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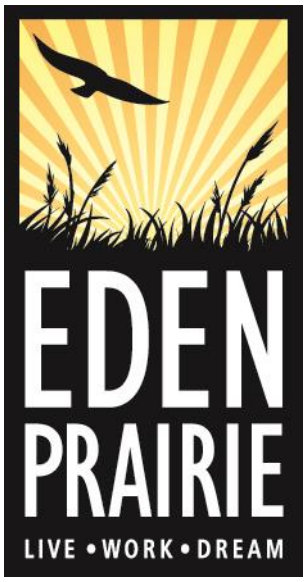
An Energy Action Plan for

Eden Prairie



Sustainable Energy Solutions for Eden Prairie

September 13, 2017

Acknowledgements

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

Eden Prairie's Energy Action Planning Team

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

City of Eden Prairie

- Marisa Bayer, Community Development Coordinator
- Beth Novak-Krebs, Senior Planner
- Aurora Yager, Administrative Intern

Eden Prairie School District

- Jim Anderson, Director of Facilities Operations

Eden Prairie City Council and Commission Members

- Kathy Nelson, City Council Member
- Lori Tritz, Conservation Commission Chair
- Michael Bennett, Conservation Commission Member
- Ashley Young, Conservation Commission Member
- Dan Katzenberger, Conservation Commission Member
- Greg Leeper, Human Rights and Diversity Commission Vice Chair

Business Representatives

- Nancy Litwin, Senior General Manager, Eden Prairie Center
- Frank Weber, Project Sourcing Engineer, MTS Systems Corporation

CenterPoint Energy Representatives

- Sarah Schaffer, Senior Administrator, Energy Efficiency Programs
- Audrey Partridge, Local Energy Policy Manager

Xcel Energy Representatives

- Tami Gunderzik, Partners in Energy Program Manager
- Yvonne Pfeifer, Community Energy Efficiency Manager
- Michelle Swanson, Community Relations Manager
- Elena Foshay, Partners in Energy Community Facilitator
- Jenny Edwards, Partners in Energy Community Facilitator
- Jamie Johnson, Partners in Energy Community Facilitator

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Executive Summary

Eden Prairie has taken significant steps toward improving environmental sustainability and reducing carbon emissions. From its successful 20-40-15 initiative to the current Sustainable Eden Prairie program, Eden Prairie has taken proactive action and achieved measurable results. The Mayor's recent declaration of support for the Paris Climate Agreement represents significant leadership in setting a bold direction for the future, and this plan seeks to support that intention.

The purpose of this plan is to establish goals and strategies that lower energy use and increase renewable energy generation, driving Eden Prairie to achieve further greenhouse gas emission reductions. In addition to generating positive environmental impacts, this plan also seeks to engage community members and businesses in helping to reach Eden Prairie's goals.

The process to develop this Energy Action Plan was facilitated by Xcel Energy's Partners in Energy team. The planning team worked together to develop a set of goals and strategies that build on existing momentum to ensure Eden Prairie remains a sustainability leader in the future.

Our Vision

Sustainable energy solutions for Eden Prairie.

Our Guiding Principles

1. Encourage energy conservation and increased use of renewable energy, realizing energy cost savings and reducing our carbon footprint.
2. Identify solutions that are feasible, data-driven and cost-effective, and that produce measurable results.
3. Pursue inclusive engagement among all sectors of our diverse community.
4. Educate residents, businesses, and nonprofits to inspire ongoing change in habits.
5. Support business growth and future economic development.
6. Protect and preserve the environment and natural resources for future generations.

How Will We Get There?

This plan prioritizes three focus areas to promote electricity and natural gas conservation:

- **Residential Energy**, which includes all Eden Prairie households, both homeowners and renters.
- **Large Commercial and Industrial Buildings**, which include the top 20 percent of commercial energy users.

- **Public, Nonprofit and Service Organizations,** which include City facilities, school district buildings, religious entities, nonprofits, private and charter schools, and medical and senior care facilities.

The goals and strategies outlined for each of these focus areas aim to reduce community-wide greenhouse gas emissions, with the goal of **reducing energy-related greenhouse gas emissions below the 2015 baseline 30 percent by 2025, and achieve an 80 percent reduction by 2050**. Achieving this goal will both improve the quality of life for Eden Prairie residents, and increase the economic vitality of Eden Prairie businesses.

Residential Energy	**Goal:** By 2025, 75 percent of households will participate in a renewable energy or energy efficiency program.
Large Commercial & Industrial Energy Users	**Goal:** By 2025, 50 percent of the largest commercial/industrial energy users will participate in Xcel Energy conservation programs over a standard three-year measuring period, which will result in an additional 7.5 incremental participants per year.
Public, Nonprofit, and Service Organizations	**Goals:** • By 2025, Eden Prairie public, nonprofit, and service organizations will reduce their energy use by 20 percent. • By 2025, the City of Eden Prairie will support renewable energy development equal to 25 percent of its energy use. • By 2025, the Eden Prairie School District will reduce its energy use by an additional 10 percent. • By 2025, all Eden Prairie public, nonprofit, and service organizations will support renewable energy development equal to 10 percent of their energy use.

This Energy Action Plan outlines a series of specific strategies and actions to meet these goals, as well as multiple opportunities for members of the community to support implementation. A more detailed action plan and timeline can be found in Appendix 7.

Letter From the Mayor

Dear Members of the Eden Prairie Community:

The City of Eden Prairie has always been mindful of the environment and natural resources the community enjoys. Efforts to reduce Eden Prairie's environmental footprint began in earnest after the inaugural Sundance Summit's Mayors' Gathering on Climate Protection in 2005. I participated in the summit and signed the Mayor's Commitment to Action, which led to the formation of the City's Conservation Commission and the launch of the 20-40-15 initiative.

After achieving the 20-40-15 energy-efficiency goals, we launched the Sustainable Eden Prairie initiative in 2017, which is an ongoing effort focusing on education and implementation of sustainable practices in four areas — energy, landscape, waste and water in our community. The Energy Action Plan gives us the tools and strategies to support residents, businesses and public, nonprofit, and service organizations to create sustainable energy solutions for Eden Prairie.

I'd like to acknowledge the Energy Action Team for their time and effort devoted to developing this Energy Action Plan. The team is comprised of Eden Prairie residents and community leaders representing various businesses and organizations, City commissions and City government. These volunteers collaborated with Xcel Energy's Partners in Energy team over a five-month period to create goals, strategies and tactics to ensure successful implementation of the Energy Action Plan.

Community engagement will be instrumental in successfully implementing our Energy Action Plan. I ask residents, businesses, service organizations and our City to continue working together so we can implement and carry out energy efficiency and renewable energy best practices in support of Sustainable Eden Prairie.

Sincerely,

Nancy Tyra-Lukens
Mayor

Introduction

Eden Prairie has taken significant steps toward improving environmental sustainability and reducing carbon emissions. The City has taken proactive action and achieved measurable results, including the successful 20-40-15 initiative, developed to increase energy efficiency in all of city facilities by 20 percent and increase the fuel efficiency of the city vehicle fleet by 40 percent before 2015, and the Sustainable Eden Prairie initiative, which seeks to address sustainability in four key areas, one of which includes conserving energy. The Mayor's recent declaration of support for the Paris Climate Agreement represents significant leadership in setting a bold direction for the future, and this plan seeks to support that intention.

The purpose of this plan is to establish goals and strategies that lower energy use and increase renewable energy generation, driving Eden Prairie to achieve further greenhouse gas emission reductions. This plan will be integrated into Sustainable Eden Prairie and Aspire Eden Prairie 2040 (Eden Prairie's comprehensive plan update) to create and implement both short- and long-term energy initiatives. In addition to generating positive environmental impacts, this plan also seeks to increase community engagement and build on existing assets to help maintain and improve overall quality of life in the community.

The process to develop this Energy Action Plan was facilitated by Xcel Energy's Partners in Energy team and took place over a series of five workshops between March and July of 2017. The plan provides an overview of the community's baseline energy use, priority focus areas identified by the planning team, and the near-term strategies and actions required to achieve the energy goals outlined here. Implementation of the Energy Action Plan will begin in fall 2017 and will be supported by the Partners in Energy team.

Commitment to Sustainability

Prior to joining Partners in Energy, the City of Eden Prairie had already shown itself as a leader in adopting energy saving practices and priorities for internal operations. Efforts include the City's participation and leadership in GreenStep Cities, the 20-40-15 initiative, and active benchmarking of energy use from all City buildings. The City plans to leverage the successes gained from past and ongoing sustainability efforts by extending lessons learned to all sectors of the community. Figure 1 provides a summary of Eden Prairie's past sustainability efforts. More detail on each of these initiatives can be found in Appendix 4.

Figure 1: Summary of selected Eden Prairie sustainability initiatives

Eden Prairie Commitment to Sustainability
20-40-15 Initiative
Adopted by the Eden Prairie City Council in 2006: • Set goals to improve energy efficiency in its facilities by 20 percent increase the fuel efficiency of its vehicle fleet by 40 percent by the year 2015. The City exceeded both goals.
Conservation Commission
Established in 2005: • Advises City Council and staff about policies and practices that promote sustainable development and conservation.
GreenStep Cities
Joined in 2011: • Achieved Step 5 status in June 2017. • Completed a total of 54 actions as of early 2017.
Aspire Eden Prairie 2040
• The City is incorporating energy and climate resiliency into 2018 Comprehensive Plan update.
Local Government Project for Energy Planning (LoGoPEP)
• An effort that encourages local governments to commit to actionable strategies for energy and greenhouse gas emission reductions.
Sustainable Eden Prairie
Launched in early 2017: • An ongoing effort focused on education and implementation of sustainable practices to protect the environment and natural resources in Eden Prairie, with four focus areas: energy, landscape, waste and water.
Climate Mayors
Joined in June 2017: • Mayor Nancy Tyra-Lukens joined Climate Mayors, a group of mayors working together to strengthen local efforts for reducing greenhouse gas emissions and supporting efforts for binding federal and global-level policymaking.

The Case for a Community Energy Action Plan

After successful completion of the City's 20-40-15 initiative, Eden Prairie began looking ahead to identify opportunities to achieve similar reductions in the broader community's energy use and greenhouse gas emissions. The City partnered with the Great Plains Institute to develop its next initiative — Sustainable Eden Prairie. An engagement process with residents, City staff, Conservation Commission members, and City Council, resulted in four sustainability priorities: energy, landscape, water, and waste. Xcel Energy's Partners in Energy was identified as the best mechanism to help define Sustainable Eden Prairie's goals around energy and energy efficiency.

The City has proven that it can successfully set and achieve internal goals to reduce energy consumption and integrate sustainability measures. It sought out Partners in Energy to help create goals and strategies to engage the broader community. In addition, Eden Prairie also hoped Partners in Energy would equip City staff with the tools and support needed to achieve measurable results.

Xcel Energy Partners in Energy

Xcel Energy is the main electricity provider for Eden Prairie residents. In 2014, Xcel Energy launched an offering called Partners in Energy to support communities in the development and implementation of customized, community-driven plans. In 2016, the City of Eden Prairie submitted an application to participate in Partners in Energy and became the tenth community in Minnesota to be selected. Other participating Minnesota communities include the Lake Street Corridor in Minneapolis, Ramsey County's Parks and Recreation Department, and the Cities of Maplewood, Red Wing, St. Louis Park, Edina, Saint Cloud, Saint Paul, Shorewood, Mahtomedi, Faribault, Winona, Bloomington, and Rosemount. In addition to these 15 Minnesota communities, there are currently 13 communities participating in Colorado.

The objective of Partners in Energy is to allow communities to develop actionable plans that advance their energy goals while being supported by Xcel Energy's technical expertise, facilitation resources, and program knowledge. After several months of planning, Xcel Energy continues to collaborate with communities by providing plan implementation assistance over the course of approximately 18 months.

Figure 2: Partners in Energy process for success

Figure 3: Resources from Xcel Energy for implementation

Eden Prairie convened a team of experts from the community to participate in the planning process. This Energy Action Team included City staff, commission members, elected officials, local business representatives, and a school district representative. The team met five times over the course of six months to review energy use data, determine priorities, and develop actionable strategies to achieve energy goals.

Eden Prairie Energy Action Team
Back Row (Left to Right): Audrey Partridge, Elena Foshay, Jim Anderson, Yvonne Pfeifer, Nancy Litwin, Dan Katzenberger, Ashley Young, Beth Novak-Krebs, Greg Leeper, Marisa Bayer, Jamie Johnson, Lori Tritz
Front Row (Left to Right): Tami Gunderzik, Kathy Nelson, Michael Bennett

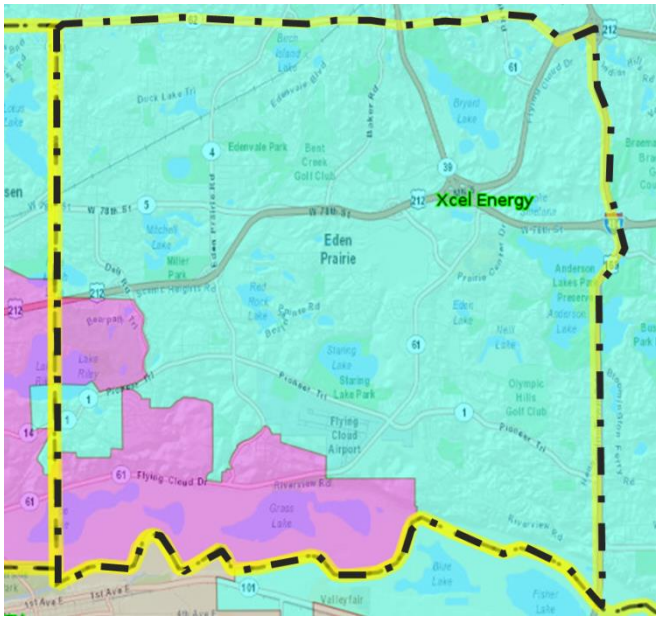
Where Are We Now? — Baseline Energy Analysis

The planning process began with an in-depth look at baseline energy use and conservation program participation. Data provided by Xcel Energy and CenterPoint Energy played a crucial role by enabling the Energy Action Team to accomplish two important tasks. The first was that it allowed the team to understand how the community currently uses and saves energy, and second the data made it possible to use scenario modeling with Eden Prairie-specific data to project impacts from achieving energy goals.

Energy Data Sources

Xcel Energy is one of two electric utilities providing service to Eden Prairie. The southwest corner of Eden Prairie is served by Minnesota Valley Electric Cooperative. Figure 4 at right shows Xcel Energy territory in blue and Minnesota Valley Electric Cooperative service territory in pink. CenterPoint Energy provides natural gas service throughout the city.

Figure 4: Map of Xcel Energy territory in Eden Prairie[1]



City-specific energy use and Xcel Energy program participation data was obtained by matching city shape files with Xcel Energy customer data from the years 2014 through 2016. The electricity data in this plan does not include use from residents and businesses in the portion of the city served by Minnesota Valley Electric Co-op.

Because CenterPoint Energy serves all utility gas customers in Eden Prairie, data for all Eden Prairie natural gas customers is included in this plan. In addition to providing the planning team with data on natural gas use, conservation program participation, and energy savings, CenterPoint Energy actively participated in the planning process and will continue to be engaged during implementation.

The data in this plan comply with Xcel Energy's 15x15 privacy rules that require all data summary statistics for energy use 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 energy use for a summary, it is removed from

[1] Minnesota Public Utilities Commission, "Electric Utility Service Areas" http://www.mngeo.state.mn.us/eusa/
The City of Eden Prairie is outlined in yellow and black. Xcel Energy territory is shown in blue and Minnesota Valley Electric Cooperative service territory is shown in pink.

that summary. No Xcel Energy electric customers were removed from the baseline data summaries below.

