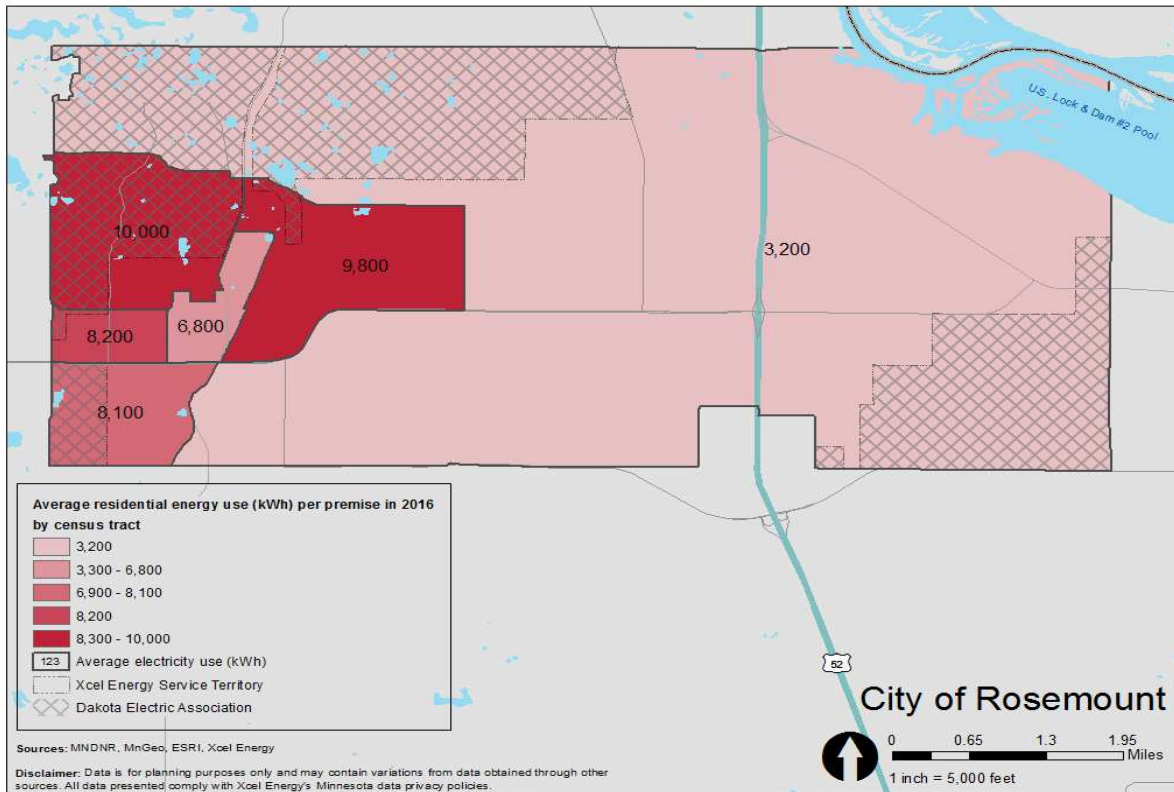
Residential Energy (kBtu)

2013 | PER HOUSEHOLD/DAY



⁹ Regional Indicators Initiative (2013). Retrieved from <https://www.regionalindicatorsmn.com/>

Figure 13: Average residential electricity use per premise (2016)¹⁰

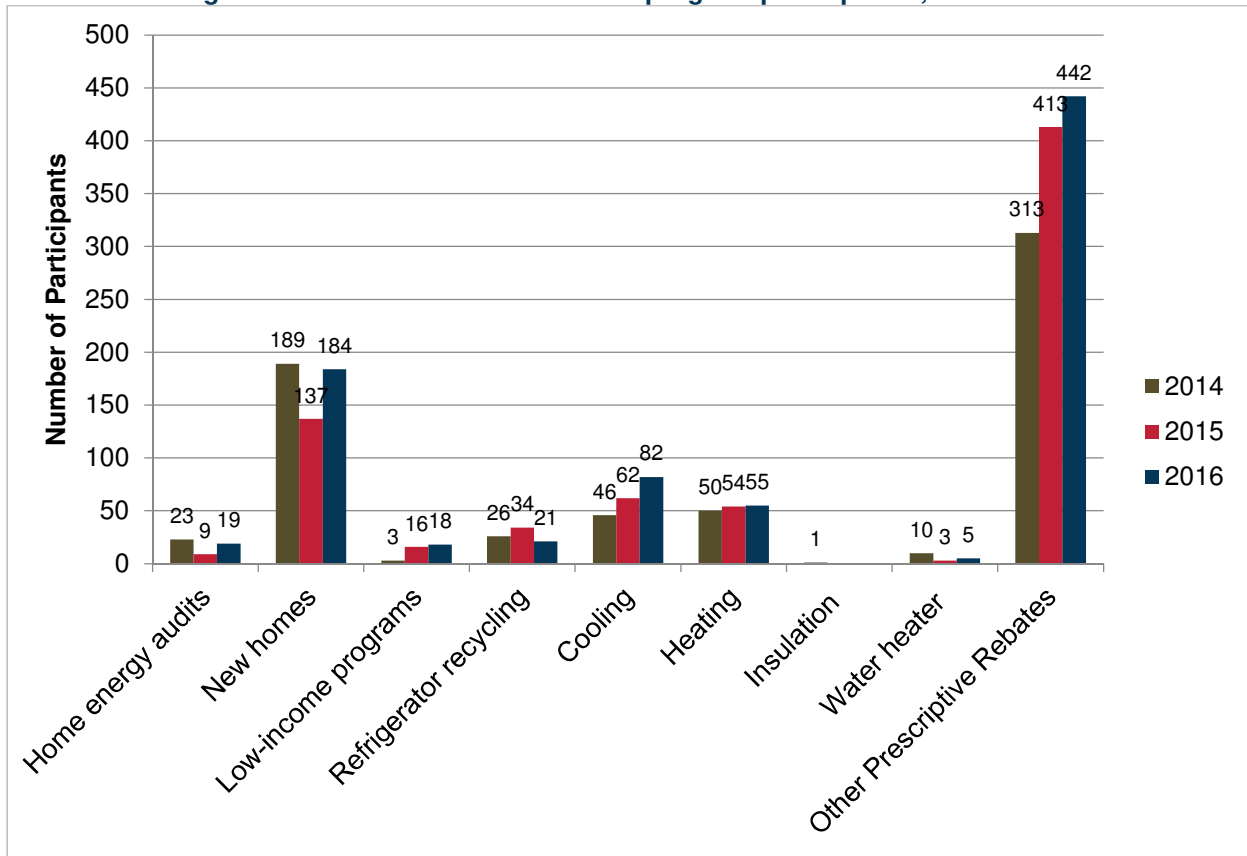


Current Energy Conservation

Rosemount residents and businesses have taken some important first steps in reducing energy use. In 2016, one in eight residential premises participated in at least one conservation program through Xcel Energy, Minnesota Energy Resources, or Dakota Electric. As a result, Rosemount residents saved 212,162 kWh and 99,175 therms, representing 1.1 percent of total residential energy use. Figure 14 summarizes residential conservation program participation across the past three years. Prescriptive rebates for appliances such as refrigerators, water heaters, washing machines and clothes dryers, and heating and cooling equipment, represented the greatest level of participation. There have also been consistently high levels of participation in programs to support energy efficiency in new home construction, showing that the majority of new homes are energy efficient.

¹⁰ Xcel Energy data only

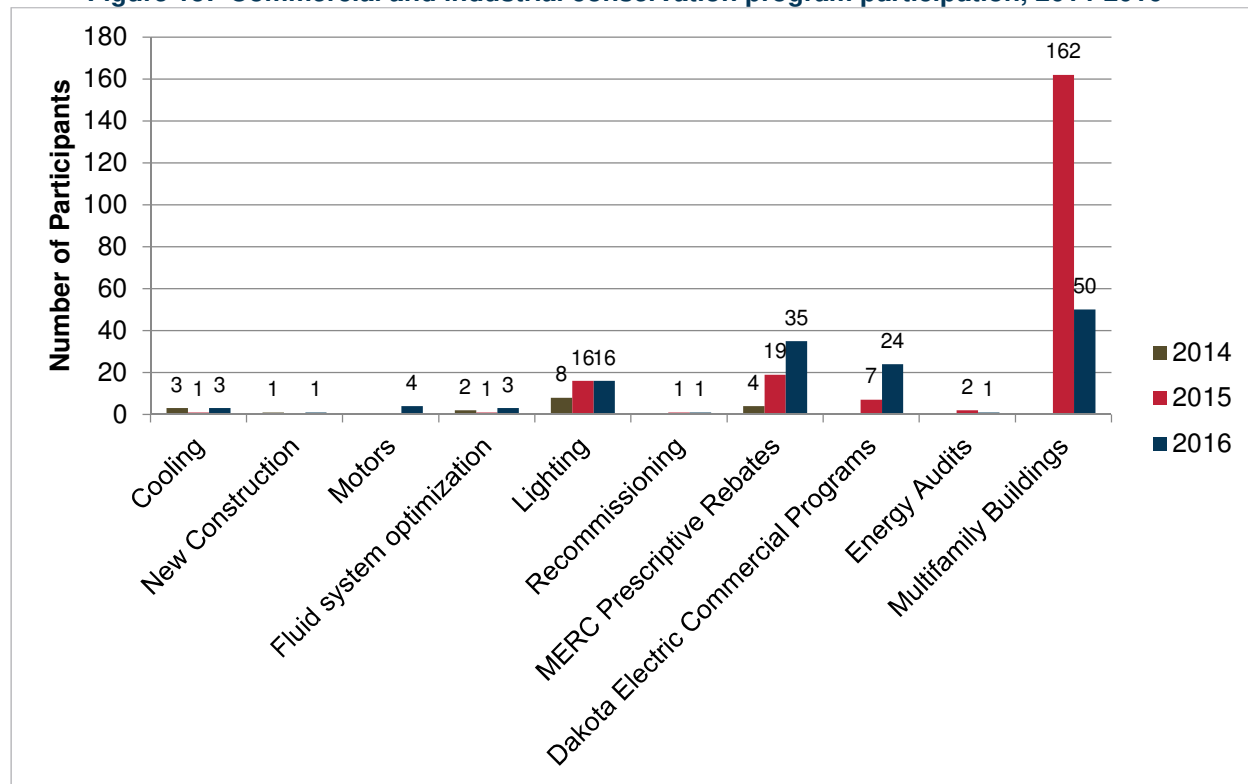
Figure 14: Residential conservation program participation, 2014-2016¹¹



The overall rate of commercial program participation has been slightly higher than that of the residential sector over the past three years. In 2016, 7 percent of commercial and industrial electric premises in Rosemount participated in conservation programs, saving an estimated 4.3 million kWh. At the same time, 30 percent of commercial and industrial natural gas premises participated in conservation programs, saving a total of 3,710 therms. Across all utilities, commercial and industrial customers took over 140 energy saving actions in 2016, saving about 2 percent of total energy use for that sector. Figure 15 shows program participation over the past three years for all commercial and industrial customers. Lighting is the most common upgrade across the board, followed by HVAC system upgrades. Participation is concentrated among the largest energy users – of Xcel Energy commercial electric customers, 38 percent have participated in at least one conservation program over the past three years.

¹¹ Includes data from Xcel Energy, Minnesota Energy Resources, and Dakota Electric

Figure 15: Commercial and industrial conservation program participation, 2014-2016¹²



Programs serving multifamily buildings may fall under the residential or commercial category, depending on the utility and the specifics of the program. Figure 15 reflects participation Minnesota Energy Resources’ multifamily program, with each individual unit counted separately. This means that the program likely served all units in one or two large multifamily buildings or complexes in a given year.

Renewable Energy

Rosemount has taken some initial strides to support renewable energy. The City of Rosemount recently made a commitment to cover 60 percent of its electricity use with renewable energy through subscriptions to community solar gardens. This represents approximately 2,900,000 kWh each year. A total of 191 Rosemount residents and two businesses subscribed to renewable energy through Xcel Energy’s Windsource[®] program in 2016, a slight increase over the previous two years. Of these, 15 elected to cover 100 percent of their annual electricity use with wind energy. Forty-four residents and two businesses are currently subscribed to Dakota Electric’s Wellspring Renewable Energy[®] program. Total subscriptions through these two programs represent about 0.3

¹² Includes data from Xcel Energy, Minnesota Energy Resources, and Dakota Electric

percent of total community electricity use. Additionally, according to City permit data there are five rooftop solar installations in the community.¹³

Where Do We Want To Go? – Community’s Energy Vision, Goals, and Strategic Priorities

In the first planning workshop, the Energy Action Team worked together to develop a shared vision for Rosemount’s energy future. This vision represents the priorities of the team and the community throughout the energy planning process.

Our Energy Vision

Rosemount will continue to foster pride in the community by becoming a leader in sustainability and energy conservation. Residents and businesses will demonstrate widespread support for renewable energy generation, as well as new, smart efficiency technologies. Energy efficiency will help the City of Rosemount and its residents save money, and broad community participation will ensure that savings benefit all. As a result, energy costs are kept low, ensuring the community remains affordable in the long-term.

Goals

Rosemount set a goal to reduce energy use, with benchmarks to measure progress in the short- and long-term.

- **Rosemount’s community-wide goal is to reduce energy use by 5 percent by 2020, and 15 percent by 2030.**

Hitting this goal would save Rosemount residents and businesses more than \$1 million in energy costs over the next three years. It would also reduce the community’s annual carbon footprint by more than 19,000 MTCO₂e, approximately equivalent to the carbon emitted from 4,100 passenger vehicles in one year.¹⁴ In addition, achieving Rosemount’s energy goal will require active participation from residents and businesses, inspiring long-term and active engagement in the community.

Focus Areas

After analyzing baseline energy use and program participation information, four priority focus areas were identified for the short-term, to be addressed over the next three years.

¹³ Rosemount City permit data, 2012-2016

¹⁴ US Environmental Protection Agency (March 13, 2018). Greenhouse gas equivalencies calculator. Retrieved from <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>

Focus Area 1: Residential Energy Savings

- Includes single-family homes, townhomes, and mobile homes as well as multifamily buildings with between two and four units. Also includes new construction and home renovation, and outreach targeting low-income residents.

Focus Area 2: Municipal Energy

- Includes all City buildings and other facilities such as parks, picnic shelters, and parking lots.

Focus Area 3: Large Energy Users

- Represents the top 20 percent of energy users, which includes commercial and industrial businesses, schools, places of worship, and multifamily buildings with five or more units.

Focus Area 4: Small and Medium Businesses

- Represents all other businesses in the community, which includes offices, restaurants, retail establishments, and light industrial.

The following sections outline why these focus areas represent the best opportunities to reduce Rosemount's community energy use. Woven throughout are examples from the community of entities finding concrete benefit in energy conservation. These stories demonstrate a key component that is integrated into all four focus areas — educating residents and businesses on the benefits and importance of energy efficiency to help build widespread support and motivation to act.

The group discussed renewable energy as an important component to building a sustainable community that should be discussed as part of outreach and engagement activities. However, aside from a municipal goal around support of renewable energy generation, the plan does not currently include other goals and targets related to renewable energy adoption. It was agreed that energy efficiency was a higher short-term priority, and that renewable energy would be addressed in years 3-5 of implementation and beyond.