Baseline Energy Use

This section is drawn from data for the years 2014, 2015, and 2016, with the most recent year serving as a baseline. In 2016, there were 25,973 distinct Xcel Energy electrical premises in the City of Eden Prairie. Eighty-nine percent of these were residential premises and 11 percent were commercial and industrial premises. There are 24,568 natural gas premises, 92 percent of which are residential.[2]

Figure 5: Premise breakdown by source, 2016

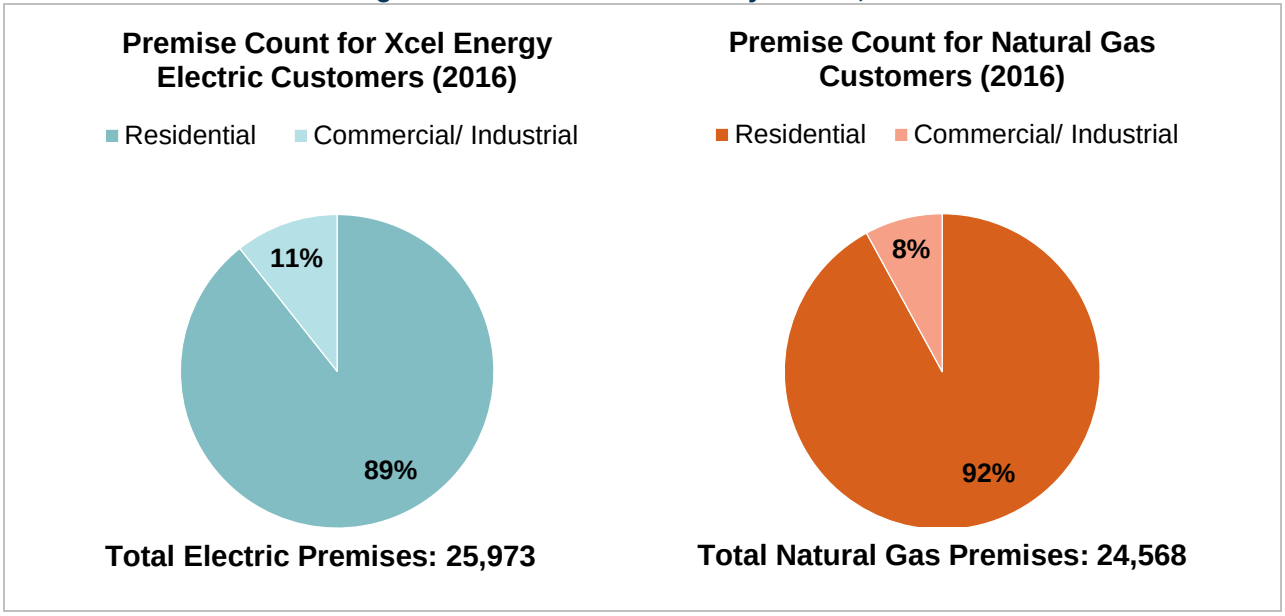


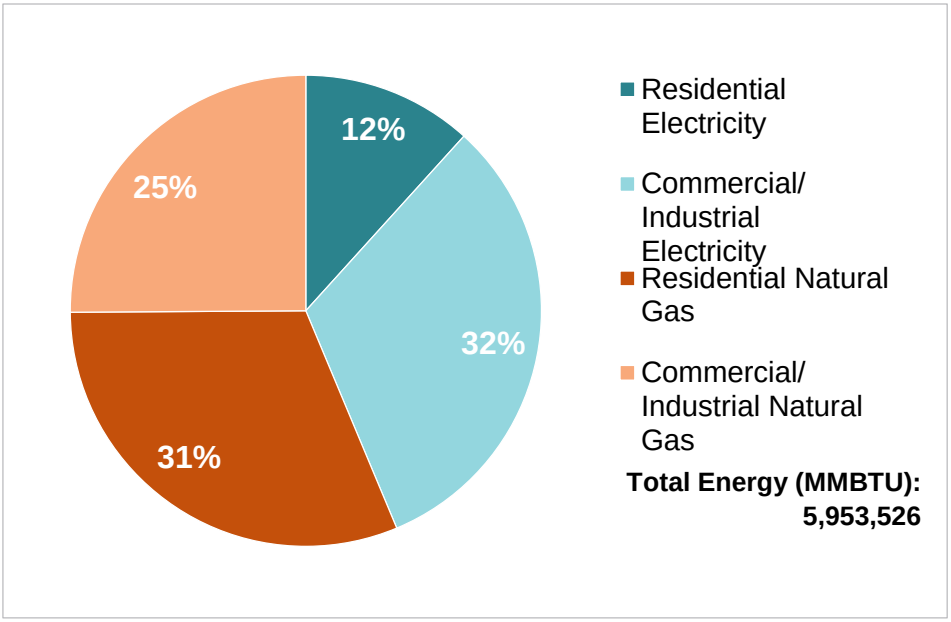
Figure 6: Eden Prairie Baseline Energy Use

Total Community Energy Use (2016)	
Electricity	762,394,823 kWh
Natural Gas	33,522,351 therms
Combined	5,953,526 MMBtu

Overall, residential premises consume about 43 percent of total energy in Eden Prairie and commercial/industrial premises consume about 57 percent of total energy. **While 73 percent of Eden Prairie's electricity is consumed by commercial/industrial premises, more than half of natural gas is consumed by the residential sector.** This breakdown is shown in Figure 7 below. A number of factors may contribute to this, such as the ways in which Eden Prairie's large commercial and industrial buildings use energy and the average size of Eden Prairie homes (large houses require more natural gas to heat).

[2] Natural gas data provided by CenterPoint Energy

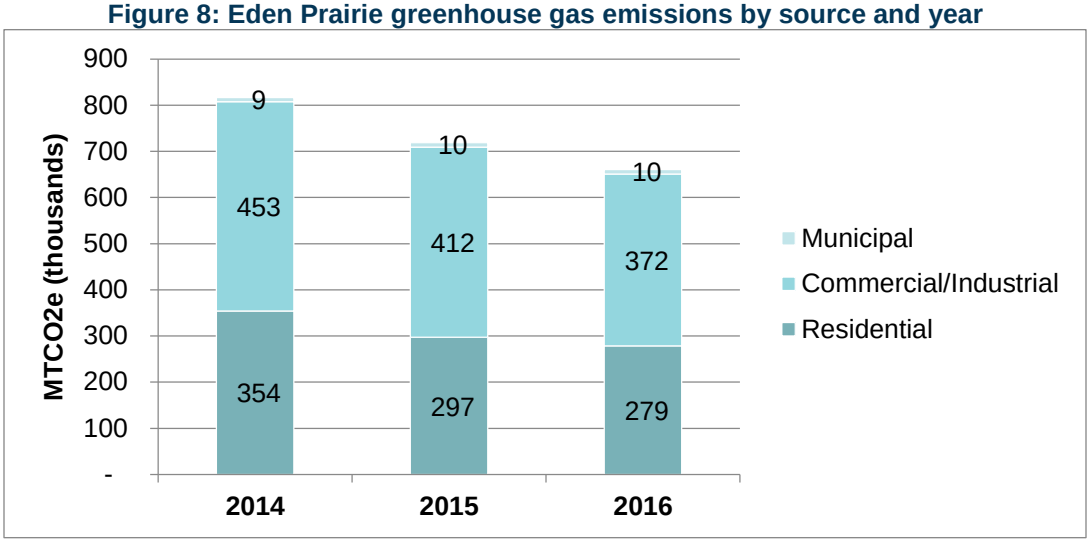
Figure 7: Sector breakdown of total energy consumption



Eden Prairie's energy-related greenhouse gas emissions equated to 771,776 metric tons of carbon dioxide emissions in 2016. This is equivalent to emissions from a year's worth of driving from more than 163,000 cars.[3] Of this, commercial/industrial energy use accounts for 56 percent of emissions, while residential energy use accounts for 42 percent of emissions. Municipal energy use represents about one percent of emissions.

[3] US Environmental Protection Agency, "Greenhouse Gas Equivalencies Calculator," accessed August 29, 2017. https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator

Figure 8: Eden Prairie greenhouse gas emissions by source and year



Eden Prairie has a solid baseline of participation in Xcel Energy and CenterPoint Energy conservation programs. Over the past three years, residential participation in Xcel Energy programs has averaged about 1,450 premises per year, and commercial participation has averaged about 180 premises per year. Residential participation in CenterPoint programs was around 1,800 premises in 2015, and 40 premises participated on the commercial/industrial side. **Combined energy savings resulting from conservation program participation equals an average of 1.3 percent of electricity use and 0.8 percent of natural gas use each year**. Cost savings in 2016 represent about one percent of total dollars spent on energy.

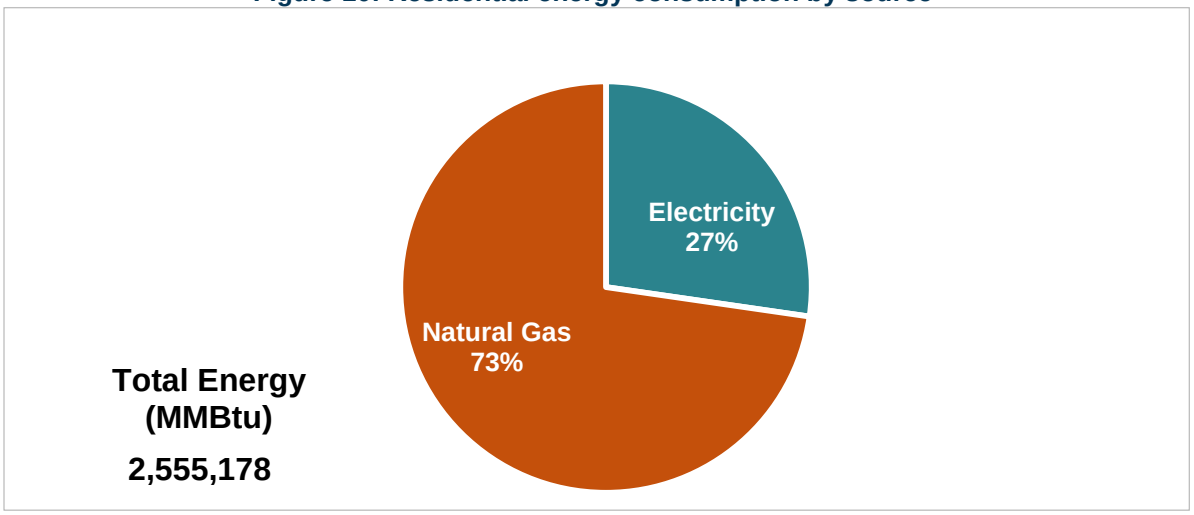
Figure 9: Energy and cost savings from conservation program participation

	Residential	Business
2016 Electricity Savings (kWh)	737,527	6,187,051
2015 Natural Gas Savings (therms)	233,742	369,160
Combined Energy Cost Savings	$251,635	$755,709

Residential Energy Use

In total, there are 23,204 residential Xcel Energy electrical premises in Eden Prairie and 22,612 natural gas premises. **Residential premises represented 43 percent of the community's total energy use in 2016.** In addition, the residential sector spent a total of $37.5 million on energy in 2016. The average residential premise spends $1,075 on electricity and $557 on natural gas each year, resulting in a **combined average of $133 per month spent on energy**.

Figure 10: Residential energy consumption by source[4]



Average 2016 electricity use per residential premise is 8,807 kWh, and average per premise natural gas use is 822 therms. **Compared to other surrounding communities, Eden Prairie's residential per premise energy use is relatively high** (Figure 11). Figure 12 shows the difference between per premise average electricity use by neighborhood, highlighting the highest average energy use in homes in the south and southwest corners.

[4] Natural gas data from CenterPoint Energy

Figure 11: Comparison of average energy use per household per day[5]

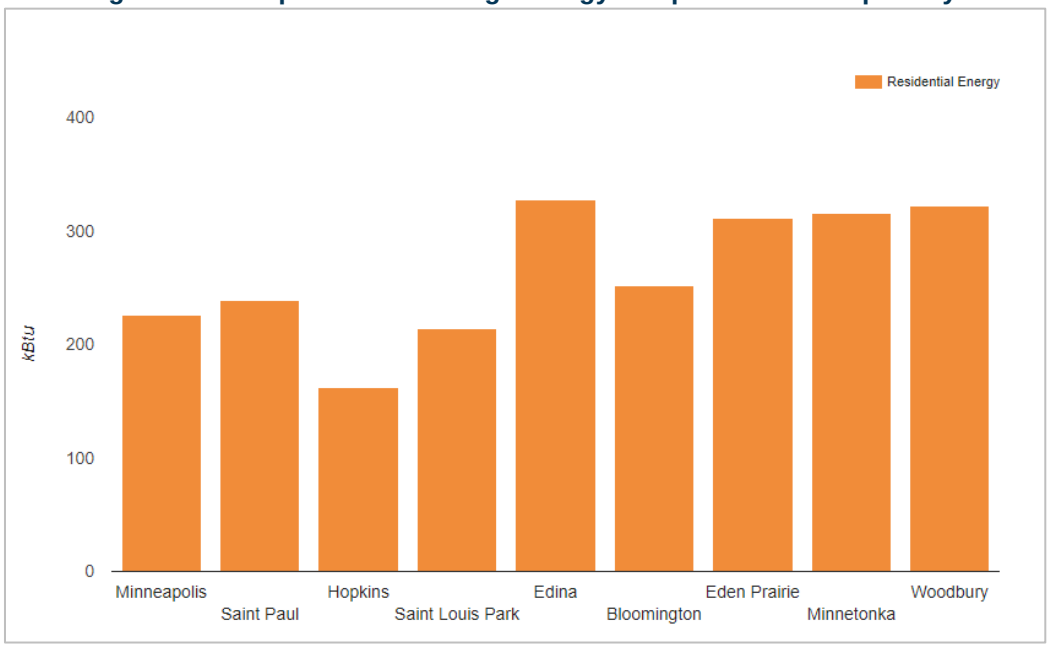
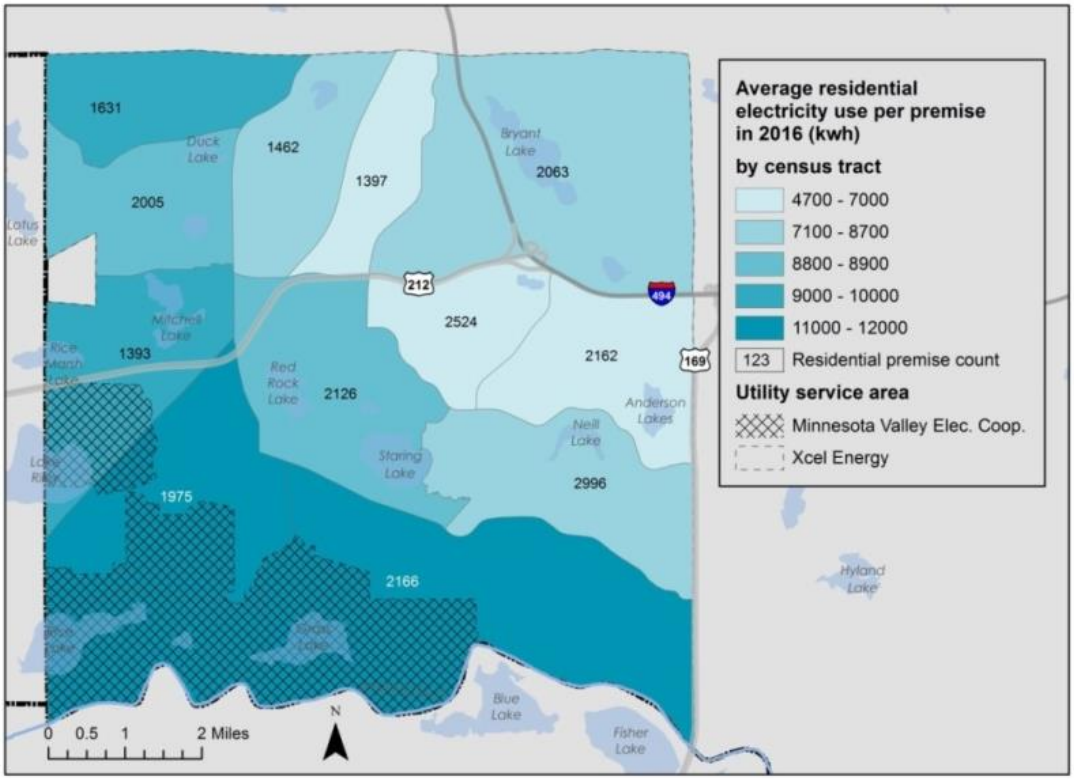


Figure 12: Per premise average electricity use for residential premises in 2016

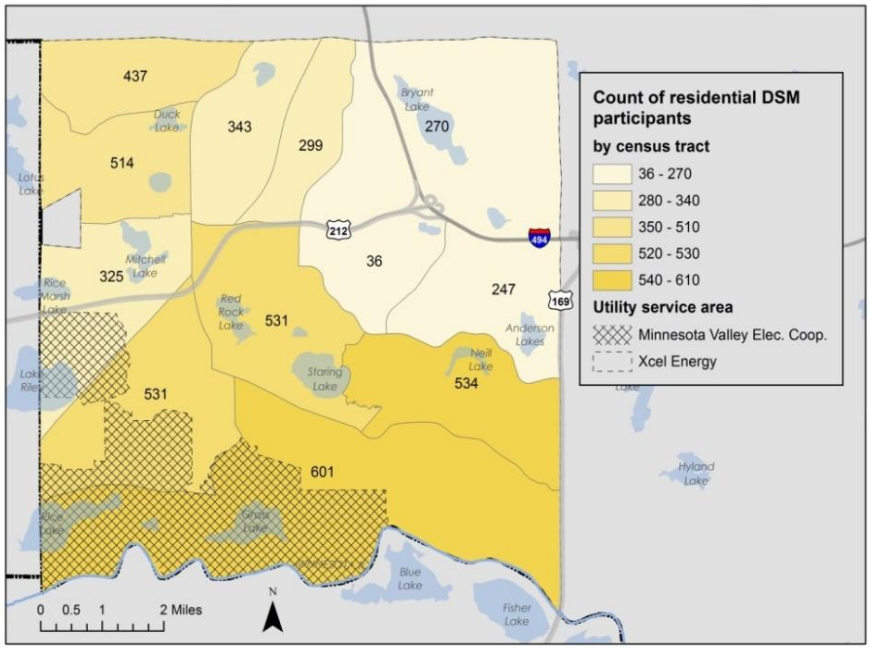


[5] Regional Indicators Initiative, 2013

Residential Energy Savings

Eden Prairie has seen relatively low rates of participation in residential conservation programs over the past few years. **The average annual participation rate in Xcel Energy conservation programs between 2014 and 2016 was about 6.5 percent, or about one in 16 households**. Participation in CenterPoint Energy programs in 2015 was 8 percent, or one in 12 households. Participation in conservation programs resulted in 737,527 kWh (0.4 percent of residential electricity use) and 180,691 therms (1 percent of residential natural gas use) saved in 2016. Additionally, each participating household saved an average of $80 in energy costs in 2016. Participation was concentrated in the southern half of the city, with some crossover in areas where energy use is highest (Figure 13).

Figure 13: Residential conservation program participation 2014-2016



Of those who participated in conservation programs, cooling and heating system rebates were by far the most popular, followed by Xcel Energy's Saver's Switch, a demand response program (Figure 14 and Figure 15). Heating and cooling system upgrades are typically performed quickly upon equipment failure or towards the end of equipment life, and offer significant energy savings. Saver's Switch is a program designed to reduce peak electric load and offers a bill credit to customers during summer months who agree to have their central air conditioning enrolled. The net savings from the program are negligible. These factors, and the relatively low penetration of other programs in the residential area, demonstrate high potential for savings by increasing participation in other programs.

Figure 14: Historical residential electric program participation

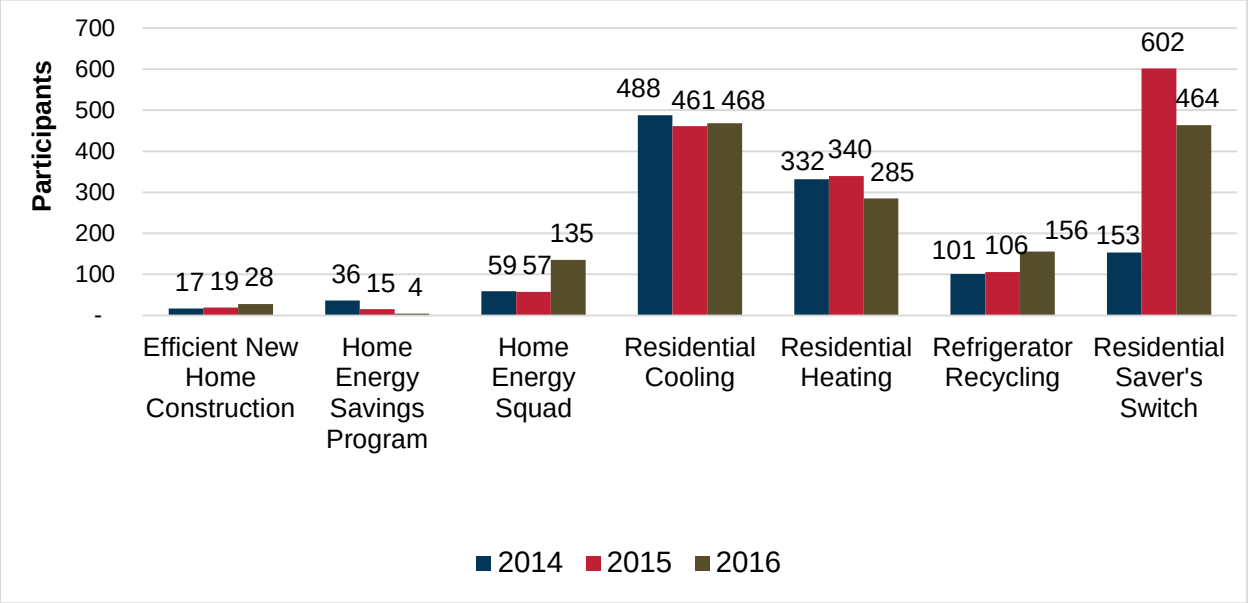
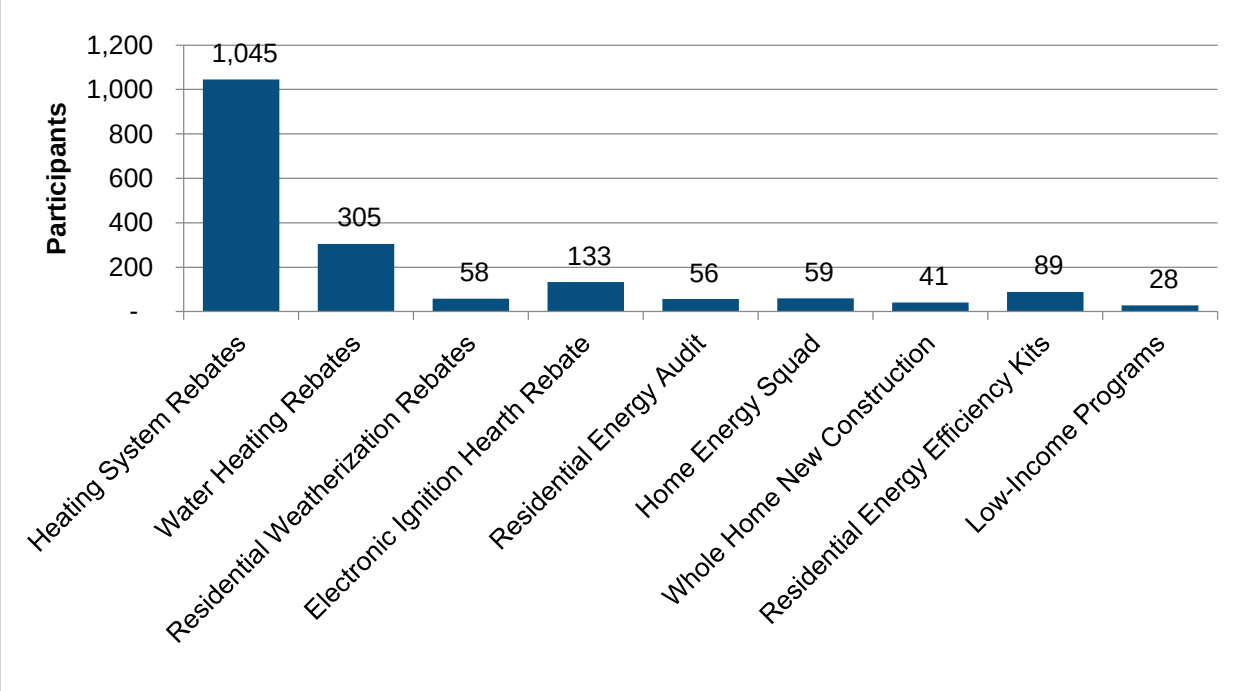


Figure 15: Residential natural gas conservation program participation in 2015

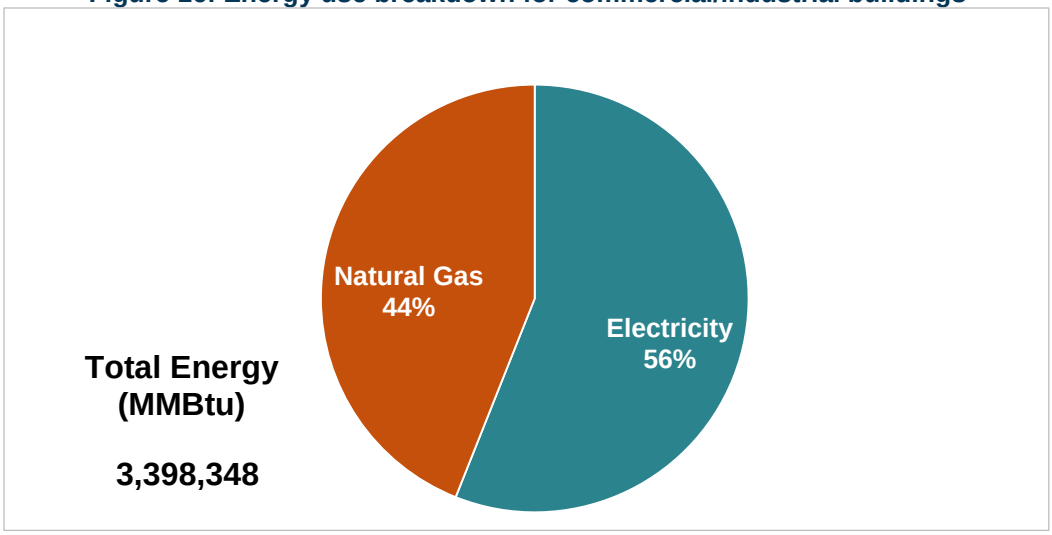


Commercial and Industrial Energy Use

The commercial and industrial sector includes all City buildings, some multifamily buildings, schools and religious facilities, and all kinds of commercial buildings. There are 2,769 commercial and industrial premises in Eden Prairie, including 182 that belong to the City.

Commercial and industrial buildings represent **57 percent of Eden Prairie's overall energy consumption**. The commercial and industrial sector as a whole spent a total of $61 million on energy in 2016. **Municipal facilities account for 3.2 percent of total commercial and industrial electricity use**, and they consumed 18,304,034 kWh in 2016, or the equivalent of more than 2,078 Eden Prairie homes.[6]

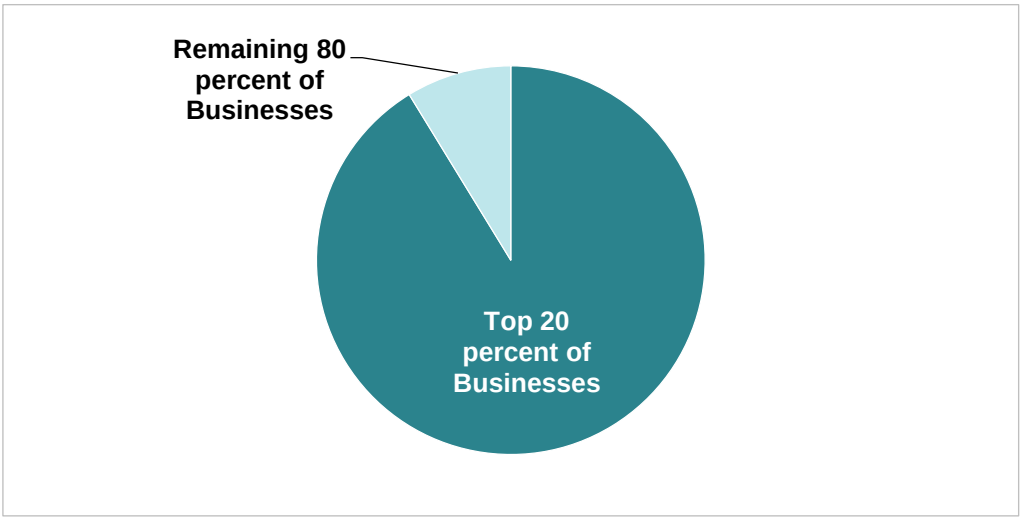
Figure 16: Energy use breakdown for commercial/industrial buildings



Divided into quintiles, **the top 20 percent of commercial electricity users — some 583 premises — represent 91 percent of total business electricity use**. Three quarters of commercial and industrial electricity is consumed by the 200 largest users.

[6] Municipal natural gas use data was not available at the time this plan was written

Figure 17: Proportion of commercial/industrial electricity consumed by the top 20 percent of energy users



Commercial and Industrial Energy Savings

Participation in conservation programs overall in the commercial and industrial sector has been similar to that of the residential sector, with an **average annual electricity program participation rate of 6.8 percent and a natural gas annual participation rate of 2 percent over the past three years**. In 2016, participation in Xcel Energy programs totaled 221 premises, with a primary emphasis on lighting replacements and cooling system upgrades. Forty commercial/industrial customers participated in CenterPoint Energy programs. **Commercial and industrial participation resulted in 6.1 million kWh (equal to 1.1 percent of commercial and industrial energy use) and 109,300 therms (equal to 0.7 percent of commercial and industrial natural gas use) saved in 2016.** Participation is concentrated in the northeast corner of the city, which coincides with where the majority of large commercial buildings are located.

Figure 18: Commercial/industrial participation in electricity conservation programs 2014-2016

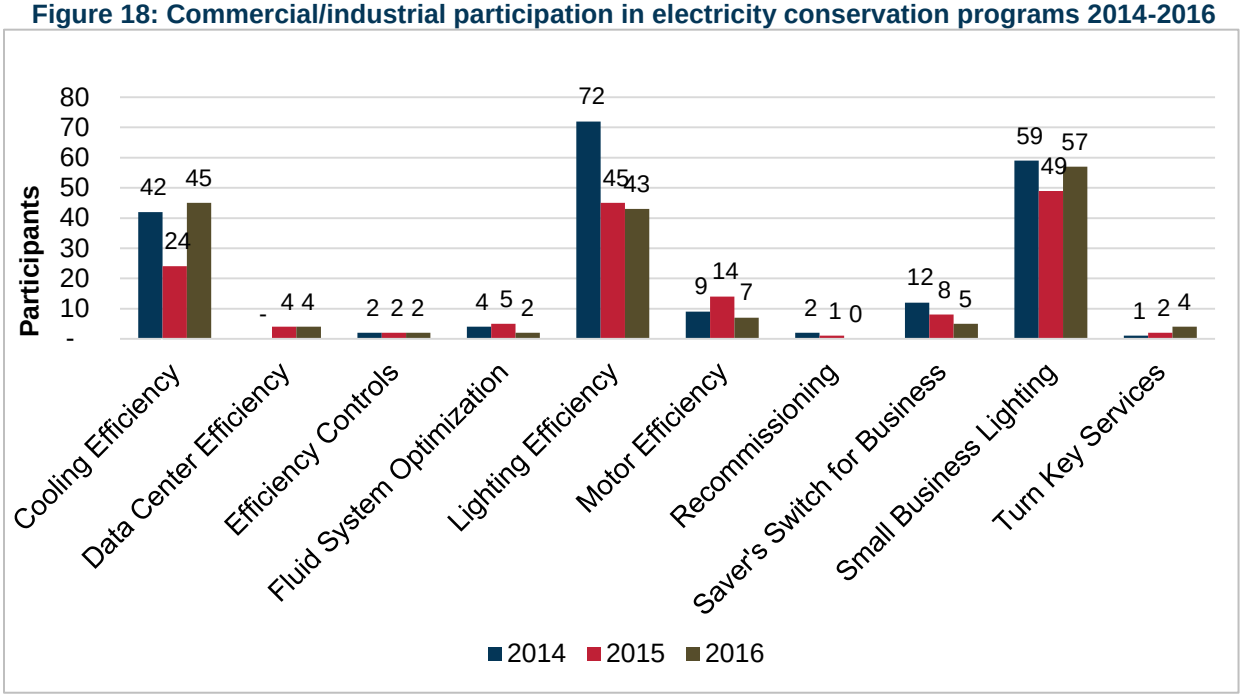
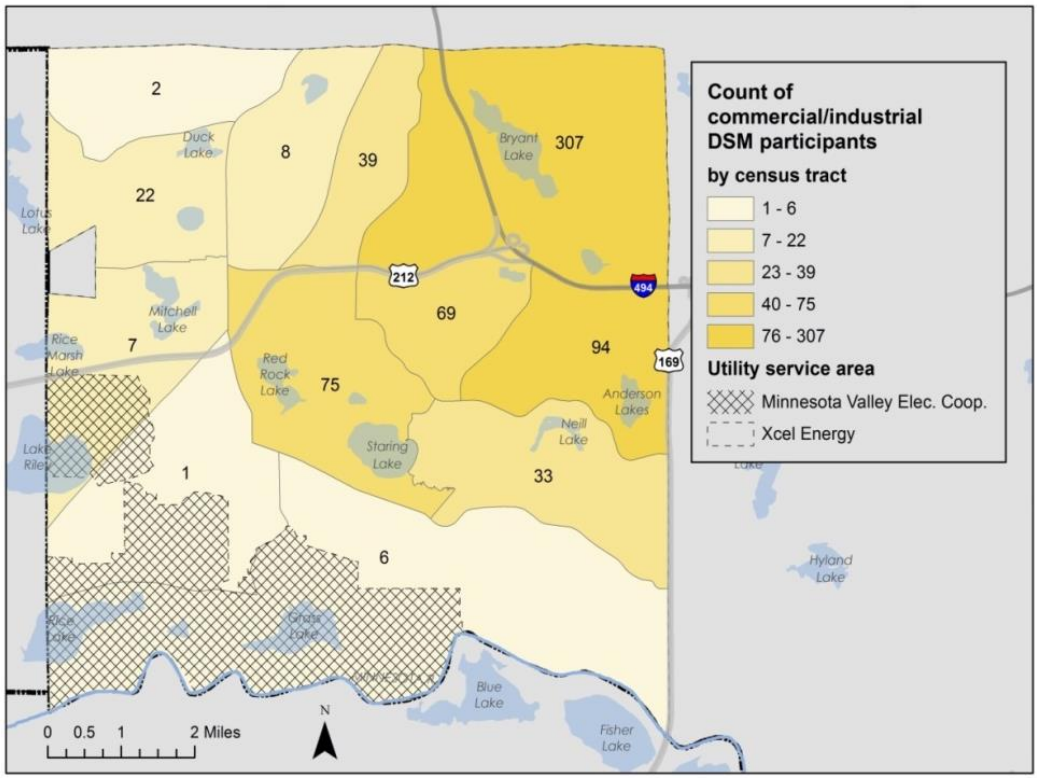


Figure 19: Commercial/industrial electricity conservation program participation 2014-2016 by census tract



Renewable Energy

Eden Prairie has made some important strides toward increasing investment in renewable energy. The Eden Prairie Community Center has a rooftop solar photovoltaic (PV) system that generates an average of approximately 18,346 kWh per year, and the school district is currently installing solar systems on all of its buildings. When finished, these projects will represent a combined 417 kilowatt solar system and account for approximately 4.5 percent of the district's electricity use. Pax Christi Catholic Community, a local congregation, is also building a community solar garden on its roof, with local residents as the primary subscribers.