Entering into the planning process, the decision was made by the Energy Action Team to exclude the Flint Hills Resources Pine Bend Refinery from focus area goal and strategy development. This is based on the assumption that the refinery has its own energy management strategies and generation capacity, and operates on a scale very different from other entities in the community. As a result, the Energy Action Team preferred to focus efforts resulting from this plan on bringing energy conservation benefits to the rest of the community.

Focus Area 1: Residential Energy Savings

Residential energy savings is a key priority for Rosemount, not only for the opportunity to reduce energy bills, but also as a way to promote broad community engagement. Within the residential sector, there are both homeowners and renters living in a variety of housing types. Utilities serving Rosemount offer various programs and incentives to help residents save money on energy bills while also contributing to the community's energy reduction goals.

Most residents – 87 percent – own their homes.¹⁵ Homeowners are a key target audience because they are most likely to invest in property improvements that will save money and improve the value of their home. More than half of existing homes in Rosemount are close to 30 years old or older, and likely have many opportunities to improve efficiency (Figure 16).

Figure 16: Housing units by year built, Rosemount, 2016¹⁶

Housing Year Built	% of Units
2014 or later	0.5%
2010-2013	3.9%
2000-2009	37.4%
1980-1999	39.6%
1960-1979	14.3%
1940-1959	3.1%
1939 or earlier	1.3%

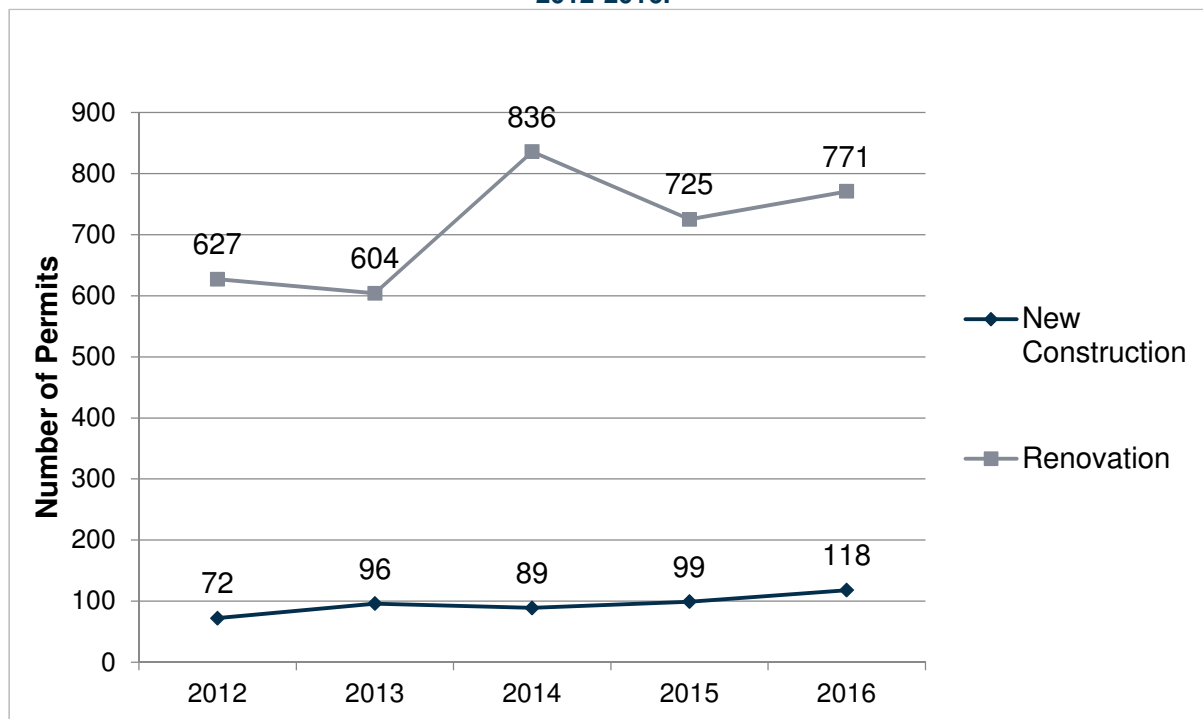
Residential New Construction and Renovation

To provide a closer snapshot of housing construction and renovation in Rosemount, Figure 17 shows the number of residential permits issued each year between 2012 and 2016. As Rosemount grows, annual new construction permits maintain a steady pace, with a slight increase in 2016. The number of new construction permits issued aligns with the count of participants in utility new construction rebate programs. This means that energy efficiency is a key feature of new homes being built in the community. At the same time, the large and growing number of permits issued for existing homes completing renovation projects indicates a key opportunity to integrate energy efficiency as homeowners plan kitchen or bathroom remodels, furnace replacements, additions, or other large home improvement projects. This tells us that, while continuing to ensure that new homes built in Rosemount are efficient, a higher priority in the short-term is to address efficiency in existing, and particularly older, homes.

¹⁵ American Community Survey, 2016.

¹⁶ American Community Survey 5-Year Estimates, 2011-2015

Figure 17: Residential new construction and renovation permits issued by the City of Rosemount, 2012-2016.¹⁷



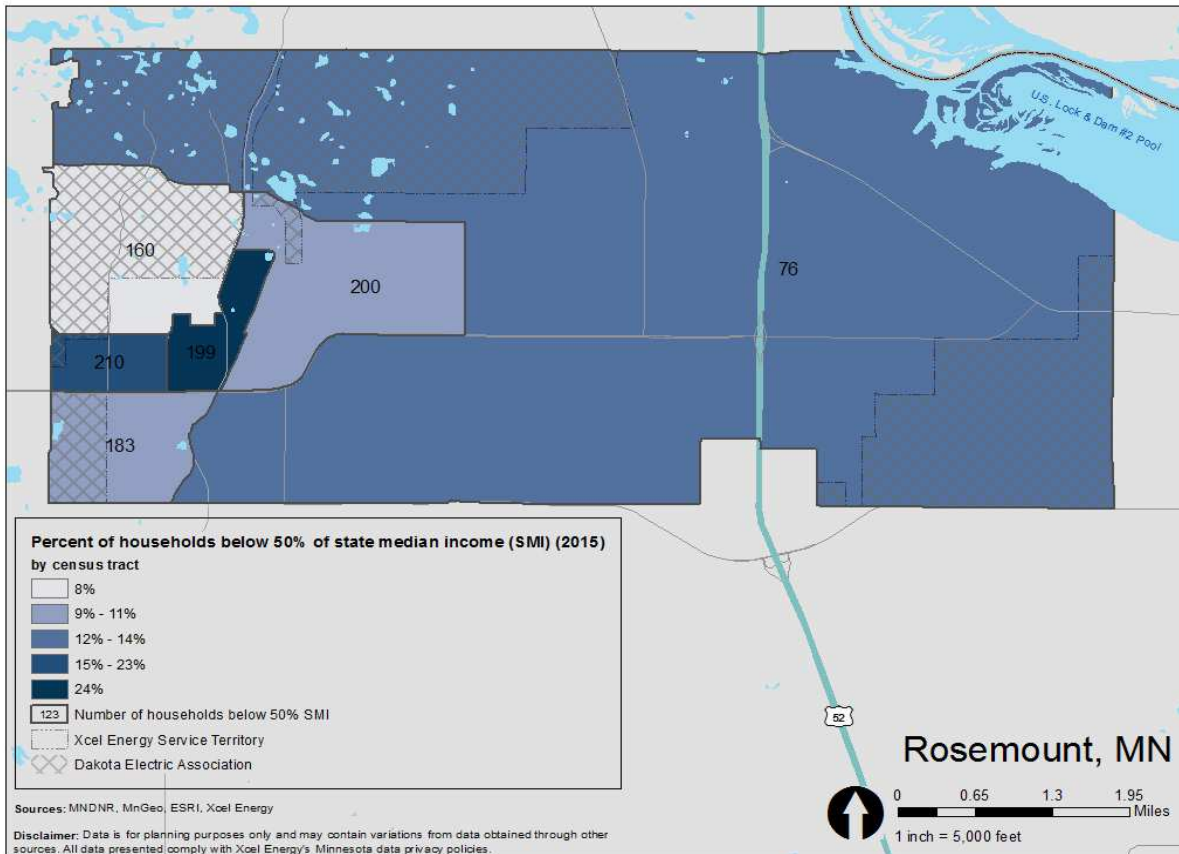
Low-Income Households

Ensuring that the cost of living remains affordable for low- and fixed-income households is a top priority for Rosemount. While poverty rates in the community are less than half of the statewide average, an estimated 13 percent, or just over 1,000 households, earn less than 50 percent of the state median income, which is the threshold for energy assistance eligibility.¹⁸ Many of these households are seniors living on fixed incomes—and saving money on energy costs would offer them an important benefit. Utilities offer free energy efficiency services to income-qualified homes, and the strategies laid out in this plan seek to maximize the number of eligible households taking advantage of this resource. Figure 18 shows where low-income households are concentrated in Rosemount. The darkest segment includes a mobile home community where REST will focus outreach efforts in the first year of plan implementation.

¹⁷ City of Rosemount permit data, 2017

¹⁸ American Community Survey, 2016.

Figure 18: Concentration of low-income homes in Rosemount, 2015



Residential Energy Goals and Strategies

With a focus on increasing the number of households taking advantage of available utility conservation programs and resources, Rosemount set the following goal for reducing energy use in the residential sector:

- **Increase residential program participation 5 percent in year 1, and 10 percent in year 2 of implementation.**

To achieve this goal, the Energy Action Team set several targets for increasing current levels of participation in available utility programs and incentives (Figure 19). Particular emphasis will be placed on home energy audits as an entry point and key first step in identifying cost-effective opportunities to reduce energy use. Energy audit services normally include follow-up support to assist customers in completing recommended improvements.

Figure 19: Residential program participation targets during first two years of implementation¹⁹

Program	Baseline	2018	2019
Overall Participation	823	41 additional	82 additional
Home Energy Audits	19	55	60
Refrigerator Recycling	21	45	45
Low-income Weatherization	15	28	30
Prescriptive Rebates	584	561	595
New Construction	184	175	175

Residential Energy Strategies

The following strategies and actions outline how Rosemount will achieve its residential energy savings goal. The timeline for implementing the actions listed, including priority actions for the first year of implementation, can be found in Appendix 4.

Focus Area: Residential Energy Savings

Strategy 1: Create a centralized, quick-reference guide for residents interested in saving energy

Actions:

- Create a page on the City website where residents can access the Energy Action Plan and quick-reference guide.
- Work with utilities to summarize and provide links to information about available programs and rebates, as well as maps that outline utility territories.
- Simplify options, focusing on a few key opportunities like energy audits and refrigerator recycling.
- Design a format that is easy to understand and facilitates action.
- Delegate responsibility for keeping the guide updated.

¹⁹ Targets are based on generalized groupings of similar programs offered by the utilities serving Rosemount. Specific program names, eligibility requirements, and rebate or incentive offerings vary by utility.

Focus Area: Residential Energy Savings**Strategy 2: Design and implement an outreach campaign to educate residents about energy efficiency and renewable energy opportunities.****Actions:**

- Survey residents about energy knowledge and communication channels to help inform campaign design.
- Utilize available channels to raise awareness and motivate residents to act, including:
 - Social media
 - City newsletter
 - Newspaper
 - Water bill inserts
 - Tabling at community events
 - Partner with Homeowners Associations (HOAs) to distribute information to their members
- Highlight residents who have taken action to reduce energy use or adopt renewable energy through news articles, testimonials, case studies, and letters to the editor.
- Conduct outreach through local civic groups--including places of worship and school groups--to engage residents in energy efficiency.
- Create an award program to recognize residents who have taken action to reduce energy use. Leverage award winner stories to inspire more participation.

Strategy 3: Promote energy efficiency in residential new construction and renovations.**Actions:**

- Host CEU-eligible training for realtors in the area to help them interpret energy audit results and convey the value of energy efficiency to prospective homebuyers.
- Provide information about residential energy efficiency programs and rebates at City permit desk, targeting home renovations.
- Develop informational materials that include case studies to maximize energy efficiency at key moments of opportunity, such as when a furnace or water heater needs to be replaced.

Focus Area: Residential Energy Savings

Strategy 4: Conduct targeted outreach that brings energy savings to low- and fixed-income households

Actions:

- Create simplified informational materials summarizing low-income utility programs available through all four utilities serving Rosemount.
- Partner with local organizations serving low-income residents and those living on a fixed income to promote income qualified energy and weatherization assistance.
- Conduct door-to-door outreach in areas where low-income residents are concentrated.
- Ensure informational materials are available in languages other than English.

Outreach Targets

Outreach efforts will target all residents, particularly families with children, low- and fixed-income households, homeowners planning renovation projects, and those with social connections that can help spread the message. As Rosemount is closely connected to neighboring cities, outreach will likely benefit those in surrounding communities as well. Outreach will seek to enhance benefits and overcome barriers to taking energy action, maximizing awareness about available programs and rebates, and seeking to make participation as convenient as possible.

Measuring Success

Success in this focus area will be measured using the following metrics:

- Participation in utility conservation programs
- Energy savings resulting from program participation
- Number of residents engaged through taking an energy survey or signing up for more information during outreach events
- Number of low-income homes reached during outreach
- Partnerships built with organizations in the community

Primary Partners

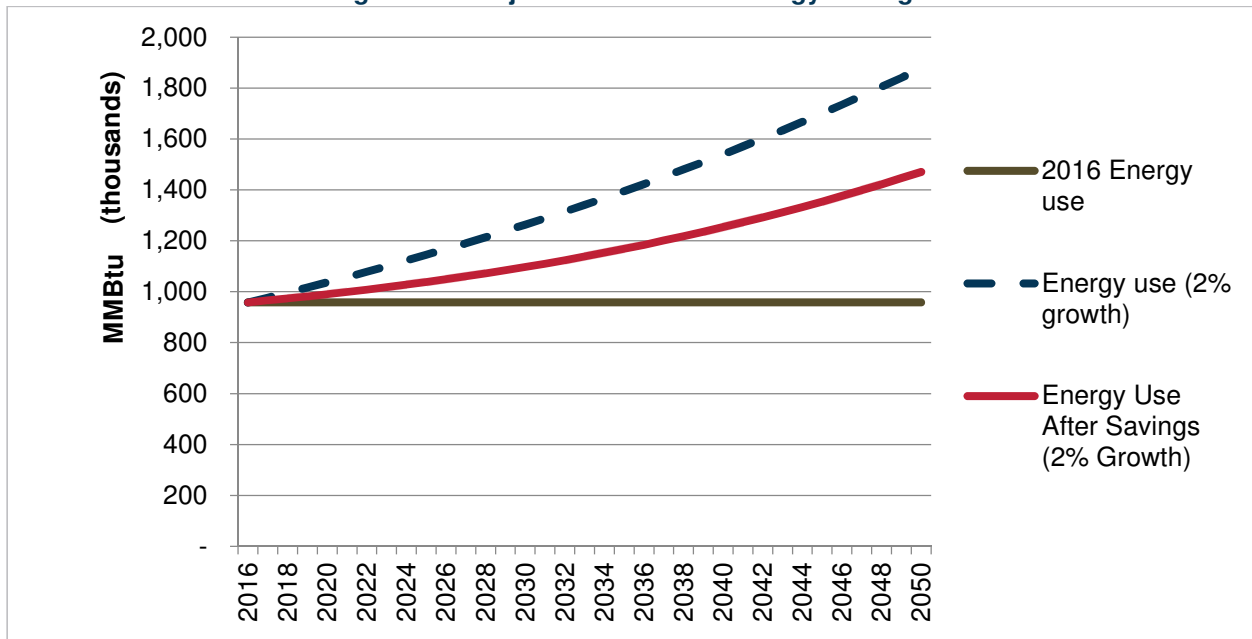
The Rosemount Energy and Sustainability Task Force, with support from Partners in Energy, will play a key role in leading the strategies and actions outlined above. To reach their targets, they will depend on additional support from the following organizations and entities:

- Community Action Partnership of Scott, Carver, Dakota Counties
- Rosemount Family Resource Center
- Rosemount Parks and Recreation
- Rosemount School District (ISD 196)
- School green teams

Impact

To calculate impact, it was assumed that the population would grow an average of two percent per year, which is a moderate estimate based on projections provided by the Metropolitan Council and included in the city’s 2040 Comprehensive Plan.²⁰ Achieving the residential participation goal will reduce energy use by 13 percent below where the community would have been by 2030, based on this two percent population growth scenario (Figure 20). If targets are achieved, Rosemount will save 243,000 kWh and 109,000 therms in the first year of implementation, and participating households will save an estimated average of \$120 per year on their energy bills.²¹

Figure 20: Projected residential energy savings²²



²⁰ More information about Rosemount’s 2040 Comprehensive Plan can be found at <https://ci.rosemount.mn.us/643/Comprehensive-Plan-Update>

²¹ Energy cost savings estimates for all focus areas were calculated by multiplying projected kWh and therm savings time average rates per kWh and therm taken from Xcel Energy filed rates. Actual cost savings for each participating customer will vary. Savings calculations do not take into account projected increases in energy costs, which would result in higher cost savings for participants in future years.