Solar array on the Eden Prairie Community Center.
Photo courtesy of the City of Eden Prairie

Current available data shows at least 42 rooftop solar installations in Eden Prairie, with a combined capacity of close to 400 kW.[7] Additionally, **773 households and four businesses subscribed to Xcel Energy's Windsource® in 2016**, with an average monthly subscription of 244 kWh and representing 0.3 percent of the community's residential electricity use. About two-thirds of residential Windsource subscribers are signed up for the minimum of 100 kWh per month. Only three percent of Eden Prairie residential subscribers cover all of their electricity with Windsource.

Figure 20: Eden Prairie renewable energy summary

Renewable Resource	Residential	Business
Windsource® Subscribers (2016)	773	4
On-Site Solar Installations (cumulative)	32	10

[7] Xcel Energy. "Eden Prairie Community Energy Report," 2016.

Where Do We Want To Go? — Eden Prairie's Energy Vision, Focus Areas and Goals

The Eden Prairie Energy Action team sought an energy vision that was short, concise, and could resonate broadly with community members. The guiding principals represent shared values and priorities that informed the planning process and will establish a clear path for implementation.

Energy Vision

Sustainable energy solutions for Eden Prairie

Guiding Principles

1. ***Encourage energy conservation and increased use of renewable energy, realizing energy cost savings and reducing our carbon footprint.***
2. ***Identify solutions that are feasible, data-driven, cost effective, and produce measurable results.***
3. ***Pursue inclusive engagement among all sectors of our diverse community.***
4. ***Educate residents, businesses, and nonprofits to inspire an ongoing change in habits.***
5. ***Support business growth and future economic development.***
6. ***Protect and preserve the environment and natural resources for future generations.***

The Energy Action Team set an ambitious, yet achievable over-arching goal against which to measure the impact of this plan, and that will help achieve Eden Prairie's sustainability vision. This goal establishes a central community priority around reducing carbon emissions that help accelerate climate change and its impacts, as well as a mid-point benchmark against which to measure progress. The team chose the goal, in part, because it aligns with similar goals in other communities and statewide.

Community-Wide Energy Goal

To reduce energy-related greenhouse gas emissions below the 2015 baseline 30 percent by 2025 and 80 percent by 2050

Focus Areas

As a starting point, the Energy Action Team identified three areas on which to focus their priorities during implementation. These areas were chosen both for their potential impact on energy savings and for their potential impact on building community engagement.

Focus Area 1: Residential Energy

This focus area includes all Eden Prairie households, both homeowners and renters.

Focus Area 2: Large Commercial and Industrial Buildings

This focus area includes the top 20 percent of commercial energy users.

Focus Area 3: Public, nonprofit, and service organizations

This focus area includes City facilities, school district buildings, religious entities, nonprofits, private and charter schools, and medical and senior care facilities.

Recognizing that renewable energy generation is a key component of reducing greenhouse gas emissions, the Energy Action Team chose to integrate renewable energy goals and actions into all focus areas, rather than call them out under a separate focus area. The goals were designed to be inclusive of all types of renewable energy generation, whether or not residents, businesses, and other organizations keep the Renewable Energy Credits (RECs) and count them toward meeting the community's greenhouse gas reduction goals.

Missing from these focus areas are small and medium-sized businesses. The Energy Action Team recognized there is a limit on capacity to support implementation of this plan and that efforts to target businesses were best spent focusing on the largest energy users, which represent 91 percent of commercial electricity use and have the most potential for significant energy savings. For the purposes of this plan, it is assumed that historical participation trends for customers who fit into the small and medium-sized business category will continue as they have over the 2014-2016 baseline years. Once Eden Prairie has achieved gains in the identified focus areas over the first one-to-three years of implementation, goals and strategies can be added to specifically target small and medium-sized businesses. In the meantime, there is the possibility that actions taken by residents, public and private entities, and large commercial businesses will have a trickle-down effect and motivate other businesses in the community to take action.

The following sections outline each of the focus areas, including goals, strategies, and anticipated impacts. There are active roles for the City of Eden Prairie, the Conservation Commission and Xcel Energy under all three focus areas. Where relevant, additional partners are called out to support the strategies outlined under a particular focus area. More detailed action plan, timelines, and roles and responsibilities for each focus area can be found in Appendix 7: Implementation Roles and Responsibilities.

Focus Area 1: Residential Energy

The strategies laid out in this section have significant potential to generate broad community engagement and support, in addition to achieving energy savings and increased renewable energy generation. This priority is reflected in the goal, with strategies that seek to motivate all community members to take action.

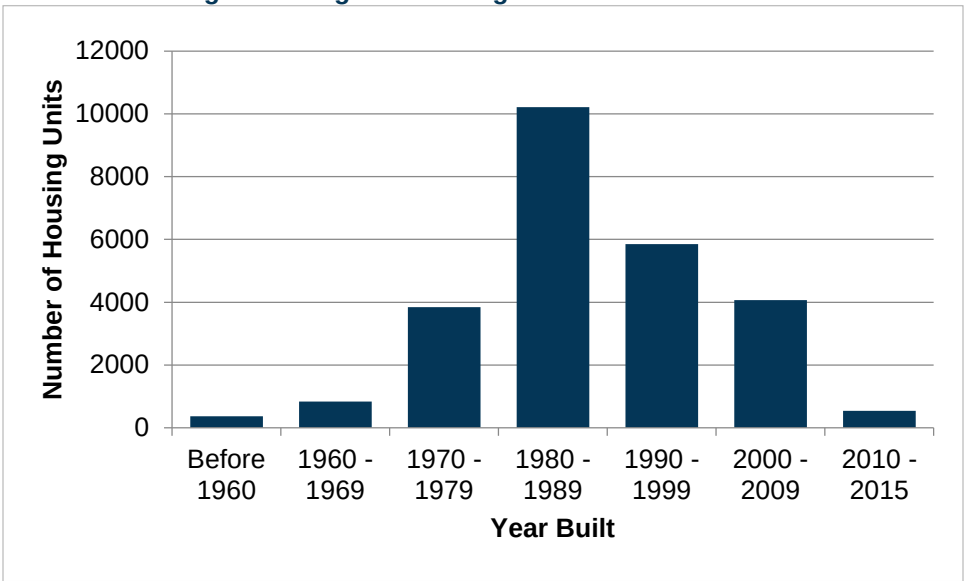
Although Eden Prairie is a community made up of a mix of housing types, the initial primary target in the residential focus area is homeowners. About half of the community's housing units are detached single family homes (Figure 21). The majority of both single family and multifamily homes were built in the 1980s and 1990s, which means that many are reaching the age for significant renovations, furnace and air conditioner upgrades, and appliance replacement (Figure 22). This opens up an important opportunity to improve energy efficiency.

Figure 21: Eden Prairie housing units by type[8]

Housing Units by Type	Housing Units	Percent
Total housing units	**25,715**	
Single Family	13,089	51
Duplex/Triplex	118	0.5
Condo/Townhome	6,184	24
Apartment	5,585	22
Co-op	140	0.5
Other	600	2.3

[8] Eden Prairie Assessor Data, 2016

Figure 22: Age of housing stock in Eden Prairie[9]



In addition to single family homes, just under a quarter of housing units are in multifamily buildings, with most in large buildings of 20 or more units. Bringing energy efficiency to these buildings will require engagement with both building owners/managers and residents. Leveraging existing City relationships and engagement channels will be critical in reaching this audience.

Already the 12th largest city in Minnesota, Eden Prairie is expected to witness a 30 percent growth in population between 2015 and 2040.[10] Population growth makes energy efficiency more imperative, as it will generate an increase in demand for energy. Population growth also provides more opportunities to target new residential construction and ensure that those new houses are both energy efficient and renewable ready.

One of the Energy Action Team's top priorities was to ensure that low-income residents were included in this plan. The median income of $97,640 is about 60 percent higher than the rest of the state, and only about 5 percent of Eden Prairie households are living in poverty. However, when you look at households that would potentially meet the eligibility threshold for low-income energy programs (defined as 50 percent of state median income), an estimated 12 percent would be covered under this definition (about 3,000 households).

[9] Eden Prairie Assessor Data, 2016
[10] American Community Survey 2015 and MN Compass

Figure 23: Distribution of households with incomes at or below 50 percent of state median income

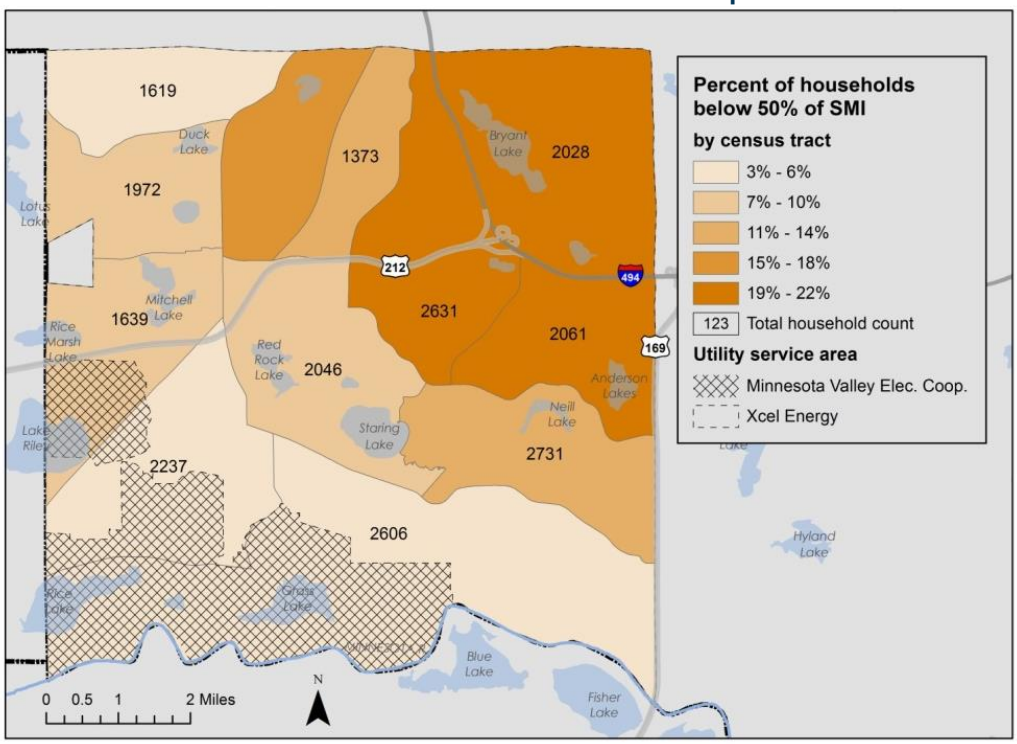


Figure 23 shows where households below 50 percent of the state median income are concentrated. The majority are in the northeast corner of the city, the area with the lowest rate of conservation program participation (see Figure 13). Outreach efforts targeting low-income households should concentrate in these areas and be inclusive of both single family homes and multifamily buildings.

Residential Energy Goal

Eden Prairie set the following residential energy goal:

> ***By 2025, 75 percent of Eden Prairie households will participate in a renewable energy or energy efficiency program.***

The table below outlines a set of strategies and targets to achieve the residential energy goal. Implementing these strategies — and ultimately achieving this goal — will require active collaboration between City staff from many different departments, members of the Conservation Commission, other commissions, and the City Council. Community organizations, congregations, and other social networks will also play an important role in engaging community members and motivating action.

Residential Energy Strategies

Strategy 1: Engage residents in energy efficiency and renewable energy actions through a community-wide marketing campaign.

Actions:

- Encourage households to sign up for Home Energy Squad®, with a target of 200 visits in the first year and an incentive for completing 'enhanced' visits.
- Target low-income households, with the goal of 75 low-income households participating annually in conservation programs.
- Promote the recycling of old refrigerators.
- Increase knowledge of energy-efficient appliances and equipment, with targeted outreach toward households nearing the end of equipment and appliance lifecycles.
- Market Windsource® and Renewable*Connect® to all Eden Prairie residents as an easy, inexpensive, and meaningful way to reduce their carbon footprint
- Inform residents about the availability of other renewable options, including community solar gardens and rooftop solar

Strategy 2: Engage residents through a community-wide energy challenge

Actions:

- Apply lessons learned from other Partners in Energy communities and from the Mayor's Water Challenge to design an effective energy challenge.
- Encourage Eden Prairie residents to participate and develop a campaign to publicly recognize households that choose to participate.
- Mobilize City Council and the Conservation Commission to support the challenge and engage the community in participating.

Strategy 3: Energy savings in multifamily buildings

Actions:

- Build partnerships with multifamily property management companies to implement efficiency improvements in resident units and common spaces.
- Engage City officials already doing outreach to multifamily buildings in promoting energy efficiency.
    - Work with the Housing and Community Services Division to share energy efficiency information with property managers/building owners.
- Target all low-income multifamily buildings in Eden Prairie for in-unit energy efficiency upgrades, with the goal of at least one building participating in the first year.
- City and Conservation Commission to co-host events highlighting the benefits of energy efficiency, as well as program options for multifamily building owners/managers and residents

Strategy 4: Increase energy efficiency and renewable energy in new construction and renovations

Actions:

- Leverage the existing Housing Rehabilitation Loan Program to support low- and moderate-income homeowners in making energy efficiency improvements.
- Research best practice policy options for increasing energy efficiency and renewable energy in new construction and renovation.
- Implement an energy efficiency requirement based on the best policy option for Eden Prairie.
- Implement renewable-ready policies that apply to residential buildings.
- Include information about Xcel Energy program offerings with all residential building permit requests and new resident welcome packets.

Measuring Success

The success of these strategies will be measured in a number of ways, including tracking:

- Annual participation in Xcel Energy conservation programs.
- Annual participation in Windsource and Renewable*Connect.
- On-site solar installations through City permit data.
- City dollars spent on Home Energy Squad buy downs.
- Number of participants in community-wide energy challenge.
- Number of multifamily property owners/renters who attend informational meetings about energy efficiency.

Additional Partners

There are a few additional partners who will be key to supporting the strategies laid out in this section, including:

- Eden Prairie Community Foundation, to help support bringing energy efficiency to low-income homes.
- The Building Inspections Division, to integrate energy efficiency into inspections.
- Local nonprofits, including People Reaching Out to People (PROP) and Eden Prairie Community Foundation, to support outreach to low-income homes.
- The Human Rights and Diversity Commission to provide support for outreach to low-income residents.

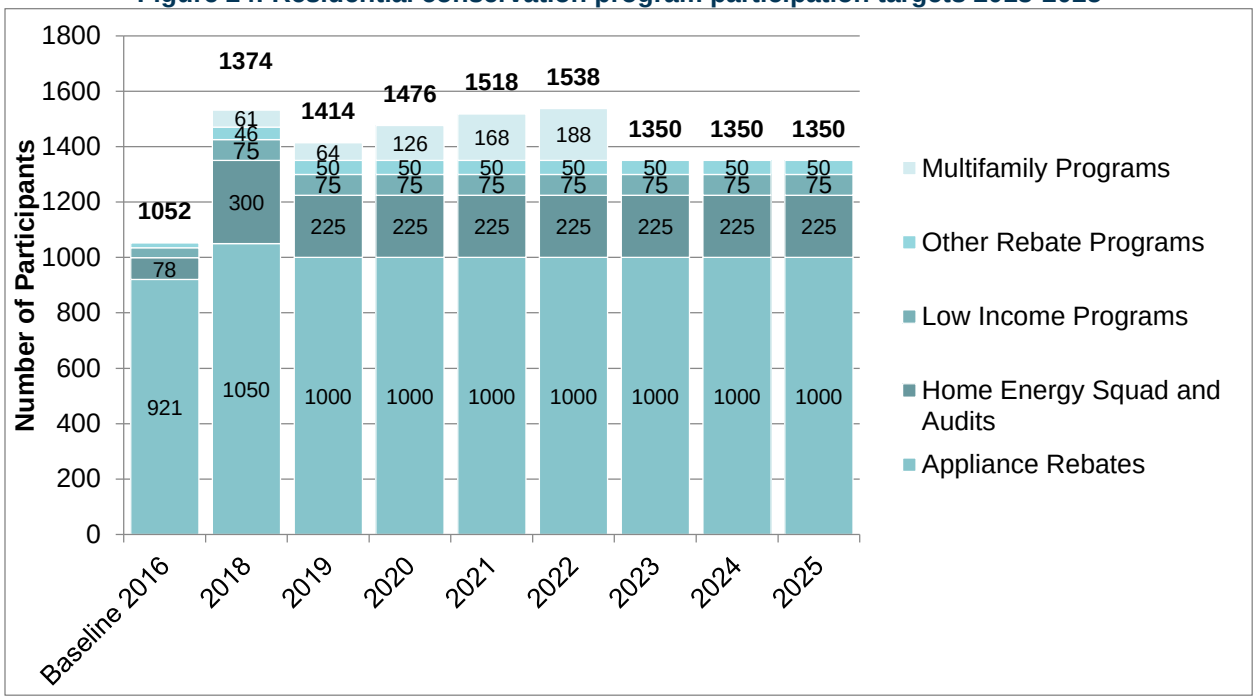
Impacts

To achieve the residential energy goal, 17,403 households need to take energy action by 2025. Figure 24 shows the path toward achieving this goal through residential conservation program participation. The combined target for residential conservation

program participation is 1,374 total actions in the first year of implementation, an increase of 322 over the baseline year. This is in addition to maintaining a slight increase in current participation in CenterPoint Energy residential programs, for a total of 1,488 households taking part each year in natural gas appliance rebates and other programs through 2025.

Specific program participation targets include 200 Home Energy Squad visits, with an emphasis on 'Enhanced' visits that include an energy audit, and free services to 75 low-income homes. Priority actions for the first year of implementation also include promoting appliance rebates and improving energy efficiency in at least one multifamily building.

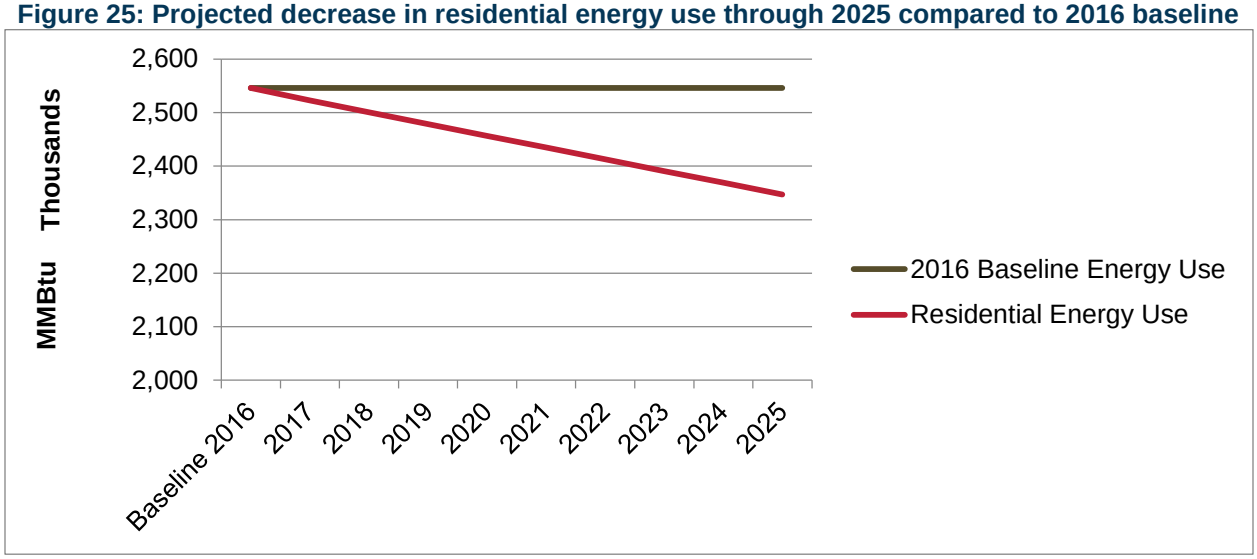
Figure 24: Residential conservation program participation targets 2018-2025[11]



Achieving the goals and targets outlined here will lead to a seven percent overall reduction in residential energy use below a 2016 baseline by 2025 (Figure 25). In the first year of implementation, these combined goals and strategies will save an estimated 1,041,201 kWh and 189,057 therms, an incremental increase of 9 percent over historic average energy savings for the community. Additionally, increased participation in Xcel Energy residential programs could save each participating household an estimated $120 annually or $10 each month on their electricity bill.

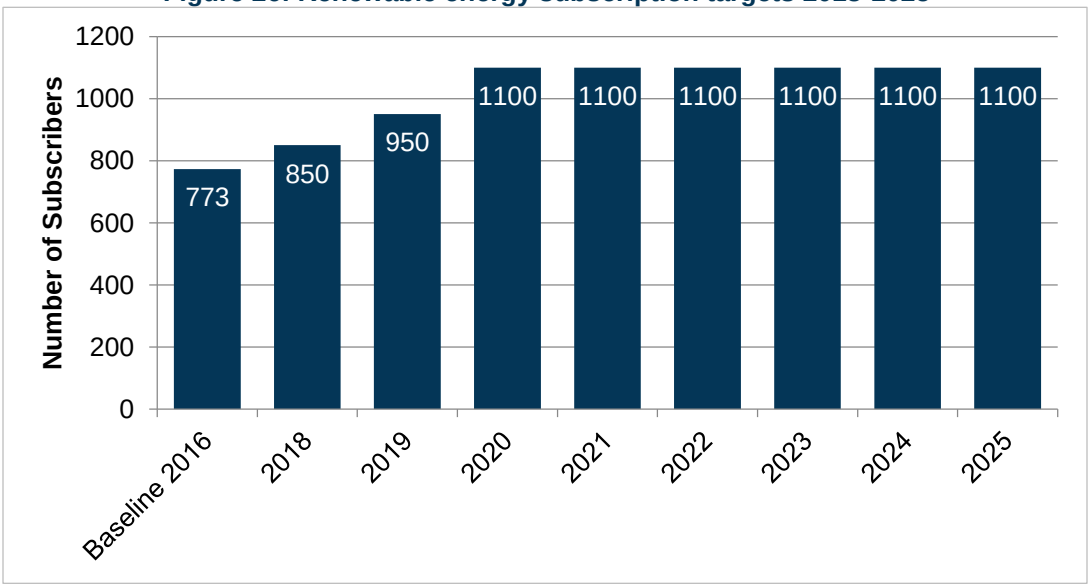
[11] Includes Xcel Energy conservation programs only. It is assumed that participation in CenterPoint Energy conservation programs will continue at the current rate.

Figure 25: Projected decrease in residential energy use through 2025 compared to 2016 baseline



Achieving the residential energy goal will also require ramping up participation in renewable energy subscription offerings such as Windsource and Renewable*Connect®. Figure 26 shows the target increase of 327 subscribers over the next three years of implementation.

Figure 26: Renewable energy subscription targets 2018-2025



Focus Area 2: Large Commercial and Industrial Buildings

Large commercial and industrial buildings represent the 20 percent of commercial energy users, about 500 premises. These customers consumed 47 percent of the community's total energy use in 2016 and represent the greatest opportunity for significant improvement in energy efficiency.

Eden Prairie 2016 assessing data shows there are 640 commercial/industrial buildings in the community. Like most of the homes in the community, the majority of commercial/industrial buildings were constructed between the 1970's and 1990s (Figure 27). This indicates that many buildings are likely looking at heating, cooling, and other equipment replacement as the original systems reach the end of their expected life, and this represents an important key moment for improving efficiency.

Figure 27: Eden Prairie commercial/industrial buildings by decade built[12]

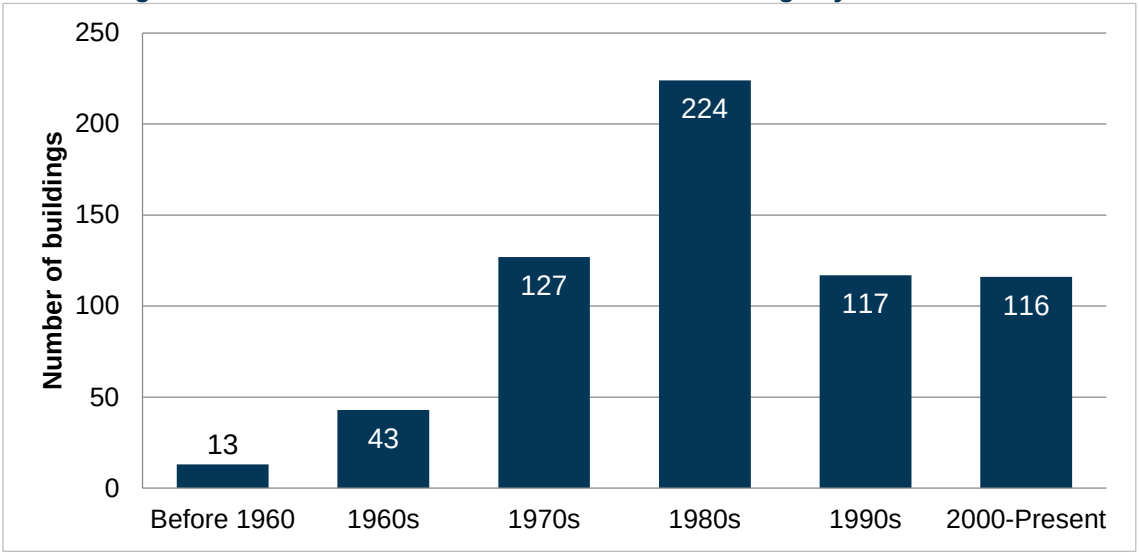
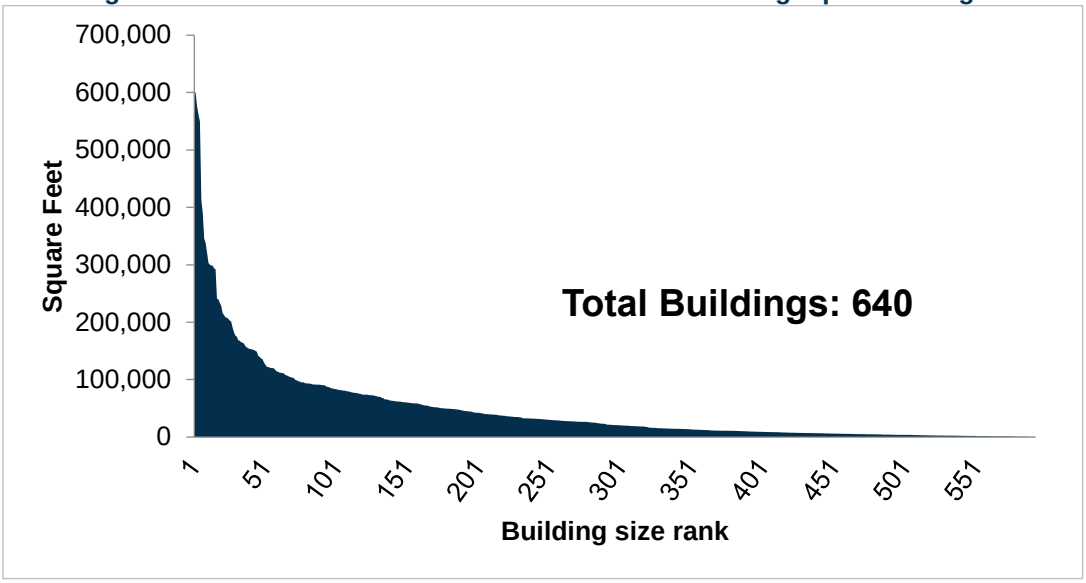


Figure 28 shows that most of the commercial/industrial square footage is concentrated within the 200 largest buildings. While energy use does depends on what type of activity goes on in a building, there is often a strong relationship between building size and energy use so these are likely to be among the greatest commercial energy users.

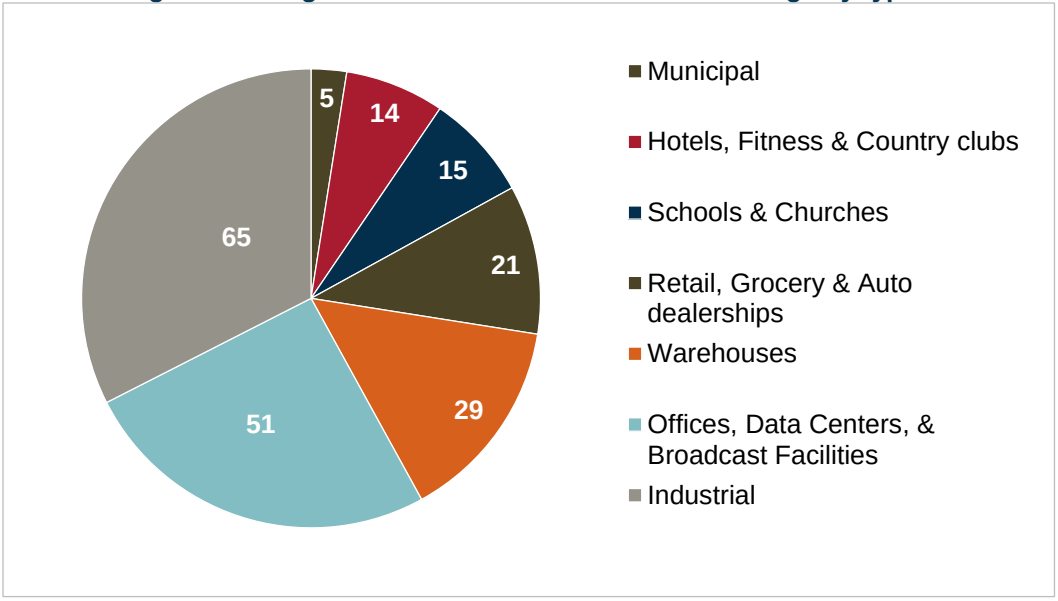
[12] Eden Prairie Assessor data, 2016

Figure 28: Distribution of commercial/industrial building square footage[13]



Looking at the 200 largest buildings in the community, the two most common types are industrial and office buildings, followed by large warehouse-type buildings such as large retail and grocery stores (Figure 29). This information can help target engagement for energy savings, as each building type has different efficiency opportunities and engagement challenges.

Figure 29: Largest 200 commercial/industrial buildings by type[14]

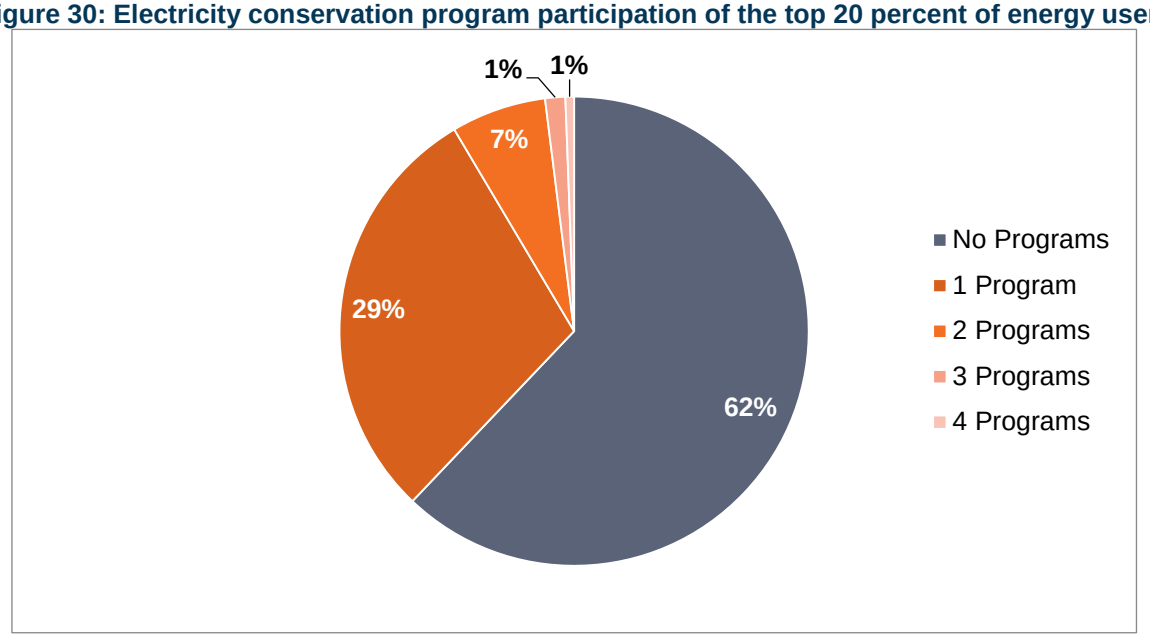


A closer look at the top 20 percent of energy users shows that many have already taken action on energy conservation. A total of 38 percent of premises have participated in at

[13] Eden Prairie Assessor Data, 2016
[14] Ibid.

least one electricity conservation program in the past three years, and 10 percent have taken more than one step to reduce their electricity use (Figure 30).

Figure 30: Electricity conservation program participation of the top 20 percent of energy users



Large Commercial/Industrial Energy Users Goal

Eden Prairie set the following goal for its large commercial/industrial energy users:

> ***By 2025, 50 percent of the largest commercial/industrial energy users participate in Xcel Energy conservation programs over a standard three-year measuring period. This will result in an additional 7.5 incremental participants per year***.

The strategies outlined below will make a significant contribution toward reducing energy-related greenhouse gas emissions and will also help achieve broader engagement of the business community in supporting Eden Prairie's sustainability vision. Achieving the above goal will require direct involvement of both City staff and leadership, with the goal of building connections and long-term relationships with business leaders.

Large Commercial/Industrial Energy Users Strategies

Strategy 1: Use established networks to raise awareness about available energy rebates and programs.