²² Energy impacts are quantified in MMBtu (million British thermal units): A unit of energy consumption that allows both electricity and natural gas consumption to be combined.

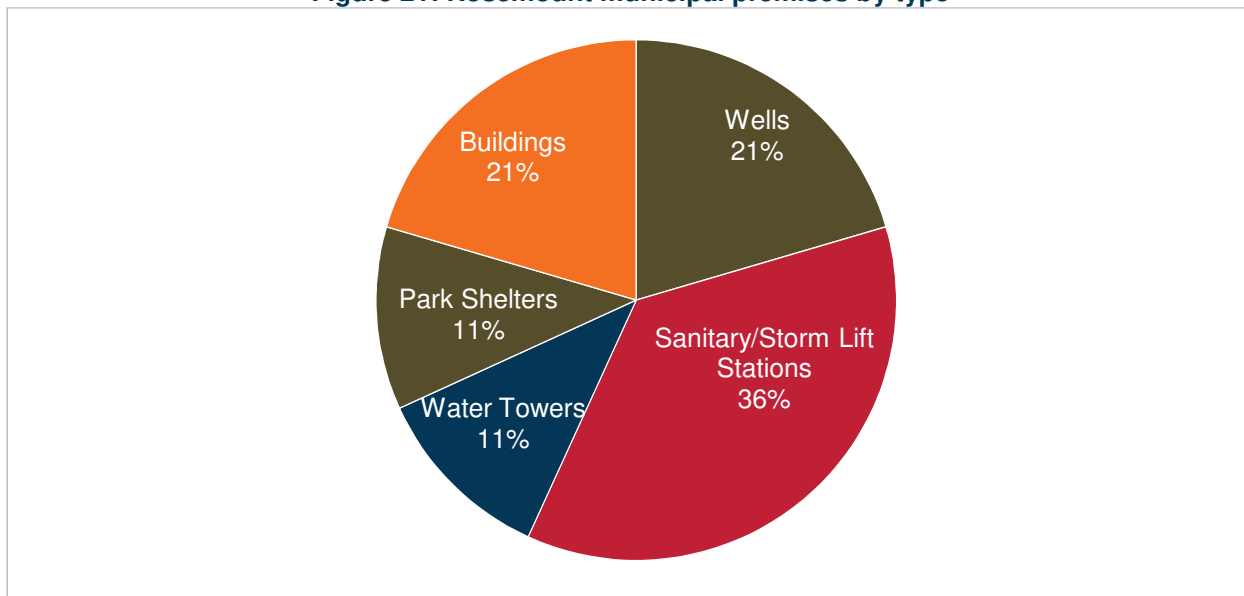
Focus Area 2: Municipal Energy

While City buildings and facilities only consume two percent of the community's total energy use, they represent an important opportunity to demonstrate leadership and serve as an example for both residents and businesses. Cost-effective investments made in reducing energy use and increasing renewable energy generation will raise the bar for others in the community, providing concrete and public examples of the value of energy conservation. Additionally, taking action to reduce energy use and increase renewable energy generation will advance Rosemount's standing in both GreenStep Cities and STAR Communities, earning both state and national recognition for its efforts.

Municipal Energy Use

The City of Rosemount owns 44 electric premises and 11 natural gas premises. City facilities consumed a total of 4,956,500 kWh and 190,814 therms in 2016. Only 21 percent of municipal premises are buildings, but these represent 87 percent of total municipal energy use (Figure 21). The remaining premises are related to water storage and distribution, as well as lighting at parks and outdoor recreation facilities. Much can be done to make City buildings more efficient, and investing in efficiency will save on costs and demonstrate good stewardship of taxpayer dollars.

Figure 21: Rosemount municipal premises by type



Municipal Energy Opportunities

The Rosemount Community Center and Ice Arena is- the highest energy user among municipal facilities (Figure 22 and Figure 23). It also represents the greatest opportunity for conservation. In addition to other municipal facilities and parking lots, the City plans to replace existing lighting at the Community Center and Ice Arena with LEDs and install occupancy sensors in areas where they make sense. There are also plans to install a low-emissivity ceiling in the ice arena that will help reduce heating and cooling costs,

and the Parks and Recreation Department is researching options for replacing the current chiller needed to make ice with a system that is more efficient.

Figure 22: Rosemount municipal facilities electricity use, 2016²³

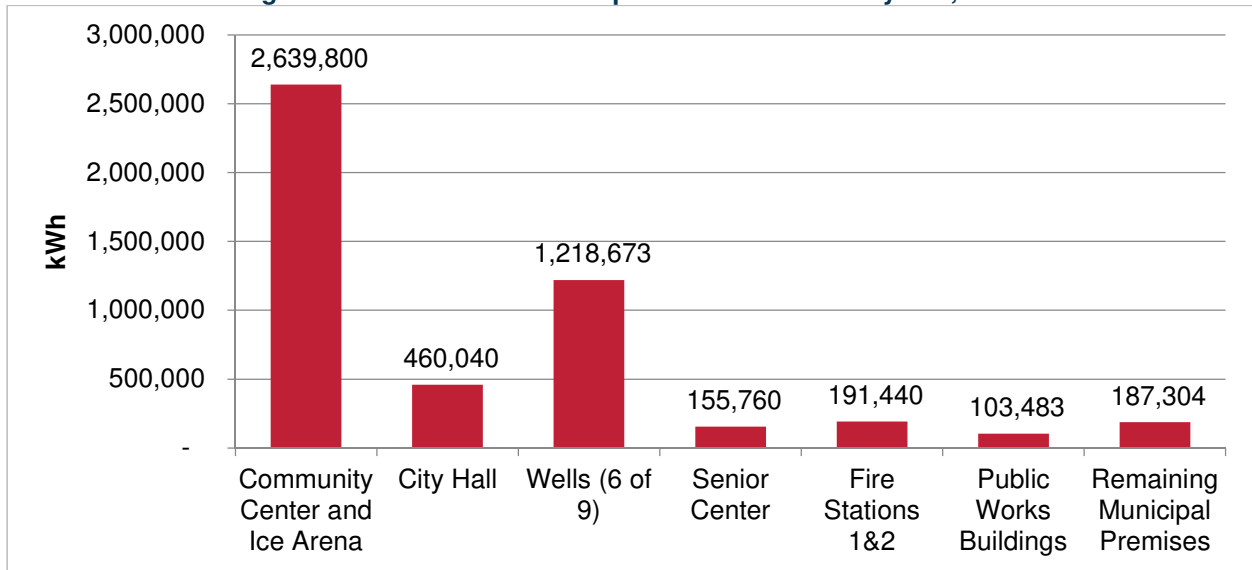
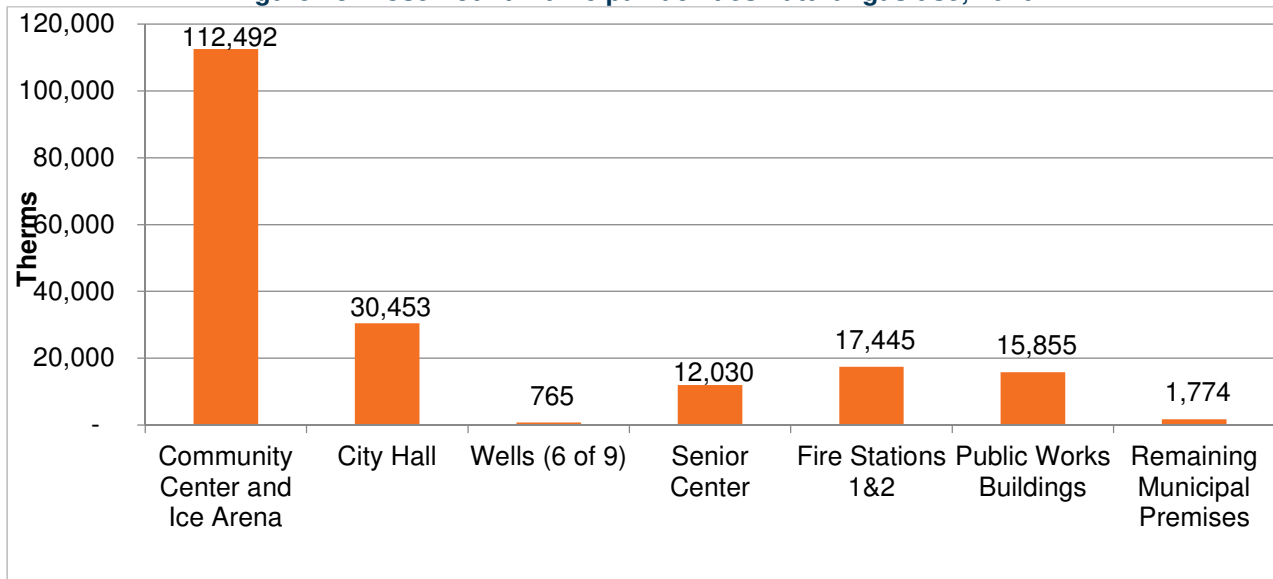


Figure 23: Rosemount municipal facilities natural gas use, 2016²⁴



²³ Data from Xcel Energy

²⁴ Data from Minnesota Energy Resources

There are also opportunities to reduce energy use through improved building operations. By reviewing current practices and updating building operation standards, as well as providing training to facility managers involved in implementing changes, the City can capture additional energy and cost savings through behavior change. Additionally, City Hall, the two fire stations, and other buildings would benefit from energy assessments to identify and prioritize opportunities to reduce energy use.

In addition to reducing energy use, the City wants to show leadership in adoption of renewable energy generation. As stated earlier, the City currently subscribes to community solar at an amount equivalent to 60 percent of its electricity use. The City wants to expand its use of renewable energy in a way that saves on energy costs or is cost-neutral, and seeks to install an on-site system that can be seen and potentially influence others to do the same.

Municipal Energy Goals and Strategies

To demonstrate energy leadership and motivate others in the community to take action, Rosemount set the following municipal goals:

- **Reduce City energy use 10 percent by 2020.**
- **Generate 75 percent of the city's energy with renewable energy.**

To achieve these goals, the City laid out the following targets for the next three years:

- All buildings and park shelters are upgraded to LEDs (12 facilities total)
- Community center completed recommissioning
- City Hall and two fire stations complete Xcel Energy Turn Key Services assessment
- Ice Arena completed custom efficiency rebate for low-E ceiling and new refrigerant
- Natural gas efficiency upgrades that result in eight prescriptive rebates received
- Subscription through Xcel Energy's Windsource[®] program or on-site generation equivalent to 679,241 kWh

The following strategies and actions will help the City achieve its energy goals. Recognizing that buy-in of elected officials and City leaders is critical in engaging them as key partners is woven into the strategies listed below. Broad engagement of City staff from all departments is also important, and will require some initial outreach during the first phase of plan implementation.

Focus Area: Municipal Energy

Strategy 1: Enhance perception of Rosemount as a sustainable city by promoting prior and current efforts to reduce energy use in city buildings and invest in renewable energy.

Actions:

- Draft and publish news articles highlighting City leadership in energy efficiency.
- Highlight actions taken on the City website.
- Educate City Council on actions taken and benefits of efficiency and renewables so they can become champions in the community.

Strategy 2: Pursue on-site installation of renewable energy generation on City buildings.

Actions:

- Develop technical specifications for renewable energy projects on City buildings.
- Consult with other locations of similar size that have successfully installed on-site solar.
- Research and prioritize financing options.
- Develop a proposal to present to City Council.

Strategy 3: Pursue energy efficiency opportunities in City buildings.

Actions:

- Develop tools/resources to clearly define return on investment of efficiency actions.
- Replace all lights in City facilities with LED lights and install motion sensors wherever possible.
- Evaluate City lighting, including parking lights, and building lights for smart control opportunities.
- Continue to maximize energy efficiency in scheduled projects at the municipal ice arena, including installing a low-e ceiling and efficient refrigeration system.

Strategy 4: Reduce energy use through efficient building operations.

Actions:

- Update City buildings operations manual, incorporating all opportunities to improve efficiency.
- Keep building benchmarking data up to date.
- Train facilities staff on efficient building operations.
- Implement an employee engagement campaign to engage all City staff in energy efficient behaviors.

Measuring Success

Success in this focus area will be measured using the following metrics:

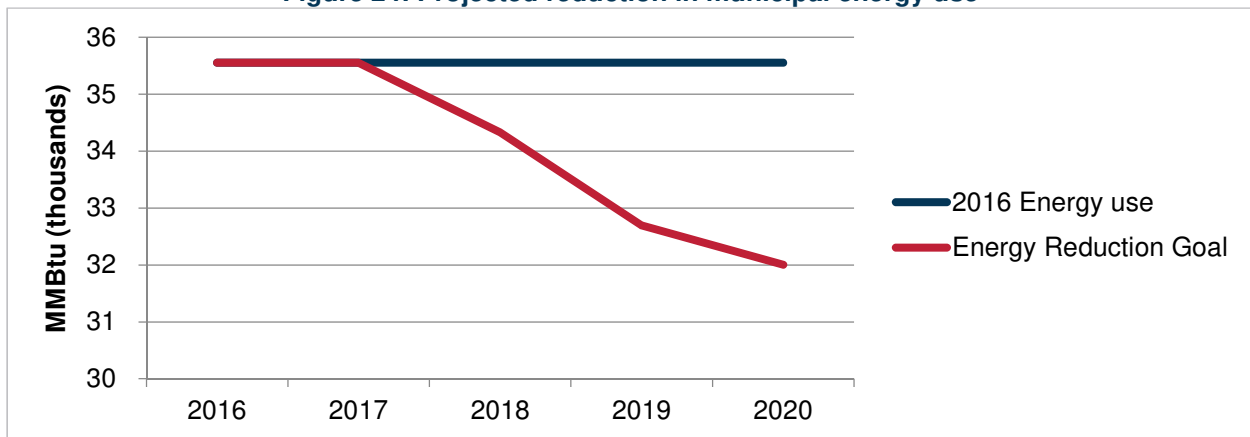
- Number of efficiency upgrades made to City facilities.
- Number of energy assessments completed.
- Energy savings resulting from efficiency upgrades and changes in building operations.
- Level of commitment and buy-in from City leadership and elected officials.
- Number of employees who participate in training and engagement opportunities.