Actions:

- Work with industry associations to share relevant information about energy savings programs with members.
- Coordinate with the Eden Prairie Chamber of Commerce to sponsor and/or promote energy efficiency program information and education sessions for local businesses.
- Conduct outreach on energy saving resources targeting property managers. Offer in-person workshops and direct outreach to discuss easy energy savings program options.
- Develop focused informational materials about recommended energy conservation actions for tenants to help property managers of multi-tenant buildings engage their tenants.

Strategy 2: Use trusted messengers to conduct targeted outreach to individual businesses.

Actions:

- Coordinate with City permitting, fire, and building inspectors to share relevant information about energy saving programs during regular engagement with contractors and property owners, focusing on both new and existing buildings.
- Identify past program participants to serve as case studies/champions to similar businesses, which can be featured on the City's website, social media platforms, and in other media.
- Engage company leadership through direct outreach from the Mayor and Economic Development Manager, inviting them to support the Energy Action Plan.

Strategy 3: Engage local service providers and contractors to ensure they are identifying energy efficiency opportunities.

Actions:

- Coordinate with Xcel Energy to promote the Trade Partner program to local contractors.
- Offer a Trade Partner training and education session in coordination with other local Partners in Energy cities to help contractors navigate the energy efficiency rebates and incentives available to contractors.

Strategy 4: Provide technical tools to assist commercial buildings in taking action.

Actions:

- Conduct an email survey to assess actions already taken by largest energy users.
- Create an easy-access checklist of the top things large commercial buildings can do to save energy.
- Promote existing self-assessment tools that help estimate potential energy savings.
- Create a list of common measures that include generic return-on-investment (ROI) information that can be broadly applicable.
- Make information available through the City website and social media platforms.
- Work with the Chamber of Commerce to include rebate and program opportunities on their website or newsletter.

Measuring Success

The success of these strategies will be measured in a number of ways, including tracking:

- Annual participation in Xcel Energy Demand Side Management (DSM) programs among top 20 percent of energy users.
- The number of participants at meetings and workshops targeting businesses.
- Changes in three-year average energy use.
- The number of businesses contacted.

Additional Partners

There are a few additional partners who will be key to supporting the strategies laid out in this section, including:

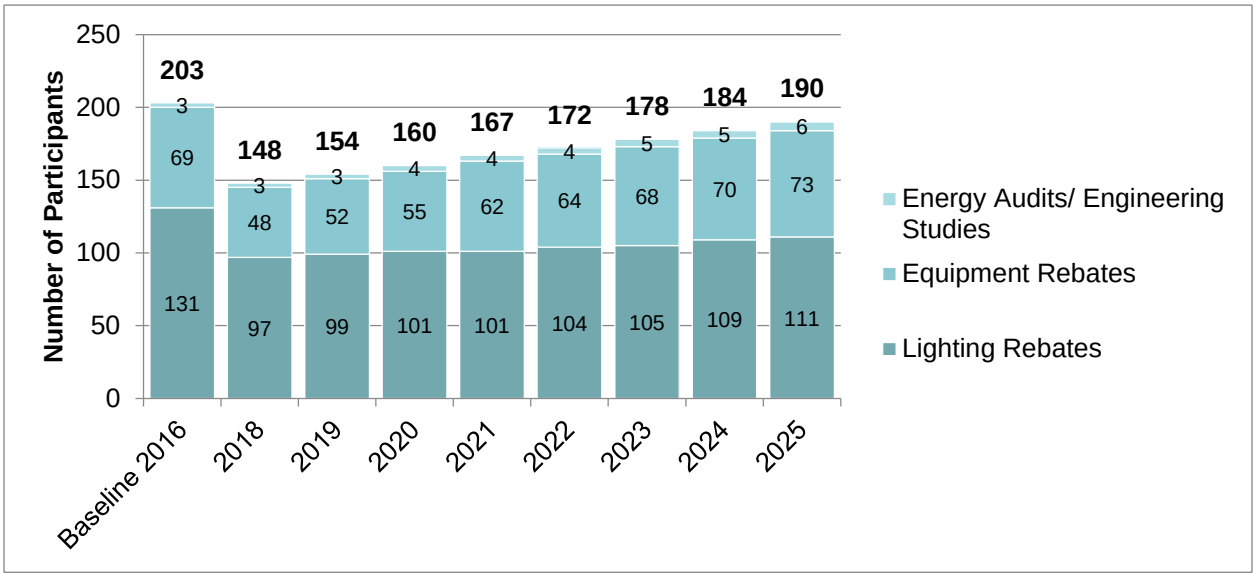
- Chamber of Commerce, to support business outreach and engagement and disseminate information about energy efficiency program options.
- Industry associations, including the Commercial Real Estate Development Association (NAIOP), the Minnesota Shopping Center Association (MSCA), and the Building Owners and Managers Association (BOMA), to share relevant information about energy savings programs with members.

Impacts

An incremental increase of 7.5 large commercial/industrial program participants each year through 2025 will result in an additional 53 energy saving actions taken on top of continued historic average rates of participation. Participation targets include an emphasis on lighting and equipment efficiency improvements, as well as a focus on

energy assessments through Turn Key Services and building recommissioning, both of which identify additional opportunities to improve efficiency.

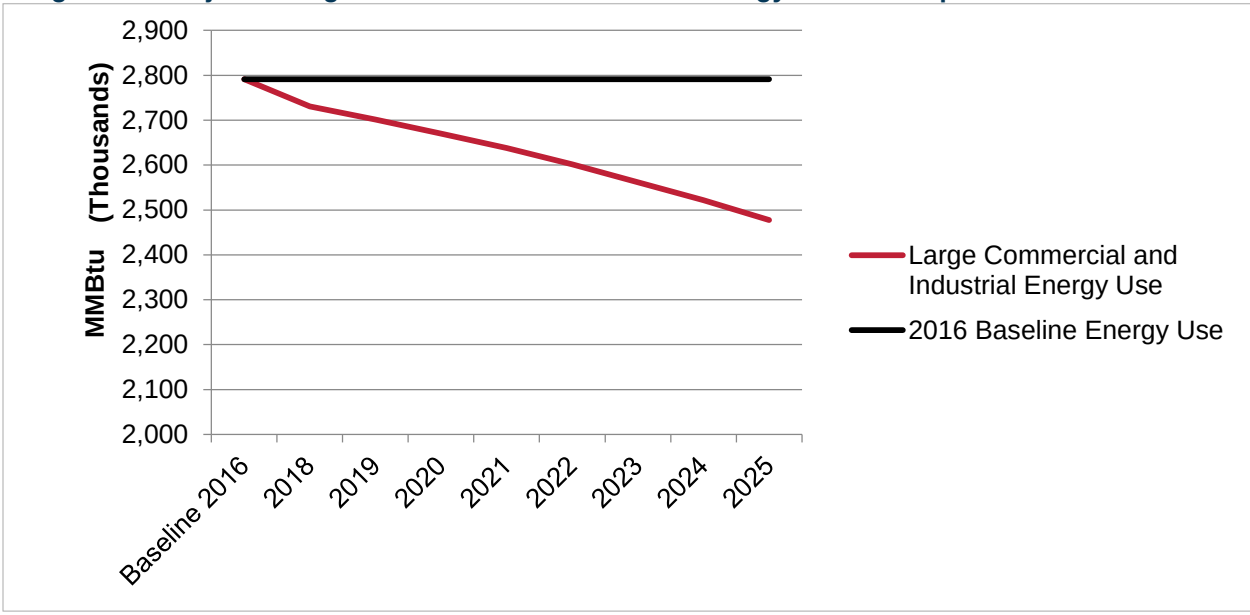
Figure 31: Large commercial and industrial conservation program participation targets 2018-2025[15]



Achieving the goal of 50 percent of large commercial/industrial users participating in conservation programs will lead to a 10 percent reduction in large commercial/industrial energy use below a 2016 baseline by 2025. In the first year, these combined goals and strategies will save 4,048,862 kWh and 125,876 therms. Additionally, increased participation in Xcel Energy programs will save an estimated $5 million in energy costs over the next seven years.

[15] Includes participation in Xcel Energy conservation programs only. It is assumed that participation in CenterPoint Energy programs will continue at the current rate.

Figure 32: Projected large commercial and industrial energy use as compared to 2016 baseline



Focus Area 3: Public, Nonprofit, and Service Organizations

Public, nonprofit, and service organizations represent a broad category that includes City facilities, school district buildings, religious institutions, nonprofits, private and charter schools, and medical and senior care facilities. There are about 300 premises that fall into this category, including 182 premises that belong to the City. Public and private entities consumed about five percent of the community's total energy use in 2016, and a total of 49 of these facilities, or about 16 percent, have participated in one or more conservation programs in the past three years.

This focus area was chosen in part for potential energy savings, and in part because it includes key community leaders — the City of Eden Prairie and the Eden Prairie School District — that can serve as examples to motivate others to take action.

This focus area also includes strategies and actions targeting religious congregations. Eden Prairie faith communities own some of the largest buildings in the community, with great potential for reducing energy use. Faith communities also value caring for both people and the environment, and they have great potential for engaging members in supporting the goals laid out in this plan. Engaging students in energy action also represents an important opportunity for building broad community support while also integrating education around energy. Student environmental groups will be key partners in motivating peers through district-wide behavior change campaigns.

Public, Nonprofit, and Service Organizations Goals

Eden Prairie set the following goals for the City, school district, and other public and nonprofit entities in the community:

- ***By 2025, Eden Prairie public, nonprofit, and service organizations will reduce energy use 20 percent below a 2016 baseline.***
- ***By 2025, the City of Eden Prairie will support renewable energy development equal to 25 percent of its energy use.***
- ***By 2025, the Eden Prairie School District will reduce its energy use by an additional 10 percent.***
- ***By 2025, all Eden Prairie public, nonprofit, and service organizations will support renewable energy development equal to 10 percent of their energy use***.

These goals represent ambitious targets for both energy use reduction and increased investment in renewable energy. The strategies outlined below include efforts to demonstrate leadership by highlighting actions taken, with an emphasis on showing the community that public and private entities are good stewards of public dollars by saving on energy costs and supporting long-term environmental goals.

Public, Nonprofit, and Service Organizations Strategies

Strategy 1: Recognize leadership among public, nonprofit, and service organizations who take action as a way to encourage others.

Actions:

- Showcase the City and school district as leaders in saving energy and investing in renewables in their own buildings through case studies and newsletter articles.
- Develop case studies of completed energy projects implemented by churches, schools, and nonprofits in the community.

Strategy 2: Provide targeted information and support to public, nonprofit, and service organizations to encourage energy and cost savings.

Actions:

- Build partnerships with creation care/green committees within local congregations to learn about existing efforts and identify needs for additional support or information.
- Host three lunch-and-learn events for facility managers and others from faith communities and nonprofits to share conservation program options and case study examples.
- Promote key programs with return on investment (ROI) estimates that are most relevant to public, nonprofit, and service organizations, including:
  - Energy audits/studies, particularly turnkey and recommissioning,
  - Lighting programs, and
  - Heating, cooling, and foodservice equipment rebates.
- Follow up to encourage action, with focused support on already-planned maintenance.
- Create a tool kit to help public, nonprofit, and service organizations set their own long-term energy conservation goals.

Strategy 3: Promote renewable energy options to Eden Prairie public, nonprofit, and service organizations.

Actions:

- Survey public, nonprofit, and service organizations to determine the number of existing renewable energy installations and gauge interest in renewable energy.
- Develop targeted information materials describing renewable subscription and on-site installation options available to public, nonprofit, and service organizations.
- Develop a cost/ROI comparison tool that includes criteria for evaluating renewable energy options.
- Focus one lunch-and-learn event on renewable energy program and financing options.

Strategy 4: Pursue on-site renewable energy on City buildings.
Actions: • Identify City buildings that are good candidates for on-site solar. • Research available contract and financing options and develop a proposal for consideration by City Council. • Complete at least one on-site install within three years.
Strategy 5: Capture additional energy savings at Eden Prairie schools by engaging students and teachers in energy conservation.
Actions: • Identify school principals willing to show leadership in energy conservation. • Work with principals to recruit teachers to lead behavior change campaigns within their schools. • Develop lesson plans and marketing materials targeting actions that students and teachers can take to save energy at school. • Provide recognition for schools that successfully conserve energy through behavior change.

Measuring Success

The success of these strategies will be measured in a number of ways, including tracking:

- Savings achieved through participation in conservation programs.
- Subscriptions to Windsource and Renewable*Connect by public, nonprofit, and service organizations.
- On-site renewable energy installations and energy generation capacity.
- Number of participants in lunch-and-learn events.

Additional Partners

It is anticipated that there will be important opportunities for engagement with other partners on the strategies outlined in this focus area, including:

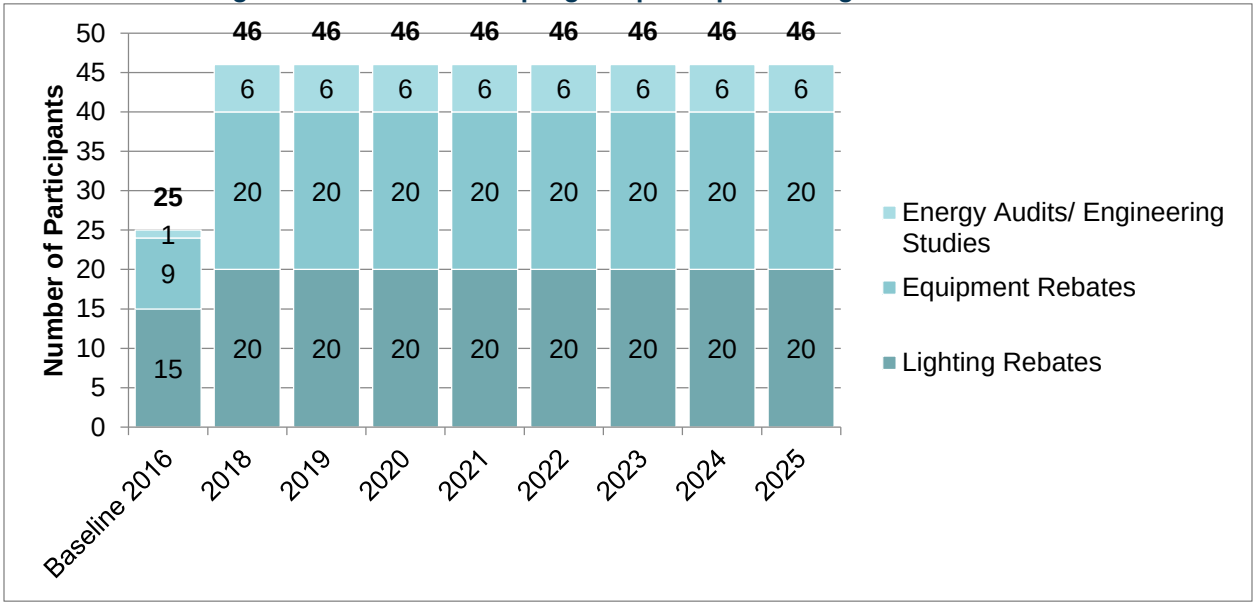
- Minnesota Interfaith Power and Light to co-host renewable energy workshop for faith communities.
- Tree Huggers student group to play a leadership role in student engagement efforts
- Creation Care/Green Committees to serve as key liaisons and project managers for religious organizations.
- Conservation Minnesota to support implementation.
- Alliance for Sustainability to serve as an information resource.

- Community volunteers to play a key role in outreach to faith communities and nonprofits.

Impacts

The goals and targets outlined here approximately double current annual conservation program participation, maintaining a count of 46 electricity actions taken and four natural gas actions taken each year through 2025. The primary focus of actions taken is on lighting efficiency upgrades and heating and cooling efficiency improvements, as well as an emphasis on energy assessments through Turn Key Services and building recommissioning to identify additional energy saving opportunities.