All efficiency improvement opportunities will be evaluated for return on investment, and priority will be placed on cost-effectiveness when determining which opportunities to pursue.

Impact

Achieving the municipal energy conservation goal to reduce energy use 10 percent by 2020 will save the City an estimated \$70,000 in energy costs (Figure 24). If targets are achieved, Rosemount will save 281,000 kWh and 2,600 therms in the first year of implementation. Additionally, achieving the renewable energy goal means an additional 679,241 kWh of electricity generated by renewable resources each year, which would reduce the City’s 2018 greenhouse gas emissions by approximately 9 percent.

Figure 24: Projected reduction in municipal energy use



Energy Spotlight: Independent School District 196

Energy efficiency is a standard practice for Rosemount schools thanks to Mike Schwanke, coordinator of facilities and grounds for Independent School District 196. When an old furnace, boiler, or hot water heater needs replacement in one of the buildings, Schwanke always chooses ENERGY STAR[®]-certified equipment to cut down on future operating costs. The school district adopted an Energy Plan in 2008, which included building controls, lighting schedules, plug load reduction strategies, and energy efficiency in all new building construction going forward.

The district also conducted energy audits in its buildings as a first step to save energy. “Start with an audit, and from there you can see what is realistic,” says Schwanke. Each building also has a building automation system (BAS) that saves gas and electricity by scheduling lights to shut off in the evening and thermostats to adjust room temperatures by 5-10 degrees. Two hours before school begins, the BAS turns the lights back on and resets the temperature in time for students and faculty to arrive.

Lighting represents a huge opportunity for energy and cost savings for the district, according to Schwanke. For example, the District Office East building recently upgraded 45 lights from 1000 Watt metal-halide lamps to 295 Watt LEDs. This reduced the building’s total electric use 30 percent, saving roughly \$7,500 on energy bills annually. Additionally, as part of the Schools for Energy Efficiency (SEE) program, the school district identified behavioral changes to save energy, such as turning off lights and computer monitors in unoccupied classrooms. Schwanke’s next priority: to reduce heating costs by replacing old, drafty windows in school buildings.

Rosemount High School’s Gymnasium



Photo by William Wesen | CC BY

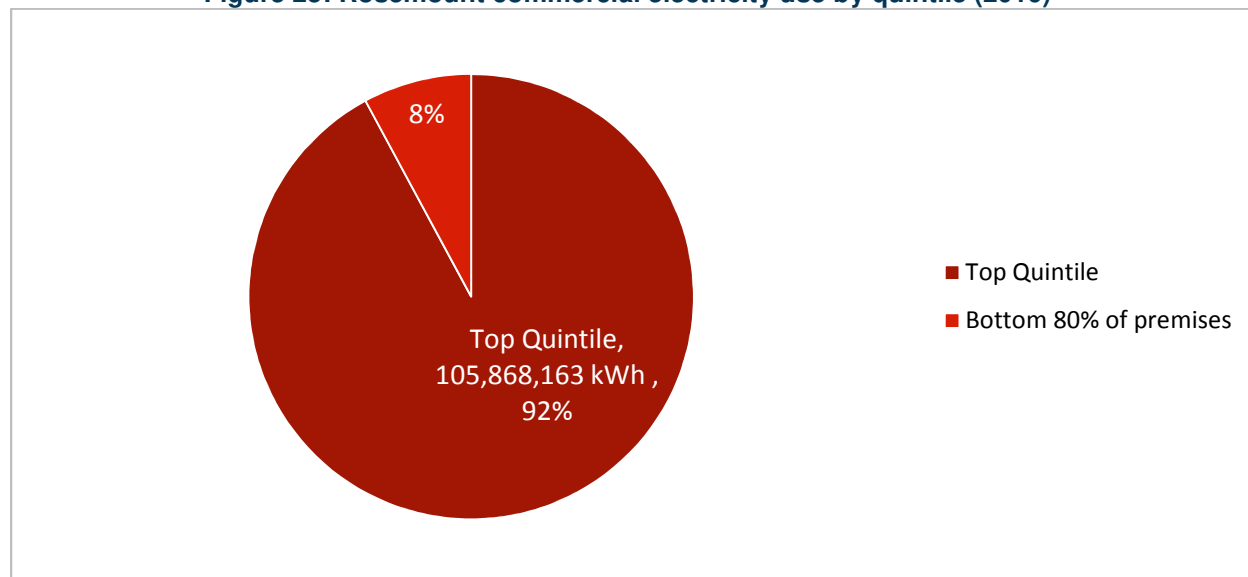
Focus Area 3: Large Energy Users

Large energy users are an important target for energy conservation efforts. Not only does this group represent great potential for capturing energy savings, it also includes some of the community's most prominent business leaders. Action taken by large energy users can inspire others in the community to follow suit as peer influence can be a key source of motivation for some.

There are various types of end users included in this large energy users group. Businesses in this group include industrial and manufacturing companies, as well as large retail stores. Also included in this group may be schools, large places of worship, and buildings belonging to nonprofit organizations, as well as multifamily buildings with more than five apartment units.

In 2016, commercial premises represented about 43 percent of the community's total energy consumption. A closer look at energy use among those commercial premises shows that the top 20 percent, about 190 premises, consume 92 percent of commercial electricity use (Figure 25) and about 90 percent of overall commercial energy use, making them a key target for energy conservation.

Figure 25: Rosemount commercial electricity use by quintile (2016)²⁵



Because the opportunities to save energy and money are so great, many of the largest energy users have already taken some action. For example, 38 percent of Xcel Energy large commercial electric customers have taken at least one energy action in the past three years. However, even those that have made some initial investments in reducing

²⁵ Xcel Energy and Dakota Electric customer data

energy use often have additional projects identified that haven't been pursued. This also means that close to 62 percent of large energy users have not taken any action to save energy in the past three years, and could be key targets for outreach efforts.

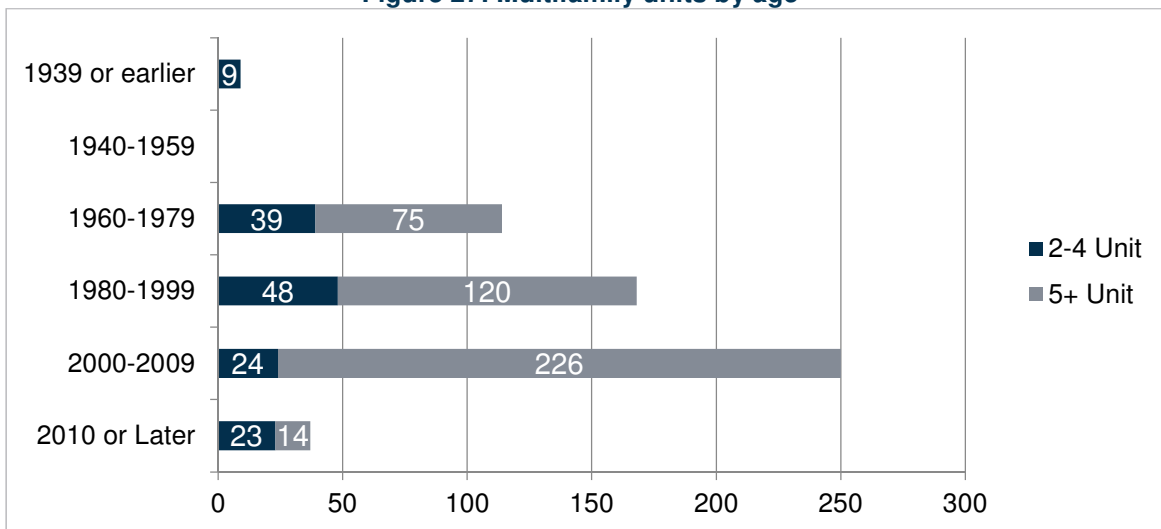
Multifamily Buildings

About 6 percent of units in Rosemount's multifamily buildings are in buildings with more than 5 apartment units (Figure 26). As stated previously, larger multifamily buildings may be included as part of residential or commercial energy use, or both, depending on how they are metered. For the purposes of this plan, multifamily buildings with five or more units are counted as large energy users. While there are newer multifamily buildings that were constructed in the past decade, just under half of all units in multifamily buildings are more than 25 years old and likely have many opportunities for energy conservation (Figure 27). Close to two thirds of units in larger apartment buildings are rented (Figure 26), so outreach efforts must target both landlords and tenants, particularly in buildings where tenants pay utility bills.

Figure 26: Housing units by type and tenure²⁶

	Number of Units	Percent	Owned	Rented
Single Family (attached or detached)	7,107	90%	90%	10%
2-4 Unit	143	2%	44%	56%
5+ Unit	435	6%	39%	61%
Mobile Home	169	2%	84%	16%

Figure 27: Multifamily units by age²⁷



²⁶ American Community Survey, 2016

²⁷ Ibid.

Large Energy Users Goal and Strategies

To encourage universal action to reduce energy consumption, Rosemount set the following goal for large energy users:

- **85 percent of the top 20 percent of energy users participate in energy conservation over the next three years.**

This compares to a baseline participation rate of 47 percent, and will require an estimated additional 75 energy saving actions among large energy users over the next three years. Achieving this target will require engagement of a variety of partners, utilizing all available channels for outreach and engagement. The following strategies and actions outline how the large energy users goal will be achieved.

Focus Area: Large Energy Users

Strategy 1: Identify and promote the top energy actions large energy users can take.

Actions:

- Engage with local Chamber of Commerce to co-host energy workshops/information sessions.
- Conduct one-on-one outreach to discuss efficiency opportunities and connect businesses to available resources.
- Promote expertise and support offered by utilities to improve existing building efficiency and maximize efficiency in new construction through targeted information materials.
- Engage City leadership and elected officials in business outreach through meetings with one or more businesses in the community.

Strategy 2: Offer support to facility managers in making decisions to invest in energy efficiency.

Actions:

- Promote success stories of local businesses and other large energy users that have saved money by taking action to reduce energy use.
- Support staff in bringing energy saving opportunities with Return-on-Investment information to decision makers/management.
- Promote MnTAP as a resource to Rosemount's large energy users; assist at least one business in obtaining MnTAP assistance.

Focus Area: Large Energy Users

Strategy 3: Leverage economic development efforts to attract new businesses by promoting energy efficiency

Actions:

- Develop informational resources targeting businesses considering locating in Rosemount.
- Connect businesses locating in Rosemount to utility key account managers to help plan for efficient operations at new locations.
- Train City economic development staff on energy efficiency resources and opportunities so they can share with businesses during regular interactions.

Strategy 4: Promote energy efficiency in multifamily buildings

Actions:

- Develop informational materials about energy efficiency programs and incentives aimed at both building owners/property managers and renters.
- Conduct one-on-one outreach to owners/property managers of older multifamily buildings.
- Host workshops for multifamily building tenants highlighting energy conservation.

Outreach Targets

Outreach efforts will target both facility managers and company leadership involved in making investment decisions. Emphasis in outreach will be energy assessments as a key step in identifying and prioritizing cost effective energy efficiency improvements. Utilities offer a variety of individualized program options that meet the unique needs of different types of end users, and rebates can often be customized based on what makes the most sense for individual customers. Wherever possible, efforts to reduce energy use will be highlighted through case studies, newsletter articles, and blog posts to demonstrate leadership and encourage others to take action.

Measuring Success

Success in this focus area will be measured using the following metrics:

- Participation in utility conservation programs
- Energy savings resulting from program participation
- Number of businesses engaged through outreach efforts
- Partnerships built with organizations and entities serving the business community

Primary Partners

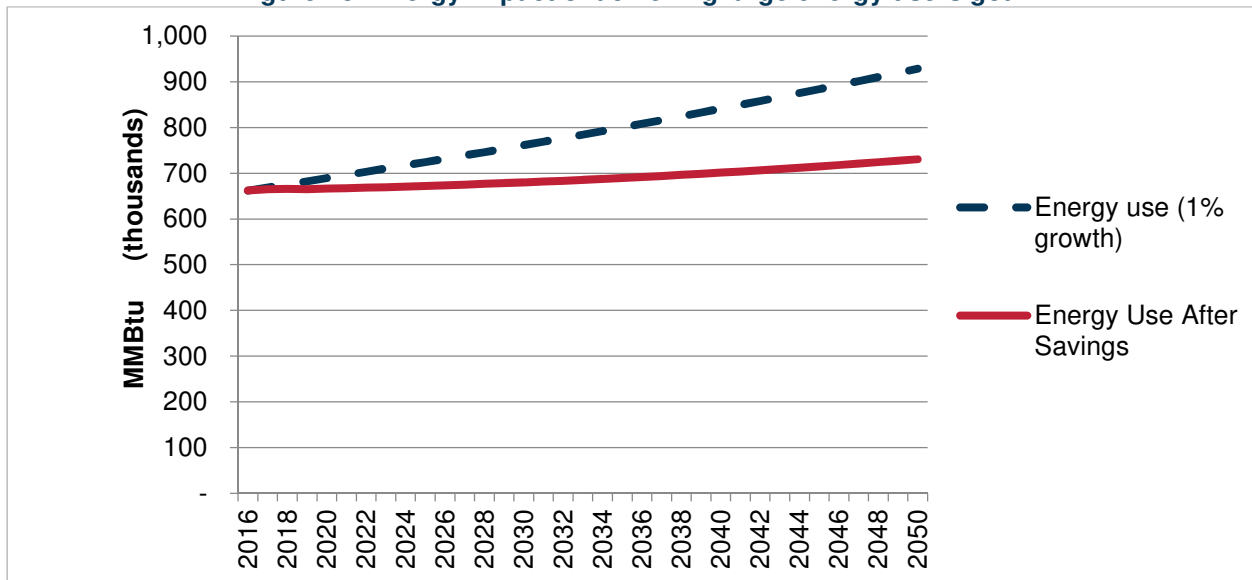
The Rosemount Environment and Sustainability Task Force will play an important role in coordinating efforts to engage large energy users, but will need the support of the City and other partners to conduct business outreach and engagement. Utility account managers will be key partners in helping to reach the largest energy users in the community. Other partners will be critical to success in this area, including:

- Dakota County Chamber of Commerce
- Rosemount Business Council
- Rosemount Community Development Department
- Rosemount School District (ISD 196)
- Dakota County Technical College

Impact

Assuming a 1 percent per year growth in this sector, achieving the large energy user participation goal will reduce energy use by 10 percent below the assumed growth rate by 2030 (Figure 28). If targets are achieved, the large energy users sector will save 1 million kWh and 21,600 therms in the first year of implementation, and will save Rosemount businesses an estimated \$360,000 in energy costs over the next three years. Specific payback periods for individual projects will vary, based on level of expenditure and a variety of other factors that are taken into consideration.

Figure 28: Energy impact of achieving large energy users goal



Energy Spotlight: Proto Labs

As the facility manager for Proto Labs: Manufacturing Accelerated, James Dreher works to make sure that the company's manufacturing facilities operate efficiently and cost-effectively. At the company's 180,000 square foot manufacturing facility in Rosemount, where monthly electricity operating costs exceed \$70,000, Dreher turned to energy efficiency to cut costs.

In June 2017, Proto Labs began working with Xcel Energy's Process Efficiency program, which offers an initial free high-level audit to identify significant technical projects that can generate substantial energy savings and rebates, as well as technical support and an energy plan to implement projects. The Process Efficiency audit identified a list of nearly a dozen energy efficiency recommendations. Once implemented, the identified actions are projected to save the facility over \$200,000 annually in electricity costs.

Less than a year after beginning the audit process, Proto Labs has already implemented a number of the most cost-effective recommendations. Projects that Proto Labs has already implemented include converting lights to LED, completing a compressed air study to identify leaks in their system, and a behavior change strategy of turning off equipment when not in use. The LED lighting project is expected to pay for itself in about two years, and the other projects were implemented at no cost to the company, meaning the manufacturing facility will begin to see savings immediately. Dreher's advice for other Rosemount businesses is, "when making decisions about projects and equipment consider your bottom line and consider the environment, and the projects will pay off."

Proto Labs Rosemount Injection Molding Facility

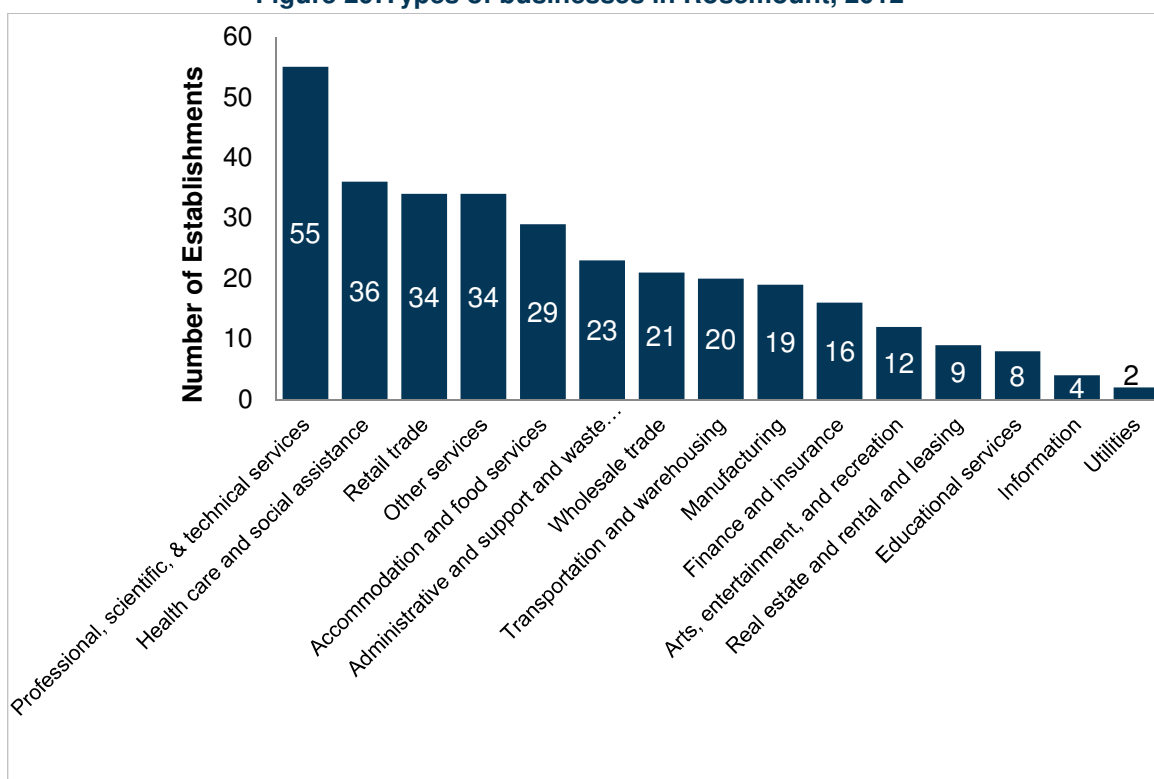


Focus Area 4: Small and Medium-Size Businesses

While focused efforts targeting the largest energy users has the potential to achieve substantial energy savings, there is great benefit to all businesses in the community reducing their energy use. Small- and medium-size businesses represent the remaining 80 percent of commercial energy users — approximately 800 commercial premises. As a group, small- and medium-size businesses consume approximately 10 percent of total commercial energy use.

A closer look at the types of businesses in the small- and medium-size business category shows a wide variety, each with their own set of energy-related opportunities. The greatest numbers of businesses are in professional, scientific, and technical services, health care and social assistance, and retail trade (Figure 29). These types of businesses often lease their space, and must therefore work with building owners to make many kinds of efficiency improvements. However, even businesses who do not own their building can make improvements to lighting and equipment they own, which can result in substantial energy and cost savings.

Figure 29: Types of businesses in Rosemount, 2012²⁸



²⁸ U.S. Census Bureau, 2012 Economic Census, 2012 Economic Census of Island Areas, and 2012 Non-employer Statistics.

Small- and Medium-size Business Goals and Strategies

Rosemount set the following goals for small and medium-size businesses:

- **Reduce small/medium business electricity use 2 percent per year**
- **25 small/medium businesses participate in natural gas programs.**

The strategies outlined to achieve these goals will require an active partnership between energy utilities, REST, and Dakota County Technical College. Effective outreach resulting in energy efficiency action will help businesses save money and remain competitive, and help the City build lasting relationships with its business community.

Focus Area: Small- and Medium-size Business

Strategy 1: Promote energy efficiency and renewable energy programs to Rosemount small- and medium-size businesses through a targeted outreach campaign

Actions:

- Develop simplified information resources targeting small- and medium-size businesses that highlight energy efficiency and renewable energy program options.
- Send a direct mailing out to all Rosemount businesses highlighting programs such as One-Stop Efficiency Shop and Brighter Ideas, with emphasis on available utility assistance in accessing rebates and completing paperwork.
- Host a business lunch to educate about energy efficiency benefits, programs and opportunities.
- Offer brief lunch-and-learn presentations on-site at businesses to motivate participation in energy efficiency and renewable subscription programs.
- Create a 'Green Award' to recognize businesses that have taken action.

Strategy 2: Conduct door-to-door outreach to reach business owners and managers.

Actions:

- Work with utilities and other partners to conduct a business blitz to reach small businesses.
- Conduct follow-up with businesses that were contacted to encourage following through on recommended actions.
- Integrate Dakota County Technical College (DCTC) students into business outreach and project implementation.

Focus Area: Small- and Medium-size Business

Strategy 3: Engage Trade Ally partners in promoting energy efficiency to Rosemount businesses

Actions:

- Create a simplified resource where Trade Allies and businesses planning equipment replacements can access information and forms for available rebates through all four utilities.
- Host a lunch-and-learn for local contractors serving Rosemount businesses to bring them up to speed on utility programs and rebates, and how best to communicate the economics of energy efficiency and serve business customers.

Strategy 4: Host a local business energy expo to promote energy efficiency.

Actions:

- Engage Trade Ally partners to set up booths at event.
- Invite businesses who have taken energy conservation actions to present during peer sharing sessions.
- Offer opportunities for businesses to speak one-on-one with utility representatives about available programs and rebates.
- Include lunch or breakfast with educational presentation about efficiency programs and financing options.

Outreach Targets

Outreach to small- and medium-size businesses is most successful when initiated in person, followed by individualized support with follow through. Small- and medium-size business owners are often busy, so convenience and efficient communication is critical to achieving desired outcomes. Electrical, HVAC, and other contractors that serve Rosemount's business community play an important role in helping to make energy decisions at key moments of opportunity. Engaging them is a key component of strategies in this focus area.

Measuring Success

Success in this focus area will be measured using the following metrics:

- Participation in utility conservation programs
- Energy savings resulting from program participation
- Number of businesses engaged through outreach efforts
- Partnerships built with organizations and entities that can assist with business outreach and follow-up

Primary Partners

The Rosemount Environment and Sustainability Task Force will play a role in small- and medium-size business outreach, but will require substantial support from other partners. Utilities, Trade Allies and program implementers will be key partners in both outreach

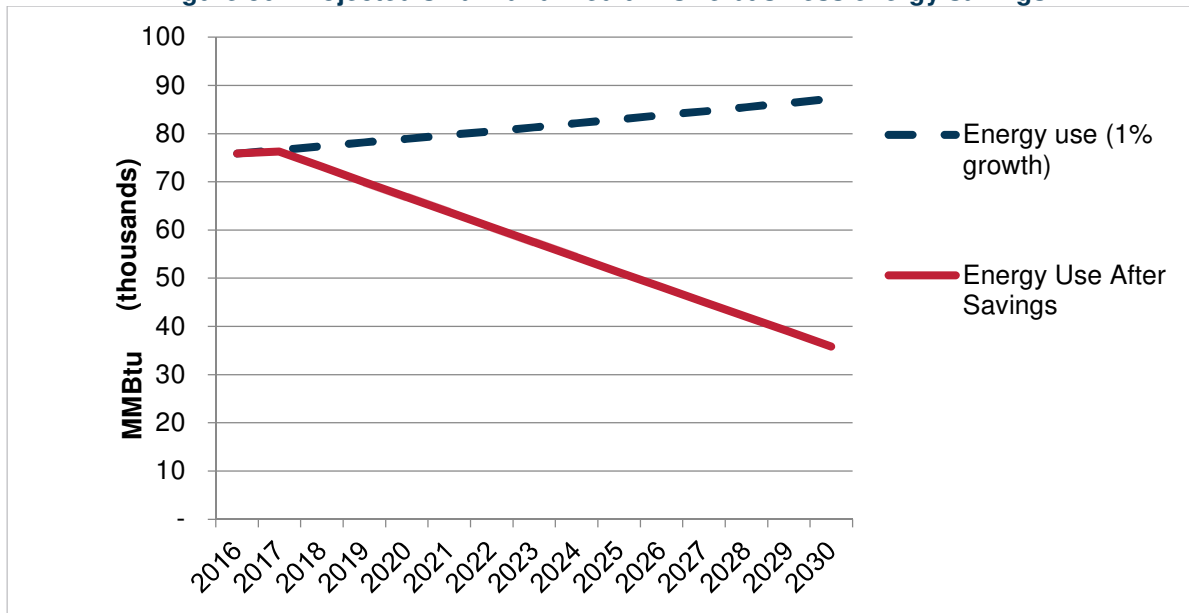
and follow-up to ensure businesses are supported in taking action. Other partners that will be critical to success in this area include:

- Dakota County Chamber of Commerce
- Rosemount Business Council
- Rosemount Community Development Department
- Dakota County Technical College

Impact

Assuming a 1 percent per year growth, achieving the small- and medium-size business energy goals will reduce overall energy use by close to 60 percent below where this sector would have been by 2030 (Figure 30). If targets are achieved, Rosemount small- and medium-size businesses will save 195,000 kWh and 32,500 therms in the first year of implementation. Additionally, achieving the small- and medium-size business goal would save this sector an average of \$36,000 per year on energy costs. As stated previously, specific payback periods for individual projects will vary, based on level of expenditure and a variety of other factors that are taken into consideration.

Figure 30: Projected small- and medium-size business energy savings



Energy Spotlight: Cemstone Products Company

Cemstone Products Company has long demonstrated its commitment to both cutting operation costs and to reducing the environment impact of manufacturing the “ready-mix” concrete that Cemstone is known for. At the newly completed Cemstone UMore facility, this has meant constructing the building using high efficiency LED lighting and heating and cooling systems.

Pat Bergin, Cemstone Products’ environmental manager, emphasized that, “At Cemstone, we are for anything that is helping the Earth and our pocket book.” By incorporating efficient technology into the new construction, Cemstone was definitely able to do both. The high-efficiency heating and cooling systems are expected to save the company money at its Rosemount facility. Installing high-efficiency lighting added a little over \$5,000 to project costs, but is expected to save the facility over \$11,865 annually in demand and electric costs over other lighting technology. These savings mean that the project had a payback of less than half a year.

Not only have these efficient lights been a boon for Cemstone Products’ pocketbook, but they have also been well received among the staff as well. According to Bergin, “Ultimately, it boils down to LED lights being a better product that requires less maintenance and provides better light.”