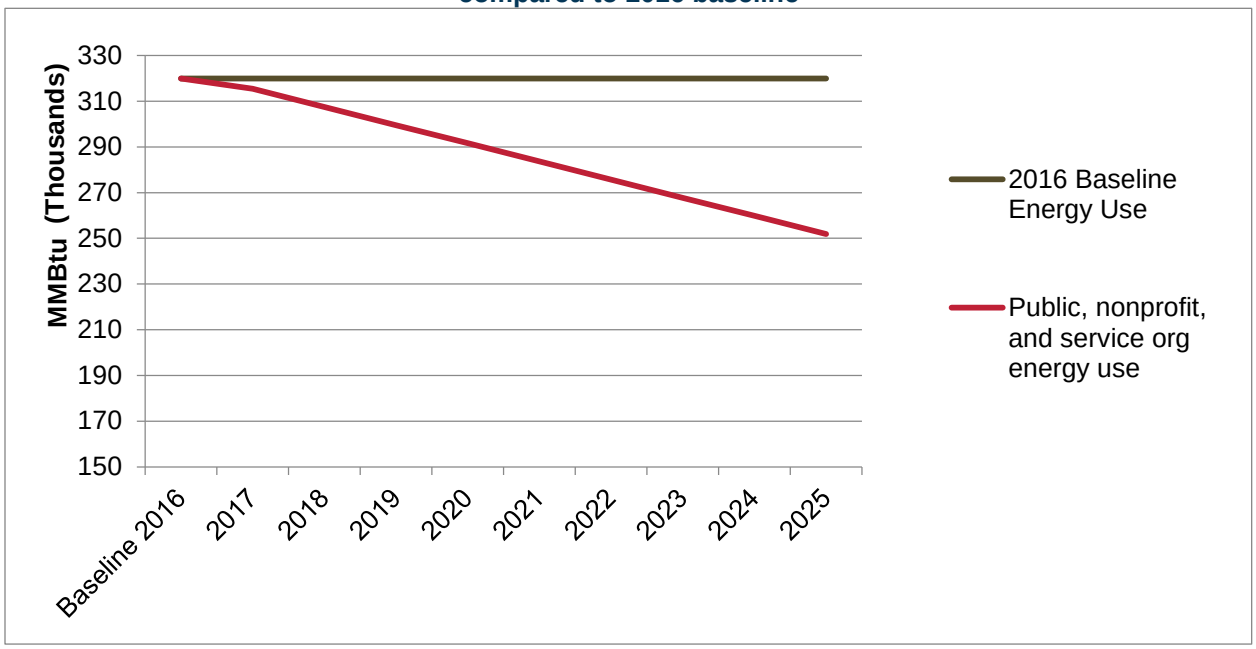
Figure 33: Conservation program participation targets 2018-2025[16]



Achieving the goals for public, nonprofit, and service organizations will lead to an overall 20 percent reduction in public and private entity energy use by 2025. In the first year, these combined goals and strategies are estimated to save 1,184,871 kWh and 39,035 therms. Additionally, increased participation in Xcel Energy programs could save an estimated $1.2 million in energy costs over the next seven years.

[16] Includes participation in Xcel Energy conservation programs only. It is assumed that participation in CenterPoint Energy programs will continue at the current rate.

Figure 34: Projected reduction in public, nonprofit, and service organization energy use as compared to 2016 baseline

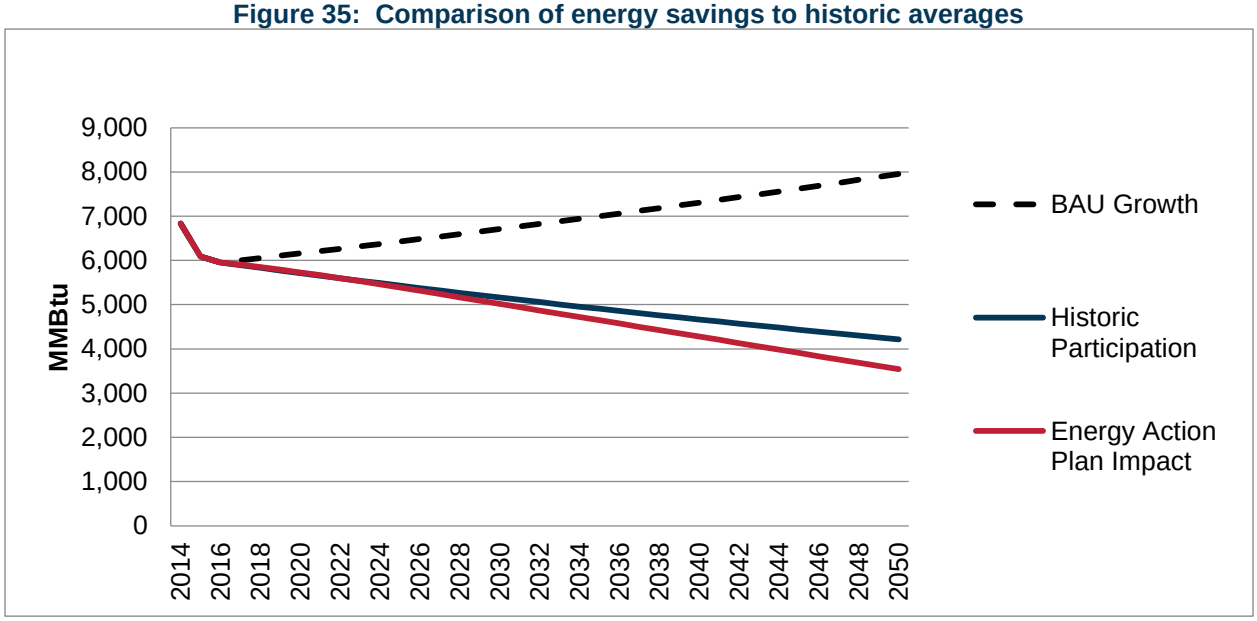


Achieving the renewable energy goals for this focus area will require supporting a total of 7.24 kWh of renewable energy development — 3.8 million kWh to cover 25 percent of City energy use and 3.4 million kWh to cover 10 percent of energy use for other public, nonprofit, and service organizations. This investment can take the form of renewable subscriptions through Windsource, Renewable*Connect®, or community solar gardens, or through direct investment in on-site solar installations on City and other buildings.

Combined Impact of Energy Action Plan

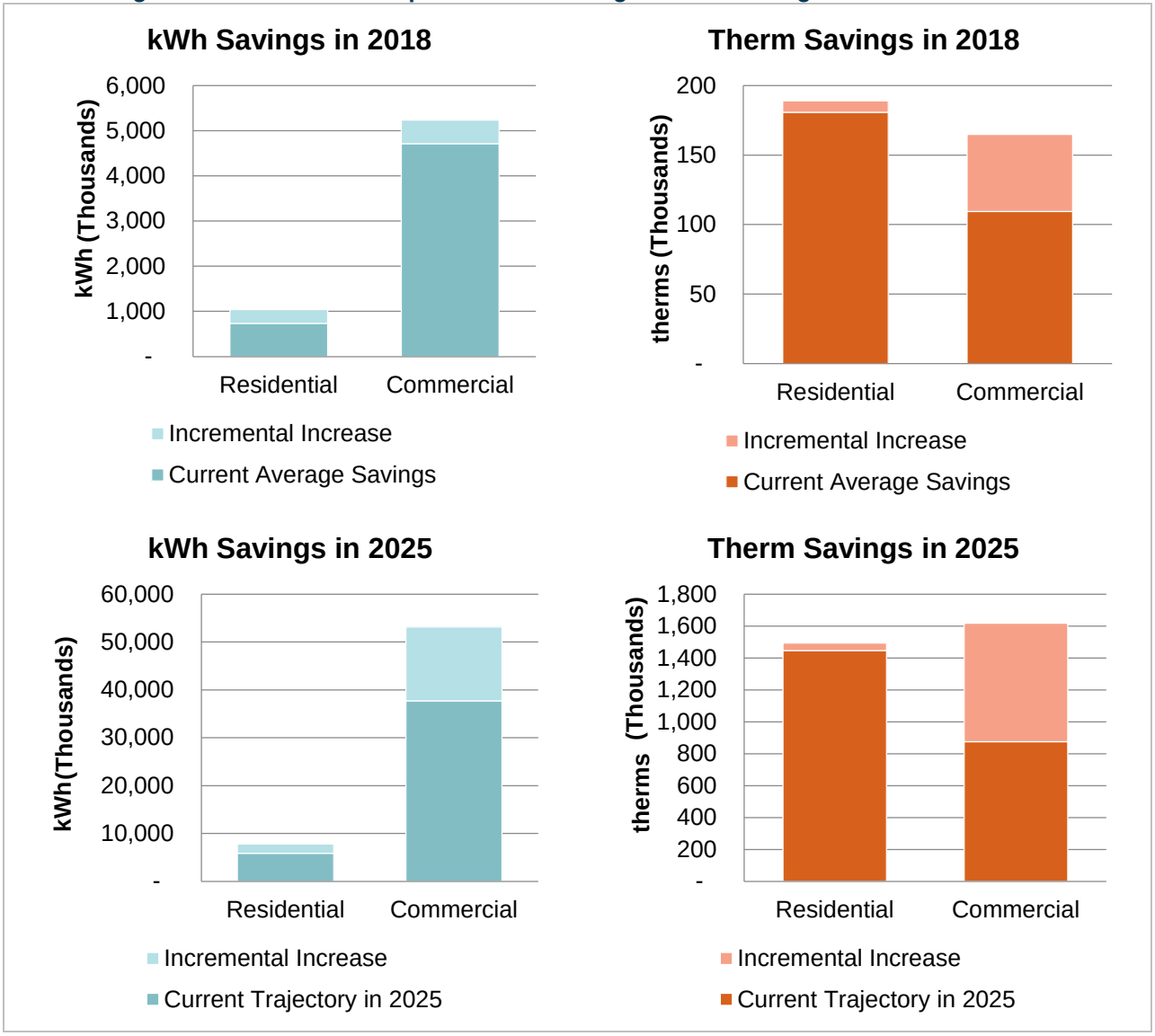
The combined goals and strategies outlined in this plan set Eden Prairie firmly on its path to achieve 30 percent greenhouse gas emissions reductions by 2025 and 80 percent reductions by 2050.

Figure 35: Comparison of energy savings to historic averages



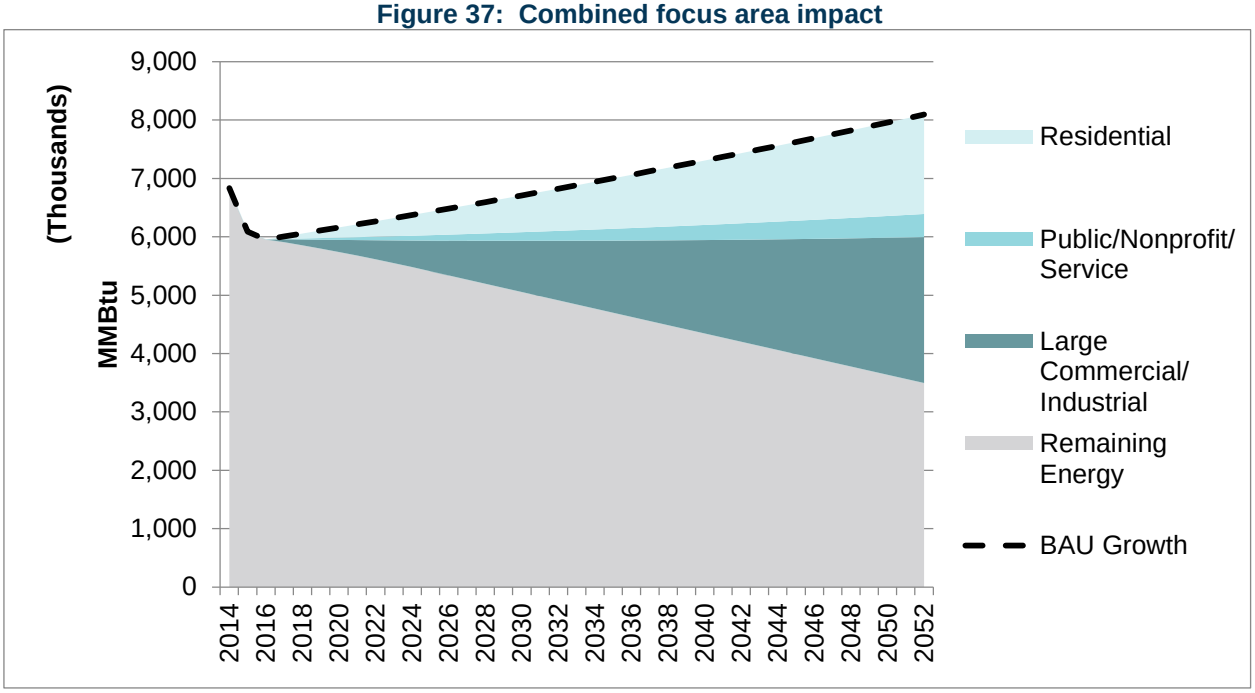
By 2025, Eden Prairie's energy goals will achieve an estimated 9.4 percent reduction in energy use below a 2016 baseline. The result will be an additional estimated 17.3 million kWh and 791,000 therms saved over historic averages over the next seven years. This is an incremental increase of approximately 19 percent above averages based on historic savings.

Figure 36: Incremental impact of combined goals and strategies in 2018 and 2025



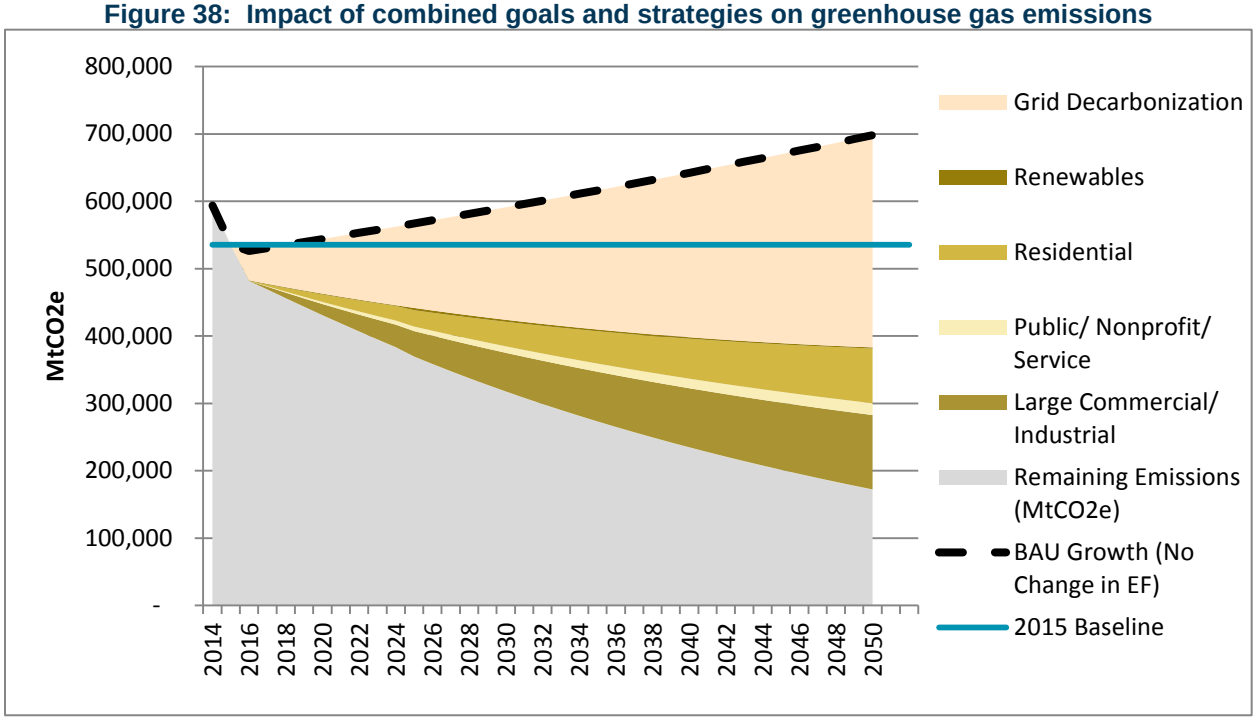
As shown in Figure 37, the greatest impact on energy savings will come from actions taken by large commercial/industrial businesses. Residential actions will have an additional lasting impact, as they continue to generate long-term savings. As stated previously, it is assumed that small and medium-sized businesses not specifically targeted in this plan will continue participating in energy conservation programs at the same rate, leading to modest savings over the long term.

Figure 37: Combined focus area impact



The combined goals and strategies put Eden Prairie on track to achieve its greenhouse gas emissions reduction goals. Figure 38 shows anticipated growth in emissions from increased energy demand over time (business-as-usual or "BAU" growth), under the assumption that energy generation continues emitting carbon at current levels. This is then mitigated by grid decarbonization, which represents projected efforts made by Xcel Energy to increase renewable energy generation. Grid decarbonization alone will reduce greenhouse gas emissions by 45 percent by 2050. In addition to grid decarbonization, Eden Prairie's combined energy conservation efforts will result in an additional 30 percent reduction in greenhouse gas emissions below a 2015 baseline by 2050, if investments made in renewable energy by the City and other public, nonprofit, and service organizations allow them to keep the Renewable Energy Credits (RECs). In that case, the result is a combined reduction in greenhouse gas emissions of 30 percent below a 2015 baseline by 2025 and a 68 percent reduction by 2050. Additional investment in renewable energy, as well as increased adoption of electric vehicles, will be required to achieve the goal of an 80 percent reduction in emissions by 2050.

Figure 38: Impact of combined goals and strategies on greenhouse gas emissions



Plan Implementation

The process to develop this Energy Action Plan represents a first step and identifies initial actions the community can take to work toward its carbon emission reduction goals. Once the plan has been approved by the City Council, the City and Xcel Energy will lay out a detailed implementation plan covering the first 18 months. During this time, the City, the Conservation Commission, and the Energy Action Team will play key roles in ensuring the action plan moves forward. Xcel Energy will support the first 18 months of implementation with project management, technical expertise, marketing resources, and progress tracking.

In addition to the strategies listed under each focus area, there are three main community-wide strategies that will support achievement of the goals laid out in this Energy Action Plan:

- Continue to utilize the Sustainable Eden Prairie Award program to recognize business, resident, and organizational leadership in energy efficiency and renewables.
- Engage City leadership and all City commissions in supporting implementation of the Energy Action Plan.
- Identify opportunities to recruit community volunteers to support plan implementation.

City staff and the Conservation Commission will work together as leads on these three strategies, beginning immediately and continuing throughout the first 18 months of plan implementation.