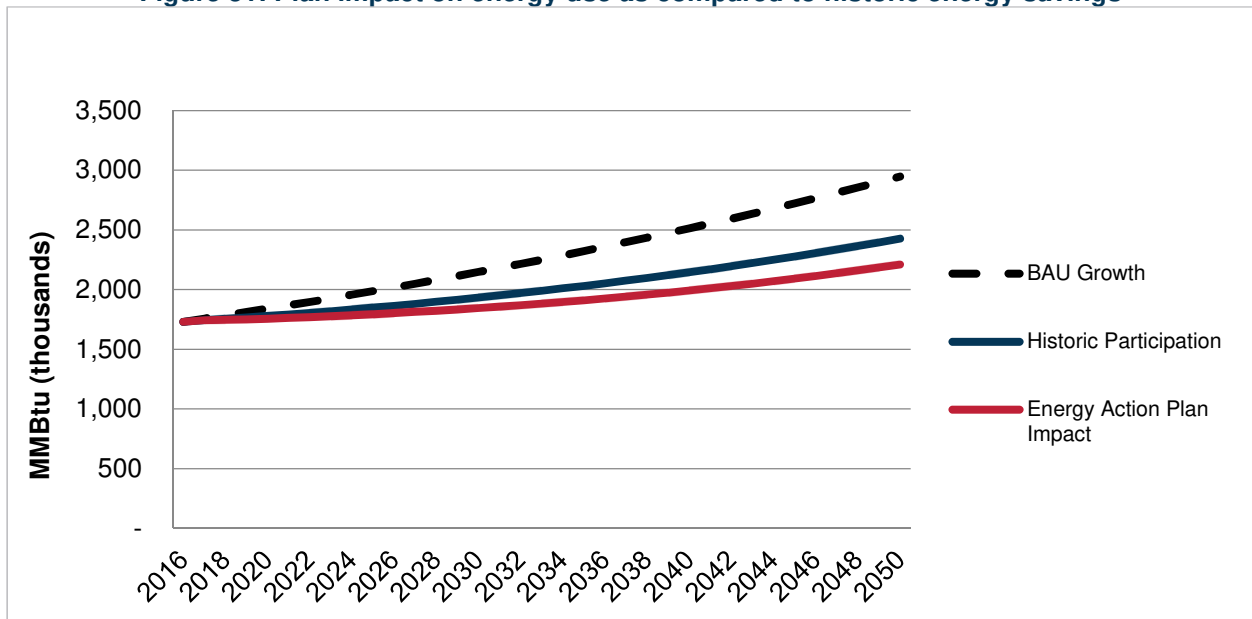
Cemstone’s UMore Facility



Impact of Energy Action Plan

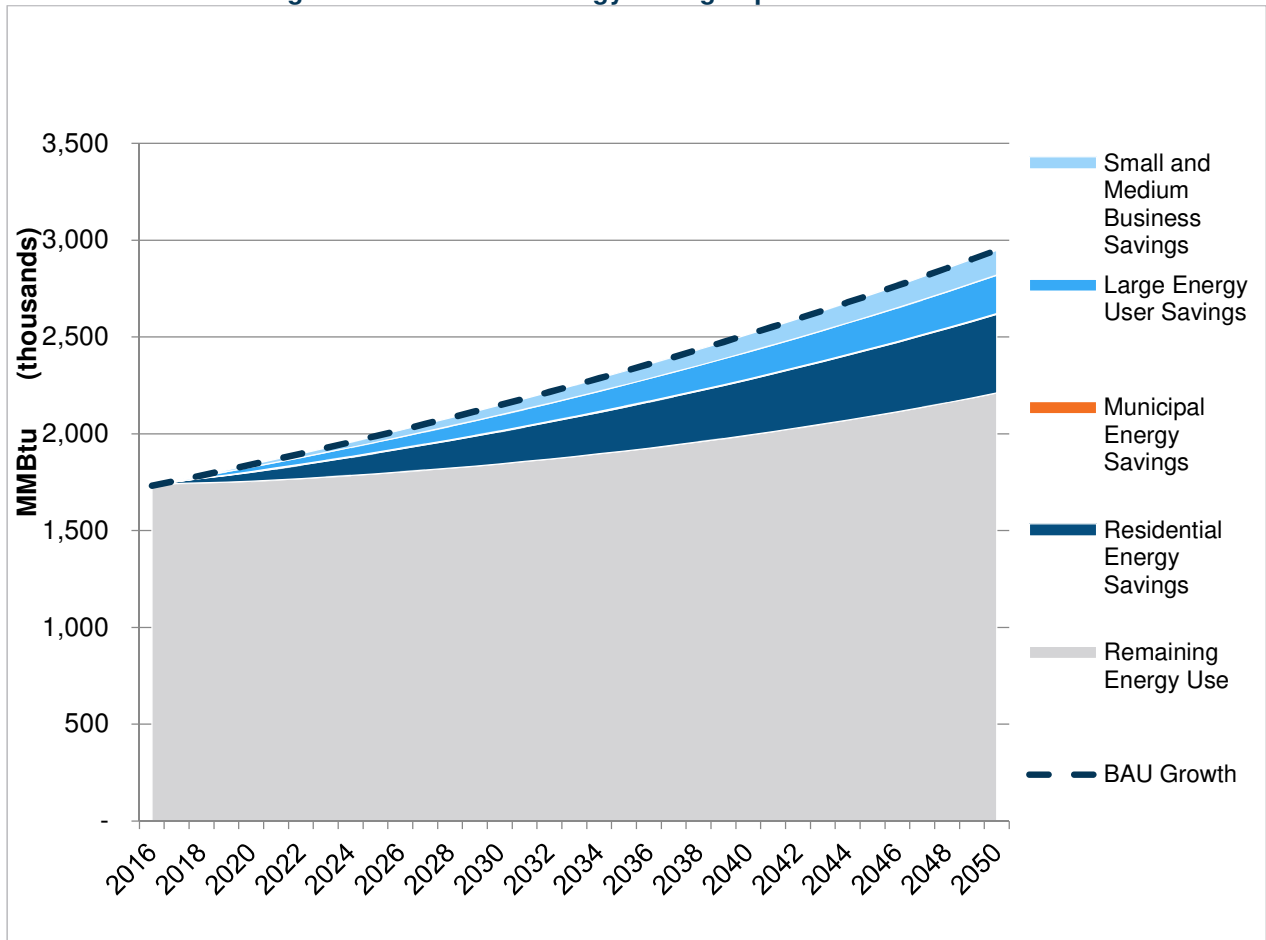
Overall, achieving the goals and targets laid out in this plan will reduce energy use 5 percent below where the community would have been by 2020, based on population and business growth assumptions, and 15 percent by 2030. This is about 5 percent more savings than would have been achieved had current levels of energy saving activity continued (Figure 31).

Figure 31: Plan impact on energy use as compared to historic energy savings

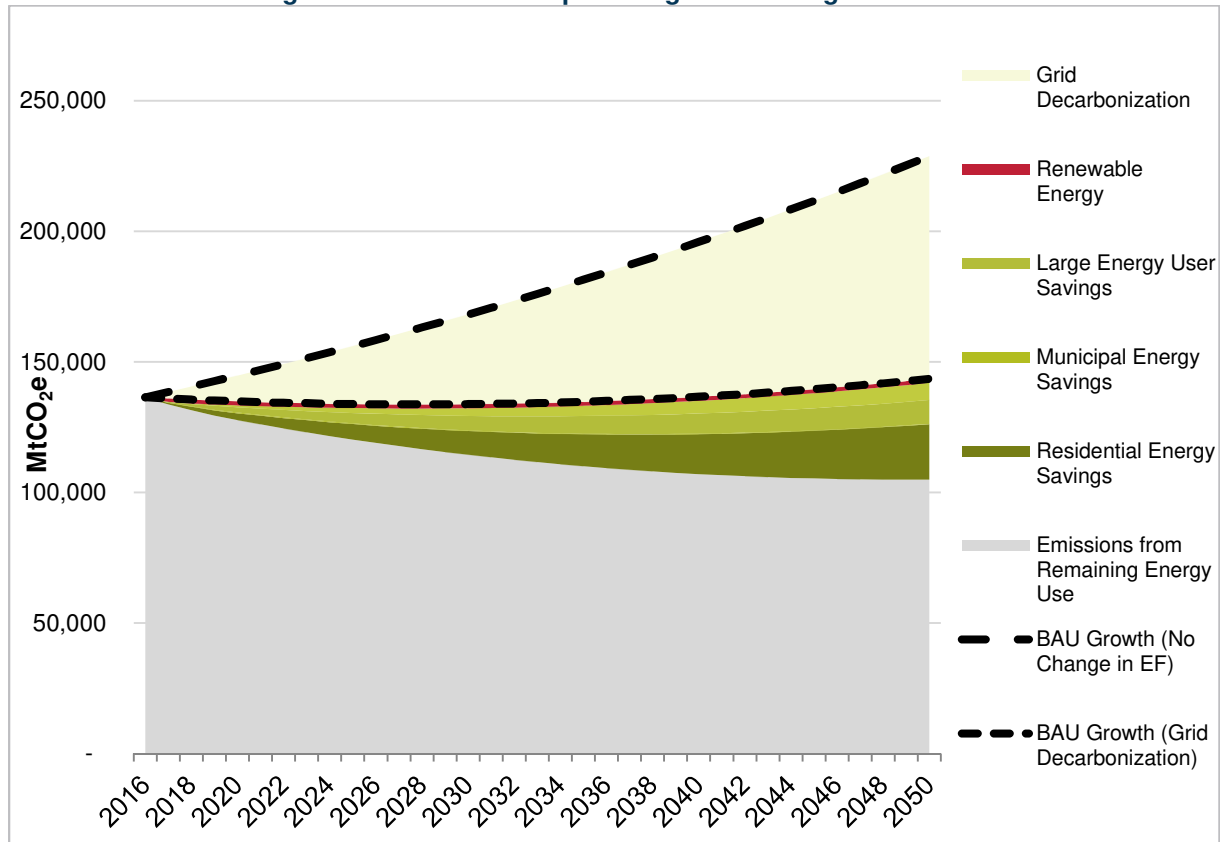


Actions in all four focus areas play an important role in helping Rosemount reach its energy goals. Residential action will make the greatest contribution towards energy savings (Figure 32), followed by large energy users. While municipal energy savings represents a small portion of the total to be achieved, action taken by the City plays a key role in demonstrating leadership and commitment to the rest of the community.

Figure 32: Combined energy saving impact of focus areas



The plan also makes an important impact on reducing Rosemount’s energy-related greenhouse gas emissions. If all targets are achieved, Rosemount will reduce its carbon footprint 15 percent by 2030, as compared to its Business-As-Usual growth scenario (Figure 33). Combined with utility efforts to expand carbon-free electricity generation, Rosemount will be on track to cut carbon emissions by more than 50 percent by 2050.

Figure 33: Combined impact on greenhouse gas emissions

Plan Implementation

The goals and strategies outlined in this plan include both short- and longer-term priorities for action. A detailed action plan that outlines tasks, roles, and timeline is included in Appendix 4.

Human capital is the greatest resource required to achieve the goals laid out in this plan. Implementing the strategies for each focus area will require a main point of contact and core team to coordinate resources and keep initiatives moving forward. Partners in Energy will provide support during the first 18 months of implementation in four main areas: Project management, technical expertise, data tracking, and marketing and communications. All four utilities serving Rosemount will leverage and direct existing resources toward helping the community reach its goals. Additional volunteers from the community will be needed to support both residential and business outreach and engagement efforts.

Short-term Priority Actions

To ensure resources are being used effectively to drive measurable results in the first year of implementation, several priority actions were identified as key starting points. These include:

Residential Energy

- Surveying residents about energy knowledge and communication channels.
- Creating a centralized, quick-reference guide for residents.
- Designing an outreach campaign to educate residents about energy efficiency and renewable energy opportunities.
- Creating simplified materials summarizing low-income utility programs available.

Municipal Energy

- Gaining buy-in from City leadership and elected officials on the benefits of efficiency and renewables so they can become champions.
- Updating City building benchmarking data.

Large Energy Users

- Developing targeted information materials that include case studies.
- Engaging Community Development department staff in business outreach.

Small- and Medium-Size Businesses

- Developing simplified information resources targeting small- and medium-size businesses.
- Sending a direct mail out to all Rosemount businesses highlighting available utility assistance in accessing rebates and completing paperwork.
- Creating a simplified resource where Trade Allies and business planning equipment replacements can access information and forms for available rebates.

Roles and Responsibilities

Implementing the goals, strategies, and actions laid out in this plan will require adequate resources invested by the City, as well as leadership and collaboration from a team of partners, including REST members and City staff, with support from Partners in Energy and the utilities that serve the community. To ensure plan success, the Energy Action Team assigned the following roles and responsibilities for the first 18 months of implementation.

Rosemount Environment and Sustainability Task Force (REST)

- Engage City leadership and elected officials in supporting energy conservation.
- Help gather survey responses.
- Design and implement outreach campaigns targeting residents and businesses.
- Build partnerships with local organizations and civic groups, including places of worship and school groups, to engage residents and businesses in energy efficiency.
- Build partnerships with the Dakota County Chamber of Commerce, Rosemount Business Council, and the Minnesota Technical Assistance Program (MnTAP) to promote energy efficiency to the business community.
- Create and implement an award program to recognize residents and businesses who take energy actions.

- Support workshops aimed at realtors, businesses and community members.
- Lead efforts to engage low-income residents, including door-to-door outreach.
- Co-host energy expo targeting local businesses.
- Conduct outreach to multifamily building owners and tenants to promote energy efficiency.

City of Rosemount

- Invest staff time in supporting plan implementation.
- Dedicate one or more pages on the City website for providing information and resources to help residents and businesses access utility programs and rebates.
- Lead by example through investments in energy efficiency and renewable energy in City facilities.
- Engage City staff from all departments in supporting energy conservation.
- Survey residents about energy knowledge and communication channels to help inform campaign design.
- Provide information about residential energy efficiency programs and rebates at City permit desk, targeting home renovations.
- Integrate energy and sustainability into economic development efforts that help bring new businesses and residents into the community.

Mayor and City Council

- Become advocates for achieving energy action plan goals.
- Promote engagement of residents in energy action.
- Support efforts to reduce energy use in City facilities.
- Identify resources to ensure long-term support of energy use reductions and sustainability in Rosemount.

Dakota County Technical College

- Engage students in conducting door-to-door outreach to local businesses.
- Host lunch-and-learn workshops for businesses about energy efficiency programs and opportunities.
- Co-host energy expo targeting local businesses.

Partners in Energy

- Develop simplified information resources for residents, businesses, and Trade Allies highlighting available utility energy programs and rebates.
- Assist in designing outreach campaigns and marketing materials.
- Provide technical tools to assist businesses with energy decisions.
- Provide biannual reports tracking progress toward goals.
- Provide overall project management support and coordination during the first 18 months of plan implementation.

Utilities (Xcel Energy, Minnesota Energy Resources, Dakota Electric, CenterPoint Energy)

- Assist in developing simplified information resources and marketing materials.
- Engage Account Managers, the Xcel Energy Business Solutions Center, and Trade Ally partners in promoting energy efficiency to local businesses.
- Utilize existing communication channels to reach out to Rosemount business customers.
- Co-host an energy expo targeting Rosemount businesses.
- Provide biannual program participation and energy savings data to help track progress toward goals.

Implementation Launch

Immediately following approval and adoption of this plan by City Council, the core team will meet to lay out a work plan and timeline for priority actions. A second, implementation Memorandum of Understanding will be signed which outlines commitments by both the City and Xcel Energy to complete identified actions during the identified time period. Overall coordination of plan implementation over the next 18 months will be the responsibility of a core team composed of REST members and City staff meeting regularly with Partners in Energy community facilitators.

How Will We Stay On Course

As part of implementation support, Partners in Energy will provide biannual progress reports that include metrics of success and overall progress toward goals. These reports will be made available to the public through the City of Rosemount website. Results of these reports will be analyzed to assess whether a change in course is needed. An in-person meeting will take place at the mid-point of implementation to evaluate overall progress in each of the focus areas and set priorities for the remaining time period. The Energy Action Team will reconvene around 15 months into implementation to evaluate whether Rosemount is on track to meet its goals, and whether goals should be revised to be more ambitious or expanded to include additional priorities.

Appendix 1: Planning Memorandum of Understanding



PARTNERS IN ENERGY
An Xcel Energy Community Collaboration

Memorandum of Understanding Phase 1 – Plan Development

Mr. Derick Anderson
Senior Engineer Technician
City of Rosemount
Rosemount, MN 55068-4997

Congratulations on being selected to participate in Xcel Energy's Partners in Energy. This offering is designed to provide your community with the tools and resources necessary to develop and implement an energy action plan that reflects the vision your community has for shaping energy use and supply in its future. Participation is intended to span 24 months with the initial 6-8 months dedicated to developing of a strategic energy action plan and the remaining time focused on the implementing that plan.

The intent of this Memorandum of Understanding (MOU) is to confirm the City of Rosemount's intent to participate in the initial plan development phase of the Partners in Energy program and outline the commitment that your community and Xcel Energy are making to this collaborative initiative. The primary objective of this phase of the program is to develop your energy action plan.

In order to achieve this Xcel Energy will provide:

- Consulting support to assist in identifying potential community stakeholders, and constructing or delivering an invitation or informational announcement regarding the planning process.
- Data analysis of community energy use and Xcel Energy program participation to the extent that it is legally and technically prudent and feasible. The results can be used to identify potential opportunities to implement plan strategies. Xcel Energy will attempt to integrate data provided by the City of Rosemount into the analysis if feasible.
- Professional facilitation of 3-5 plan development work sessions with the community stakeholder group to develop the energy action plan's vision, focus areas, goals and implementation strategies.

- Assistance as needed in synthesizing the community and program data collected with the vision of the community to identify attainable goals that align with suitable strategies and tactics.
- Development of the documented energy action plan that will incorporate inputs from the stakeholder planning team and will be accessible to the community.
- Commitment to delivering an actionable and complete energy action plan within seven months of the City of Rosemount and Xcel Energy signing this MOU.

Although participation in the Plan Development phase of Partners in Energy program requires no monetary contribution, the community, the City of Rosemount, does agree to provide:

- A single contact point to recruit active and engaged stakeholders, coordinate planning meeting logistics as well as distribution of deliverables, and lead participation of the community in the planning process.
 - Community staff engagement in developing workshop agendas, participating in post-workshop check-in meetings and follow-up work, and implementation planning.
- Commitment to ensuring community stakeholder engagement throughout the planning workshops. This could include consultation with key community stakeholders who may be relevant to the plan but not present on the energy action planning team, to gain input on proposed goals and strategies.
- Timely review of Energy Action Plan document, as well as shepherding the completed plan through stakeholder review process.
 - Good-faith evaluation of the recommendations and analysis provided, as well as fair consideration of the potential strategies and tactics identified to ensure alignment with the community's goals and priorities.
- Meeting facilities to host the stakeholder group during the development of the plan.
- Identification of existing community energy plans, programs, or initiatives that could be leveraged in successful development and delivery of this plan.

- Commitment to delivering an actionable and complete energy plan within a twelve month timeframe of the City of Rosemount and Xcel Energy signing this MOU. Within this period the City of Rosemount is committed to completing the formation of the energy action planning team and the development and approval of the energy action plan.
- Public distribution of the work products developed with the support of the Xcel Energy's Partners in Energy Program.

**Resource Commitment Summary
Plan Development Phase**


City of Rosemount	Xcel Energy
<ul style="list-style-type: none"> • Single point of contact • Support in maintaining community stakeholder engagement throughout the planning process. • Involvement in development and review of Energy Action Plan content. • Meeting facilities • Access to existing energy-related plans and programs • Commitment to completing the plan development and approval • Agreement that the energy plan resulting from this work will be available to the public 	<ul style="list-style-type: none"> • Assistance identifying and recruiting stakeholders • Analysis of community energy use and program participation • Facilitation of planning sessions • Training and guidance developing goals and strategies • Documentation and delivery of the energy action plan • Commitment to completing the plan development

The Memorandum of Understanding for the Implementation Phase of the Partners in Energy program will be developed upon completion of your energy action plan and will outline your goals and the resource commitment from Xcel Energy and the City of Rosemount

All communications pertaining to this agreement shall be directed to Derick Anderson, on behalf of the City of Rosemount, and Tami Gunderzik on behalf of Xcel Energy.

Thank you again for your continued interest in Xcel Energy's Partner in Energy program. We look forward to assisting the City of Rosemount in the development of an action energy plan.

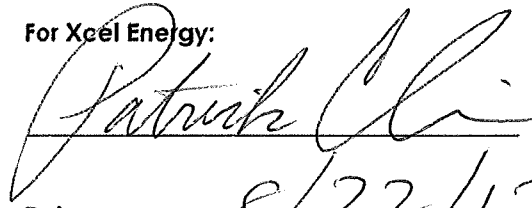
For the City of Rosemount:



BRIAN L. ERICKSON

Date: 17 AUG 2017

For Xcel Energy:



Date: 8/22/17

Appendix 2: Community Background

Rosemount is a fast-growing outer-ring suburb of the Minneapolis-Saint Paul metropolitan area. According to Metropolitan Council projections, Rosemount's population will grow by 75 percent by 2040, and the number of jobs in the community will nearly double within that time frame.

Geography

The City of Rosemount is located in Dakota County in southeast Minnesota. The northeast corner of the community borders Wisconsin along the Mississippi River. Figure 34 below shows Rosemount's location within the state and county.

Figure 34: Rosemount is located in Dakota County in southeast Minnesota. Rosemount is shown in red on the left, and Dakota County is shown in red in the state map of Minnesota on the right

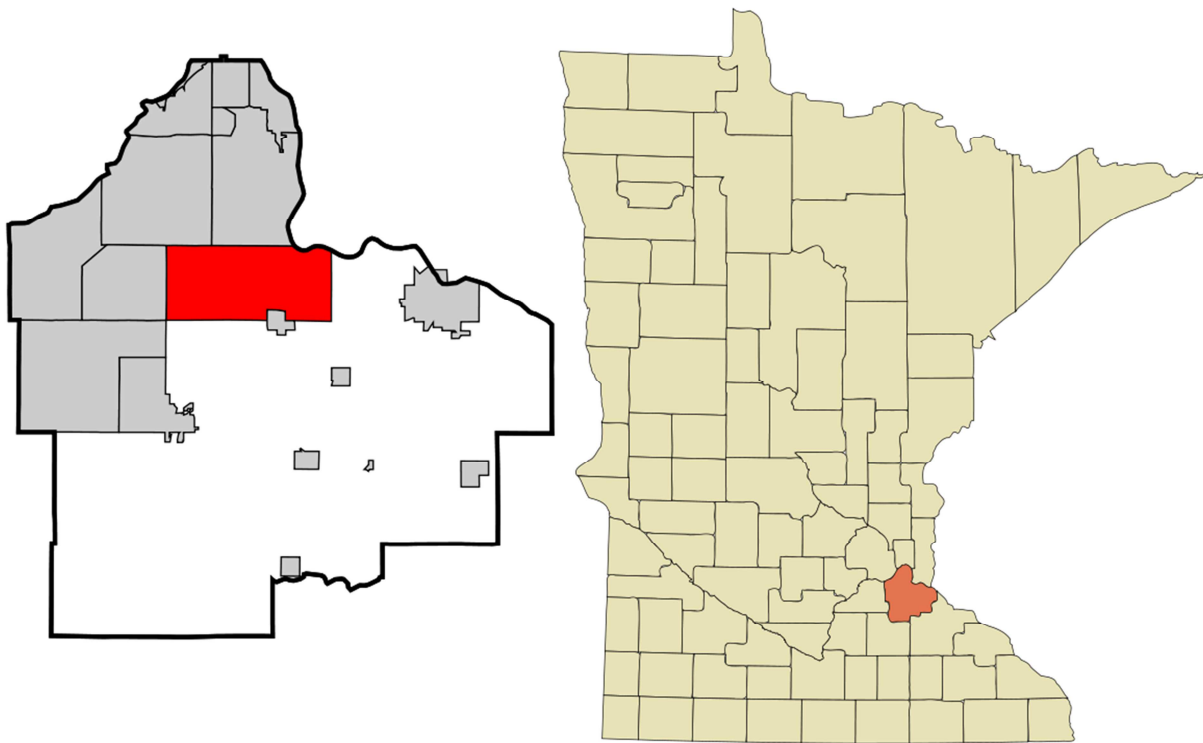


Image by Arkyan | CC BY

Approximately half of the land in Rosemount is zoned agricultural, with population concentrated in the western third of the city. Rosemount is also home to Flint Hills Resources Pine Bend Refinery, the largest oil refinery in the state. The refinery and buffer land surrounding it occupy most of the northeast corner of the city.

Population, and Demographics

In 2016, Rosemount was home to 23,099 residents making up 8,073 households.²⁹ Rosemount's 2030 Comprehensive Plan projected the city's population to nearly double between 2010 and 2040. The city's median income in 2016 was \$90,448, with 4.9 percent of residents living in poverty, as compared to 11.3 percent statewide.³⁰ Almost 43 percent of Rosemount families have children under the age of 18.³¹ The majority of the population, 86 percent, is white, with the remaining population spread relatively evenly between African Americans (5 percent), Asians (5 percent) and those of Hispanic origin (4 percent). Just over 11 percent of the population speak a language other than English at home, including Spanish, other Indo-European languages, and Asian and Pacific Island languages.³²

Housing

Most residents of Rosemount – 87 percent – own their homes, while 12 percent rent. While there are a number of older homes in Rosemount, the vast majority of current housing stock was built after 1980. An average of 95 new homes were built in the community each year between 2012 and 2016, and the rate of new home construction will likely remain steady or increase in coming years.³³

Over 68 percent of Rosemount's housing units are single family detached. However, over 21 percent of housing units are single family attached (townhomes or similar), and 7.6 percent of units are in multifamily housing complexes. There is one manufactured home development within the City of Rosemount, located adjacent to downtown. Manufactured homes make up about 2 percent of the City's housing units.

Altogether, 88 percent of households in Rosemount heat their homes with utility gas provided by one of the three natural gas utilities serving the Rosemount area.³⁴ Most of the remaining homes in Rosemount use electric heat.

Older homes near downtown Rosemount.



²⁹ American Community Survey 5-Year Estimates, 2012-2016

³⁰ Ibid.

³¹ Ibid.

³² Ibid.

³³ City of Rosemount permit data, 2017

³⁴ American Community Survey 5-Year Estimates, 2011-2015

Education

Rosemount is served by Independent School District 196, and is home to 2 elementary schools, 1 middle school, and 1 high school.³⁵ The district serves approximately 28,000 students, only a portion of which live in Rosemount.³⁶ Intermediate School District 917 also serves Rosemount, providing special education and other services to students in the community. One ISD 917 school, Alliance Education Center, is located in Rosemount. Rosemount's high school graduation rate was 94 percent in 2017.³⁷ Over 37 percent of Rosemount residents have some college, and 18 percent have a college degree.³⁸

Business and Economy

Rosemount is home to a variety of employers and businesses. In total, there are about 1,800 businesses located in Rosemount.³⁹ Schools, including ISD 196, and the area's post-secondary institution, Dakota County Technical College, employ a large number of people. Rosemount also employs a number of workers in the industrial and manufacturing sectors. Rosemount's top employers as of 2016 are identified in Figure 35 below. Unemployment in the city is slightly lower than the state average, at 4.1 percent.⁴⁰

³⁵ District 196 (2018). Retrieved from <http://www.district196.org/schools/>

³⁶ District 196 (2018). Retrieved from <http://www.district196.org/about/>

³⁷ U.S. News and World Report (2018). Rosemount Senior High. Retrieved from <https://www.usnews.com/education/best-high-schools/minnesota/districts/rosemount-apple-valley-eagan/rosemount-senior-high-11052>

³⁸ American Community Survey 5-Year Estimates, 2012-2016

³⁹ US Census Bureau (December 15, 2015). 2012 Survey of Business Owners. Retrieved from <https://factfinder.census.gov>

⁴⁰ American Community Survey 5-Year Estimates, 2011-2015

Figure 35: Major employers in Rosemount (2016).⁴¹

<i>Employer</i>	<i>Products/Services</i>	<i>Employee Count</i>
Rosemount School District #196	Elementary & Secondary Schools	4,000
Flint Hills Resources (Pine Bend Refinery)/ Koch Industries	Petroleum & Coal Products Manufacturing	1,300
Wayne Transports	General Freight Trucking	450
Dakota County Technical College	Technical & Trade Schools	270
Intermediate School District 917	Elementary & Secondary Schools	190
Cub Foods	Supermarket Grocery	130
Spectro Alloys Corp	Alumina & Aluminum Production & Processing	121
El Dorado Packaging	Converted Paper Product Manufacturing	90
Proto Labs	Injection Molding Machinery Plastics Manufacturing	71
Astro Plastics	Plastics Product Manufacturing	55
Endres Processing LLC	Other Animal Food Manufacturing	50
MRCI	Rehabilitation Vocational Services	42

Local Outreach and Communication Channels

Engaging the community is critical to reaching energy action plan goals. Below are some of the ways that residents and businesses currently receive information (Figure 36). These communication channels will be helpful during implementation efforts.

⁴¹ City of Rosemount (2018). Community Profile. Retrieved from <https://www.ci.rosemount.mn.us/406/Community-Profile>

Figure 36: Local outreach channels**Local Outreach Channels****Digital and Print Communications**

- Social media
 - Facebook – City page has 2,645 followers
 - Twitter – City feed has 718 followers
 - Nextdoor – Over 4,000 followers in Rosemount, across 19 neighborhoods
- Utility emails
- City emails to resident and business subscribers
- Regional Chamber of Commerce weekly newsletter
- Local community TV channel
- School district newsletters
- *Dakota County Tribune*
- *Rosemount Town Pages*
- *Rosemount City News*

Events

- National Night Out
- Home and Business Expo
- Leprechaun Days

Community Spaces for Collateral Distribution

- School groups/clubs
- Civic group presentations – Rotary Club, Chamber of Commerce, Business Council
- Electronic billboards outside of City Hall and the Steeple Center

Figure 37: The City of Rosemount publishes a triannual newsletter, the Rosemount City News.

Appendix 3: Utility Data

Premises Served

Figure 38: Premises served by Rosemount utilities (2016)

Premises	Xcel Energy	MERC	Dakota Electric	CenterPoint Energy
Residential Electric Only	5,190	n/a	3,081	n/a
Residential Gas Only	400	7,473	n/a	15
Residential Electric + Gas	382	n/a	n/a	n/a
Commercial Electric Only	704 ⁴²	n/a	155	n/a
Commercial Gas Only	n/a	284	n/a	1
Commercial Electric + Gas	n/a	n/a	n/a	n/a

Summary of Electric Use by Utility

Figure 39: Residential Electric Use by Utility (kWh)

Utility	2014	2015	2016
Xcel Energy	47,009,219	46,712,866	48,794,298
Dakota Electric	36,784,351	35,374,398	35,342,654
Total	83,793,570	82,087,264	84,136,952

Figure 40: Commercial & Industrial Electric Use by Utility (kWh)

Utility	2014	2015	2016
Xcel Energy	99,199,876	101,912,158	112,728,453
Dakota Electric Association	3,933,920	4,054,150	2,190,458
Total	103,133,796	105,966,308	114,918,911

Figure 41: Municipal Electric Use by Utility (kWh)

Utility	2014	2015	2016
Xcel Energy	4,234,010	4,420,570	4,528,274
Dakota Electric Association	n/a	n/a	298,700
Total	4,234,010	4,420,570	4,826,974

⁴² Includes premises with zero kWh use in 2016

Summary of Gas Use by Utility⁴³

Figure 42: Residential Gas Use by Utility (therms)

Utility	2014	2015	2016
Xcel Energy	755,139	633,925	658,741
MERC	6,034,391	6,034,391	6,034,391
CenterPoint Energy	19,136	15,178	14,406
Total	6,808,666	6,683,494	6,707,538

Figure 43: Commercial & Industrial Gas Use by Utility (therms)

Utility	2014	2015	2016
Xcel Energy	-	-	-
MERC	n/a	n/a	3,459,526
CenterPoint Energy	-	-	-
Total	n/a	n/a	3,459,526

Figure 44: Municipal Gas Use by Utility (therms)

Utility	2014	2015	2016
Xcel Energy	-	-	-
MERC	n/a	n/a	190,814
CenterPoint Energy	-	-	-
Total	n/a	n/a	190,814

⁴³ If a utility does not provide gas service to the noted sector, it is marked with “-“. If data for a year are not available, that year is marked with “n/a”.

Summary of Program Participation Data by Utility

Xcel Energy Program Participation and Savings

Figure 45: Participation counts for Xcel Energy residential customers in Rosemount, 2014-2016. See Figure 46 for corresponding residential electric and gas savings.

Residential Program	2014 Participation	2015 Participation	2016 Participation
Efficient New Home Construction	97	73	95
Home Energy Audit	7	4	3
Home Energy Savings Program	-	-	4
Home Energy Squad	1	1	6
Insulation Rebate	1	-	-
Low-Income Home Energy Squad	1	1	-
Residential Cooling	46	62	82
Residential Heating	50	54	55
Refrigerator Recycling	26	33	18
Residential Saver's Switch	156	26	460
Smart Thermostat	-	1	58
Water Heater Rebate	10	3	5
All Residential Programs	395	258	786

Figure 46: Electric (kWh), and gas (therm) savings for Xcel Energy residential customers in Rosemount, 2014-2016. See Figure 45 for corresponding residential participation counts.

Residential Program	2014		2015		2016	
	Savings (kWh)	Savings (therms)	Savings (kWh)	Savings (therms)	Savings (kWh)	Savings (therms)
Efficient New Home Construction	95,048	6,716	62,474	9,346	14,011	10,608
Home Energy Audit	-	-	-	-	-	-
Home Energy Savings Program	-	-	-	-	2,585	-
Home Energy Squad	3,527	97	74	57	13,791	572
Insulation Rebate	12,017	-	-	-	-	-
Low-Income Home Energy Squad	1,006	176	600	84	-	-
Residential Cooling	28,194	-	33,816	-	46,432	-
Residential Heating	21,114	3,255	27,945	1,865	29,556	2,558
Refrigerator Recycling	22,835	-	33,346	-	17,751	-
Residential Saver's Switch	1,256	-	224	-	3,688	-
Smart Thermostat	-	-	-	-	-	-
Water Heater Rebate	-	211	-	68	-	150
All Residential Programs	184997	10455	158479	11420	127814	13888

Figure 47: Participation counts and electric (kWh) savings for Xcel Energy commercial customers in Rosemount, 2014-2016.

Commercial Program	2014		2015		2016	
	Participation	Savings (kWh)	Participation	Savings (kWh)	Participation	Savings (kWh)
Cooling	3	50,464	1	2,340	3	1,282
Custom Efficiency	-	-	-	-	1	1,641,247
Efficiency Controls	-	-	-	-	1	6,525
Electric Rate Savings	4	-13,346	-	-	5	-20,922
Energy Design Assistance	-	-	-	-	1	457,478
Energy Efficient Buildings	1	130,143	-	-	-	-
Fluid System Optimization	2	503,536	1	11,042	3	354,447
Lighting Efficiency	3	8,621	11	395,770	9	898,715
Motor Efficiency	-	-	-	-	4	709,919
Recommissioning	-	-	-	-	1	-
Saver's Switch for Business	2	85	6	70	11	156
Small Business Lighting	5	293,427	5	130,833	7	184,508
All Commercial Programs	20	972,930	24	540,055	46	4,233,355

Dakota Electric Program Participation and Savings

Figure 48: Participation counts and electric (kWh) savings for Dakota Electric residential customers in Rosemount, 2015-2016.

Residential Program	2015 Participation	Savings (kWh)	2016 Participation	Savings (kWh)
Freezer Recycling	1	1,196	3	3,588
ECM Motor Rebate	-	-	43	3,1476
Fluorescent Light Rebate	3	81	5	135
LED Light Rebate	125	5,625	115	5,175
Refrigerator Rebate	28	29,316	32	3,3504
Working Appliance Rebate	5	5,235	10	10,470
All Residential Programs	162	41,453	208	84,348

Figure 49: Participation counts and electric (kWh) savings for Dakota Electric commercial and industrial customers in Rosemount, 2015-2016.

Commercial Program	2015 Participation	Savings (kWh)	2016 Participation	Savings (kWh)
All Commercial Programs	7	56,546	24	127,783

CenterPoint Energy Program Participation and Savings

Figure 50: Participation and gas (therm) savings for CenterPoint Energy customers in Rosemount, 2015-2016.⁴⁴

Residential Program	2015 Participation	Savings (therms)	2016 Participation	Savings (therms)
Low-Flow Showerhead & Aerator and Low-Income Weatherization ⁴⁵	9	450	5	220
Home Energy Reports ^Δ	8	107	8	120
All Residential Programs	17	56	13	34

⁴⁴ Conservation program participation data for the commercial/Industrial sector are not provided for CenterPoint Energy. CenterPoint does not release CIP participation information unless it can aggregate data from three or more customers. CenterPoint Energy does not release CIP participation data unless it can aggregate data from three or more customers.

⁴⁵ To preserve customer privacy, statistics from the Heating System Rebates and Low-Flow Showerhead & Aerator programs are aggregated. CenterPoint does not release CIP participation information unless it can aggregate data from three or more customers.

^Δ Indicates that a program was not included in aggregated participation and savings summaries and projections.

MERC Program Participation and Savings

Figure 51: Participation and gas (therm) savings for MERC residential customers in Rosemount, 2014-2016.

Residential Program	2014 Participation	Savings (therms)	2015 Participation	Savings (therms)	2016 Participation	Savings (therms)
4U2	-	-	5	1,104	4	432
Low Income Weatherization	2	548	10	1,420	7	766
Online Audits (Aggregate)	77	-	76	-	59	-
Online Audits (Lead Only) ^Δ	6	-	5	-	4	-
Residential Energy Audit	15	842	4	256	10	46.0
Existing Rebates	313	31,800	380	44,174	357	38,684
New Homes	6	375	1	9	6	260
Water Kits	114	8,449	147	10,964	104	8,005
Home Energy Excellence	86	53,486	63	38,404	83	44,465
All Residential Programs	619	95,500	691	96,331	634	92,658

Figure 52: Participation and gas (therm) savings for MERC commercial and industrial customers in Rosemount, 2014-2016.

Commercial Program	2014 Participation	Savings (therm)	2015 Participation	Savings (therm)	2016 Participation	Savings (therm)
BOC	1	520	-	-	1	1,098
CI Audits	-	-	-	-	-	-
CI Prescriptive Rebates	4	1,380	15	59,052	29	2,127
Turnkey	-	-	-	-	-	-
Multifamily	-	-	162	1,887	50	486
Small Business	4	90	-	-	6	1,095
All Commercial Programs	9	1,990	177	60,939	86	4,806

Renewable Energy Participation

Figure 53: Xcel Energy's Windsource[®] participation and usage, 2014-2016.

Sector	2014 Participation	Usage (kWh)	2015 Participation	Usage (kWh)	2016 Participation	Usage (kWh)
Residential	145	294,460	179	351,661	191	398,625
Commercial	2	12,054	2	11,822	2	11,608
Total	147	306,514	181	363,483	193	410,233

Figure 54: Dakota Electric Wellspring Renewable Energy® participation and usage, 2017

Sector	2017 Participation	Usage (kWh)
Residential	44	n/a
Commercial	2	n/a
TOTAL	46	245,000

Appendix 4: Work Plan and Timeline

Residential Energy									
Actions	Q3 2018	Q4 2018	Q1 2019	Q2 2019	Q3 2019	Q4 2019	Responsible	Support	Other Resources Required
Create a centralized, quick-reference guide for residents interested in saving energy.							City website coordinator (Alan Cox)	Partners in Energy REST Utilities	Page(s) on City website
Survey residents about energy knowledge and communication channels to help inform campaign design.							Rosemount Environment and Sustainability Task Force (REST)	City Partners in Energy	Survey mechanism
Design and implement an outreach campaign to educate residents about energy efficiency and renewable energy opportunities.							Rosemount Environment and Sustainability Task Force (REST)	Partners in Energy	Flyers and other marketing materials Access to communication channels
Conduct outreach through local civic groups, including places of worship and school groups, to engage residents in energy efficiency.							Rosemount Environment and Sustainability Task Force (REST)	One Rosemount Interfaith Power and Light School District	Flyers and other marketing materials Presentation slides
Create an award program to recognize residents who have taken energy action.							Rosemount Environment and Sustainability Task Force (REST)		Prizes/lawn signs or something similar
Host CEU-eligible training for realtors in the area to help them interpret energy audit results and convey the value of energy efficiency to prospective homebuyers.							Home Energy Squad	Partners in Energy REST Dakota County Chamber of Commerce Mayor	Information materials targeting realtors
Provide information about residential energy efficiency programs and rebates at City permit desk, targeting home renovations.							City - Permit office	Partners in Energy	Information materials targeting home renovation Space in permit office to display materials
Develop informational materials to maximize energy efficiency at key moments of opportunity, such as when a furnace or water heater needs replaced.							Partners in Energy	City - Permit office City website coordinator	Information materials
Create simplified materials summarizing low-income utility programs available. Ensure informational materials are available in languages other than English.							Partners in Energy	Utilities	Translation services
Partner with local organizations serving low-income residents and those living on a fixed income to promote income qualified programs.							Rosemount Environment and Sustainability Task Force (REST)	Partners in Energy Community Action Partnership Rosemount Family Resource Center	
Conduct door-to-door outreach in areas where low-income residents are concentrated.							Rosemount Environment and Sustainability Task Force (REST)	Low-income program providers	Talking points and materials for outreach

Municipal Energy

Actions	Q3 2018	Q4 2018	Q1 2019	Q2 2019	Q3 2019	Q4 2019	Responsible	Support	Other Resources Required
Enhance perception of Rosemount as a sustainable city by promoting prior and current actions.							Communications department - Alan Cox	Partners in Energy	Newsletter articles, Facebook posts, press releases, presentation slides, City website
Educate City Council on actions taken and benefits of efficiency and renewables so they can become champions.							Rosemount Environment and Sustainability Task Force (REST)	City staff Partners in Energy	Case studies, success stories
Develop technical specifications for renewable energy projects on City buildings.							City - Public Works	Consultant/ developers	Look at what other communities have developed, and/or work with a consultant
Consult with other locations of similar size that have successfully installed on-site solar.							Rosemount Environment and Sustainability Task Force (REST)	CERTs	
Research and prioritize financing options for on-site renewable energy generation.							Rosemount Environment and Sustainability Task Force (REST)	CERTs	
Develop a renewable energy proposal to present to City Council.							Rosemount Environment and Sustainability Task Force (REST)	City staff Partners in Energy	
Develop tools/resources to clearly define Return on Investment of efficiency actions.							Partners in Energy	City - Public Works	
Replace all lights in City facilities with LED lights and install motion sensors wherever possible.							City - Public Works	Xcel Energy Dakota Electric	
Evaluate City lighting, including parking lights, and building lights, for smart control opportunities.							City - Public Works	Utilities Partners in Energy	
Continue to maximize energy efficiency in scheduled projects at the municipal ice arena, including installing a low-e ceiling and efficient refrigeration system.							Parks and Recreation Department	Xcel Energy	
Update City buildings operations manual, incorporating all opportunities to improve efficiency.							City - Public Works	Partners in Energy	Expert insight into how to best integrate efficiency into building operations
Keep building benchmarking data up to date.							City - Public Works	Xcel Energy	
Train facilities staff on efficient building operations.							City - Public Works	Partners in Energy	
Implement an employee engagement campaign to engage all City staff in energy efficient behaviors.							Rosemount Environment and Sustainability Task Force (REST)	Partners in Energy	Case studies, success stories

Large Energy Users

Actions	Q3 2018	Q4 2018	Q1 2019	Q2 2019	Q3 2019	Q4 2019	Responsible	Support	Other Resources Required
Promote expertise and support offered by utilities through targeted information materials.							Partners in Energy	Utilities	
Engage with local Chamber of Commerce to co-host energy workshops/information sessions.							Rosemount Environment and Sustainability Task Force (REST)	Partners in Energy Chamber of Commerce DCTC	Information pieces listing available resources Event/meeting space Funds for meeting refreshments
Conduct one-on-one outreach to discuss efficiency opportunities and connect businesses to available resources.							To Be Determined	Partners in Energy	Business outreach kit List of businesses to target
Engage City leadership and elected officials in business outreach through meetings with businesses in the community.							Rosemount Environment and Sustainability Task Force (REST)	Partners in Energy	Talking points Business outreach kit
Promote success stories of large energy users saving money by taking action.							Rosemount Environment and Sustainability Task Force (REST)	Partners in Energy	Communication channels to publish stories
Support staff in bringing energy saving opportunities with Return on Investment information to decision makers/management.							Partners in Energy	Utilities	ROI calculator tools
Promote MnTAP as a resource to Rosemount large energy users; Assist at least one business in obtaining MnTAP assistance.							Rosemount Environment and Sustainability Task Force (REST)	Partners in Energy	Funding to support MNTAP intern
Develop informational resources targeting businesses considering locating in Rosemount.							Partners in Energy	Community Development	Contacts at businesses locating in Rosemount
Connect businesses locating in Rosemount to utility key account managers.							Community Development	Utilities	Information materials summarizing opportunities
Train City economic development staff on energy efficiency resources and opportunities.							Community Development	Partners in Energy	Information resources and talking points
Develop informational materials about energy efficiency programs and incentives aimed at both building owners/property managers and tenants.							Partners in Energy	Utilities	
Conduct one-on-one outreach to owners/property managers of older multifamily buildings.							Rosemount Environment and Sustainability Task Force (REST)	Partners in Energy	Information resources and talking points
Host workshops for multifamily building tenants highlighting energy conservation.							Rosemount Environment and Sustainability Task Force (REST)	Partners in Energy Utilities, Community Redevelopment Authority	Workshop refreshments

Small- and Medium-size Businesses

Actions	Q3 2018	Q4 2018	Q1 2019	Q2 2019	Q3 2019	Q4 2019	Responsible	Support	Other Resources Required
Develop simplified information resources targeting small- and medium-size businesses that highlight energy efficiency and renewable energy program options.							Partners in Energy	Utilities	Website location for information
Send a direct mailing out to all Rosemount businesses highlighting programs such as One-Stop Efficiency Shop and Brighter Ideas, with emphasis on available utility assistance in accessing rebates and completing paperwork.							Utilities	Partners in Energy	Postcard Mailing list Funds to cover cost of direct mailing
Host a business lunch to educate about energy efficiency benefits, programs and opportunities.							Rosemount Business Council	Utilities Partners in Energy DCTC Dakota County Chamber of Commerce	Meeting space Funds to buy lunch
Offer brief lunch-and-learn presentations on-site at businesses to motivate participation in energy efficiency.							DCTC	Utilities Partners in Energy	Presentation outline Funds to buy lunch
Create a 'Green Award' to recognize businesses that have taken action							Rosemount Environment and Sustainability Task Force (REST)	City	Criteria for award selection Budget for awards
Conduct door-to-door outreach to reach business owners and managers.							DCTC	CERTS MERC/Dakota Electric Partners in Energy	Business outreach kit
Create a simplified resource where Trade Allies and businesses planning equipment replacements can access information and forms for available rebates.							Partners in Energy	Utilities	Information materials/website
Host a lunch-and-learn for local contractors serving Rosemount businesses to bring them up to speed on utility programs and rebates, and how best to communicate the economics of energy efficiency.							Utilities	DCTC Partners in Energy	Meeting space Funds to buy lunch List of contractors to invite
Host a local business energy expo to promote energy efficiency.							Rosemount Environment and Sustainability Task Force (REST)	Partners in Energy Utilities DCTC	Event location Funds for breakfast/lunch for attendees Contact list of Trade Ally partners