Figure 39: Implementation roles and responsibilities

Roles and Contributions Toward Plan Implementation
City of Eden Prairie
• Serve as overall project management lead for plan implementation. • Coordinate with Conservation Commission, Sustainable Eden Prairie group, other City commissions, and relevant City departments. • Allocate necessary staff and other resources to ensure plan success. • Lead design and implementation of community-wide marketing campaign and energy challenge. • Develop effective messaging to target low-income residents, renters, homeowners, and multifamily building owners and renters. • Administer surveys. • Review and select best policy options for new construction and renewable energy, and present to City Council for approval. • Co-host events targeting businesses, multifamily buildings, and other organizations. • Lead engagement and follow up with businesses and public, nonprofit, and service organizations. • Conduct outreach to industry associations and contractors • Implement energy efficiency and renewable energy projects in City buildings. • Engage City and school district leadership in supporting plan implementation.

Conservation Commission
• Create an energy efficiency subcommittee to support engagement on an ongoing basis. • Partner with City to co-host events targeting businesses, public, nonprofit, and service organizations, and multifamily buildings, including recruiting participants and conducting follow up with event attendees. • Volunteer to staff outreach booths at community events. • Help design and actively support energy challenge, including recruiting participants. • Build partnerships with Creation Care/Green committees and other groups in the faith community. • Sponsor/administer Sustainable Eden Prairie Award program. • Conduct outreach and follow up with public, nonprofit, and service organizations in community. • Work with Tree Huggers group at Eden Prairie High School on student engagement. • Disseminate residential and public, nonprofit, and service organizations surveys.
Energy Action Team
• Re-convene every six months to monitor progress toward goal achievement. • Assist with residential, public, nonprofit, and service organizations, and business outreach and engagement. • Assist in developing targeted marketing materials and tools for large commercial businesses. • Assist in developing effective low-income and multifamily outreach strategies. • Assist in building partnerships with key organizations in the community.
Xcel Energy
• Assist with market research and marketing campaign planning. • Design customized marketing materials, website content, case studies, and newsletter articles. • Compile policy option research. • Assist in identifying existing tools for businesses and developing new ones. • Engage account managers in outreach and assistance connecting interested businesses to appropriate Xcel Energy programs and services. • Provide expertise and develop customized informational materials. • Provide expert presentations at lunch-and-learn events. • Help build surveys and summarize results. • Provide bi-annual data tracking and reporting.

Community Engagement

A key goal for entering into the Partners in Energy planning process was to identify opportunities to broaden community engagement. There are many opportunities for community members to support this Energy Action Plan, including:

- Taking energy conservation and renewable energy action in their own homes.
- Reaching out to friends, neighbors, and other social networks to encourage them to take action.
- Using social media to supporting the community-wide marketing campaign and energy challenge.
- Engaging faith communities to implement energy efficiency and renewable energy projects on church facilities.
- Encouraging schools to take part in energy conservation.
- Organizing office 'green teams' and encouraging company leadership to take action, for those residents who also work in Eden Prairie.
- Volunteering to assist with tabling and outreach at community events.

Community members interested in volunteering to support plan implementation should contact Marisa Bayer, Community Development Coordinator, at mbayer@edenprairie.org.

Operational Actions and Tracking

The City and Energy Action Team will review bi-annual reports of identified metrics to assess progress toward achieving goals, which will determine whether a change in course is necessary. The Energy Action Team may decide to revise goals, update strategies, or add new strategies based on implementation progress as needed. Bi-annual reports will be posted on the City website and available for public review.

Conclusion

With this Energy Action Plan, Eden Prairie is demonstrating its firm and ongoing commitment to sustainability and improving the quality of life for its residents as well as economic conditions for its businesses. Eden Prairie will continue to demonstrate leadership in these efforts and seek out opportunities to broaden carbon reduction impacts in the future as new technologies develop. In particular, growth in use of electric vehicles presents an opportunity for significant environmental benefits, as well as a new challenge for meeting increased electricity demand. Additionally, accomplishing its 2050 greenhouse gas emissions reduction goal will require additional investment in renewable energy, so the City and Conservation Commission will look for ways to continue demonstrating leadership in this area.

Implementation of this plan will dovetail with the City's other sustainability areas of focus in several ways. For example, organics recycling is currently under heavy discussion, and this can become a source of renewable energy generation by utilizing biodigestors. As an another example, efforts to increase tree canopy through tree planting and to

replace turf with native plants can help offset carbon emissions and push Eden Prairie even closer to its long-term greenhouse gas goals. The City and Conservation Commission, along with residents and businesses, will work together to move these and other sustainability efforts forward.

Appendix 1: Planning Memorandum of Understanding

Xcel Energy®
PARTNERS IN ENERGY
An Xcel Energy Community Collaboration

Memorandum of Understanding
Phase 1 – Plan Development

Mr. Rick Getschow
City Manager
City of Eden Prairie
8080 Mitchell Road
Eden Prairie, MN 55344

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 a team of community members to participate in the development 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 Eden Prairie's intent to participate in the initial plan development phase of Partners in Energy 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 Eden Prairie into the analysis if feasible.
- Professional facilitation of three to five 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 community stakeholder planning team and will be accessible to the community.
- Commitment to delivering an actionable and complete energy action plan within eight months of the City of Eden Prairie and Xcel Energy signing this MOU. Support for this phase of Partners in Energy can extend to twelve months but we anticipate completing the plan in a shorter time frame.

Although participation in the Plan Development phase of Partners in Energy program requires no monetary contribution, the community, the City of Eden Prairie, 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.
- 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.
- Timely review of energy action plan document, as well as shepherding the completed plan through stakeholder review process.
- 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 an eight-month timeframe of the City of Eden Prairie and Xcel Energy signing this MOU. Within this period the City of Eden Prairie 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 Eden Prairie	Xcel Energy
• Single point of contact • Participation in development of workshop agendas and planning process oversight. • Support in maintaining community stakeholder engagement throughout the planning process. • Consideration and review of potential strategies to meet community goals. • Review and input for 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 action plan resulting from this work will be available to the public	• Assistance identifying and recruiting community stakeholders. • Analysis of community energy use and program participation. • Content development and facilitation of planning sessions. • Training and guidance developing strategies and tactics based on community data and goals. • Documentation and delivery of the energy action plan. Coordinating input and edits from community planning team. • 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 Eden Prairie.

All communications pertaining to this agreement shall be directed to Aurora Yager, on behalf of the City of Eden Prairie, 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 Eden Prairie in the development of an energy action plan.

For the City of Eden Prairie:

Date: 1/17/17

For Xcel Energy:

Date: 1/31/17

Appendix 2: Glossary of Terms

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

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

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

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

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

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.

Quick Energy Unit Conversions

See the glossary in Appendix 1 for definitions of common energy terms.

MMBtu: Million British Thermal Units
kWh: Kilowatt Hour
Thm: Therm

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

Renewable Energy Credits (RECs): Renewable Energy Credits, or RECs, are a third party certified currency used to measure the renewable energy produced and applied to meet renewable energy goals. These credits represent the environmental attributes associated with renewable energy, and can be kept together with electricity, or sold separately from that electricity. RECs purchased on the market or retired by Xcel Energy on a customer's behalf through a program such as Xcel Energy's Windsource® or Renewable*Connect® can be used to meet renewable energy and carbon reduction goals. RECs owned or purchased by Xcel Energy are used to meet the utility's renewable energy goals and requirements, and are not counted toward the community's renewable energy goals.

Therm: A unit of natural gas consumption

Appendix 3: Community Background

Figure 40: Eden Prairie Facts and Figures[17]

County	Hennepin
Metro Area Location	11 miles southwest of Minneapolis, along the northern side of the Minnesota River
Size	35.19 square miles
Development	78% developed[18]
Population	62,626 in 2015
Population Density	1,873.6 people per square mile 715.9 housing units per square mile

The City of Eden Prairie's mission is to foster respect for the past, plan for the future, and deliver high quality public services that contribute to a strong sense of community. Eden Prairie prides itself on being a desirable place to live and work. Boasting one of the largest and highest achieving public school districts in the state, Eden Prairie is a destination for families. The City also is home to award-winning restaurants and a vibrant retail community, including the Eden Prairie Center mall.

The City itself is approximately six by six miles square, with the Minnesota River bordering to the south and Highway 169 bordering to the east. With the famous waterway making up its southern border, it shouldn't be a surprise that Eden Prairie prides itself on its natural amenities. The city boasts nearly 10,000 acres of land designated for parks and open spaces, and 200 miles of walking and biking trails. Eden Prairie is one of the only cities within the metro area where residents enjoy more than 4,500 acres of open space wetlands, including the beautiful views of 17 lakes and more than 100 ponds. With a strong commitment to natural resource conservation, protection of the environment is a core value for Eden Prairie residents.

[17] U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates
[18] Metropolitan Council Generalized Land Use Historical Data Set. Undeveloped land includes 'Agricultural and Undeveloped Land' as well as 'Open Water.' Parks are counted as developed land.

A Cross Section of Eden Prairie's Community Assets

Highlights identified by Energy Action Team members during the planning workshops.

- Strong, diverse community.
- Many opportunities to get involved.
- High quality of life with parks and community services
- Strong schools.
- Demonstrated commitment to sustainability
- Shopping opportunities.
- Strong and active faith community.
- Well-managed city.

Population and Demographics

Eden Prairie's population of more than 62,000 is both more affluent and more ethnically diverse than the population of Minnesota. Eden Prairie is also home to a diversity of ages, being a popular place to live among both families and seniors.

Lake Mitchell
Photo by Steve Krahn / CCBY

Figure 41: Eden Prairie Population and Demographics Summary[19]

Economics	
Median income (2015)	$97,640 ($61,492 statewide)
Poverty rate (2015)	5% (11.3% statewide)
Unemployment rate	4.1% (5.6% statewide)
Ethnic Diversity	
White	77.8%
Asian	10.6%
Black or African American	5.5%
Latino	3.1%
Foreign Born	14.2%
Speak a language other than English	17.3%
Age Distribution	
Under 18	25.1% (17.2% statewide)
65 and over	10% (13.9% statewide)
Median age	38.3
Families with children under 18	35%

Business and Economy

Eden Prairie has a robust and diverse business community, with a variety of small and large businesses. From award-winning restaurants to large retail and corporate headquarters, more than 2,200 businesses are located in Eden Prairie, employing 59,562 individuals.[20] Three businesses employ over 1,000 people each.[21] Eden Prairie's principle employers for 2016, as identified by the City, were as follows:

Eden Prairie Center
Photo by Bobak Ha'Eri / CCBY

[19] U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates.
[20] Metropolitan Council Quarterly Census of Employment and Wages, 2016.
[21] City of Eden Prairie, " Eden Prairie Comprehensive Annual Financial Report for the Year Ended December 31, 2016," page 172.

Figure 42: Eden Prairie Principal Employers[22]

Employer	Employees	Percent of City Employment
Optum	2,984	5.3%
Starkey Labs	1,700	3.0%
Eden Prairie School District #272	1,637	2.9%
SUPERVALU Inc.	1,000	1.8%
CH Robinson	913	1.6%
Optum360, LLC	900	1.6%
MTS Systems Corp.	800	1.4%
Eaton Corp.	717	1.3%
Abbott Laboratories	617	1.1%

Eden Prairie employs people within a diverse array of fields. While finance, management, and professional jobs make up about a third of the workforce, the service, retail, and manufacturing sectors are also large employers. In 2016, the largest area of employment was in professional and technical services, with 25 percent of employees working within that sector. Manufacturing was the second largest employer with 13 percent of the workforce. Combined, retail and wholesale trades account for 18 percent of jobs, while finance and insurance, along with management of companies and enterprise, account for 12 percent of Eden Prairie jobs.[23]

As Eden Prairie also has highly visible medical centers and schools, it is not surprising that health care and education are large employers. Health care and social assistance account for 5 percent of jobs, and jobs in educational services make up 4 percent of the workforce.

Eden Prairie also has some very large buildings to go along with its large businesses and employers. These buildings are a mix of large commercial, corporate offices, schools, churches, and industrial buildings. Only one of these larger buildings, Central Middle School, is ENERGY STAR® Certified.[24]

Education

Eden Prairie Independent School District 272 has eight K-12 schools and serves 10,200 students.[25] The city is also home to the International School of Minnesota and Hennepin Technical College.

[22] City of Eden Prairie" Eden Prairie Comprehensive Annual Financial Report for the Year Ended December 31, 2016," page 172.
[23] Metropolitan Council Quarterly Census of Employment and Wages, 2016.
[24] ENERGY STAR®. July 7, 2017. Environmental Protection Agency and U.S. Department of Energy. www.energystar.gov/index.cfm?fuseaction=labeled_buildings.locator
[25] Eden Prairie School District website

At least 86 percent of adults in Eden Prairie have earned at least a high school diploma. Sixty percent of adult residents have bachelor's degrees and 22 percent of adult residents have graduate degrees.[26] This is more than twice the average college education rate for the state as a whole.

Housing

Currently, 31 percent of the land in Eden Prairie is residential, mostly consisting of low-density residential housing. In 2016, there were 25,715 housing units in Eden Prairie.[27] About 73 percent of those were owner-occupied, and 27 percent were renter occupied.[28] Eden Prairie housing stock is relatively new, with the majority of the housing stock being erected in the 1980s. In fact, over 60 percent of the current housing stock was constructed between 1980 and 1999.[29] The median home value is $303,600, which is higher than the average for the Twin Cities region. Median rent is $1,182, which is also higher than the Twin Cities average.[30]

Most Eden Prairie homes, both single family homes and multifamily units, are heated using natural gas, though 15 percent of homes are heated using electricity.[31] A small portion of homes (just over 1 percent) are heated using propane.

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. These communication channels will be helpful during implementation efforts.

[26] U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates.
[27] Eden Prairie Assessor Data, 2016
[28] U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates.
[29] Eden Prairie Assessor Data, 2016
[30] U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates.
[31] American Community Survey 2015

Figure 43: Eden Prairie local outreach channels

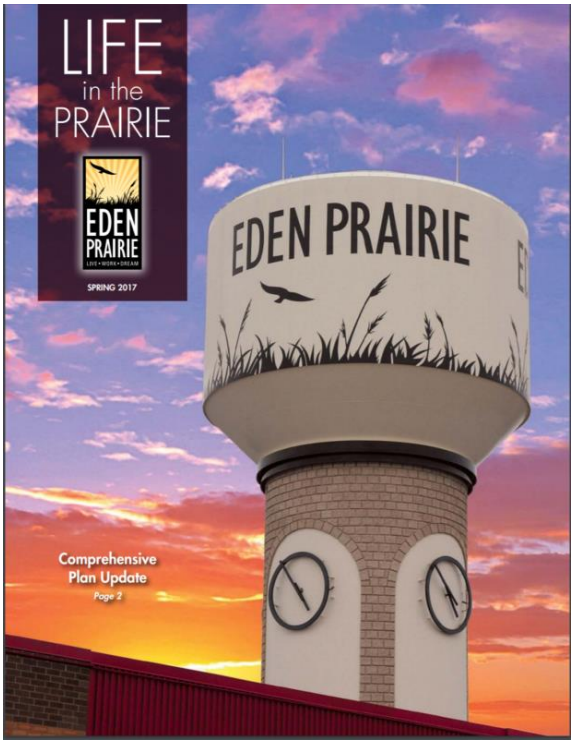
Local Outreach Channels
City Communications

• City website, including Sustainable Eden Prairie section
• CITY NEWS email and text subscription services
• *Life in the Prairie* quarterly newsletter
• Parks and Recreation program guides
• Senior Center News
• City Connect online engagement platform
• City blogs
• Social media platforms
  ○ Facebook
  ○ Twitter
  ○ Nextdoor

Other Communication Channels

• Local print media
  ○ *The Sun Current*
  ○ *Eden Prairie News*
• School District publications
• Signage in parks and City facilities
• Environmental Learning Center at Water Treatment Plant

Events
• Chamber of Commerce Home and Garden Expo (tabling) • Arbor Day and Green Fair (tabling) • Citywide Open House (tabling)



Spring 2017 Life in the Prairie newsletter cover

Appendix 4: Prior and Existing Sustainability Initiatives

Below is a detailed summary of Eden Prairie's prior and existing sustainability initiatives.

Conservation Commission

Eden Prairie's Conservation Commission was established to provide guidance and act as an advisor to Eden Prairie sustainability and conservation efforts including the 20-40-15 Initiative. The commission consists of Eden Prairie residents as well as student members who serve during the school year. The Conservation Commission is also tasked with educating the public about Sustainable Eden Prairie programs and recommending additional initiatives for the City to undertake.

20-40-15

One of Eden Prairie's first steps towards sustainability was in 2006, when they launched the 20-40-15 initiative. This initiative was aimed at increasing energy efficiency in the City's vehicle fleet and facilities. Strategies for the vehicle fleet included reducing the number of City vehicles and purchasing fuel efficient and hybrid vehicles. Strategies for City facilities included:

- Lighting replacements,
- HVAC system replacements,
- Solar panels installed at Community Center,
- Additional insulation when re-roofing City buildings, and
- Ice rink efficiency improvements.

The City's efforts were overwhelmingly successful, with the initiative surpassing its goals in each area. The goals were to reduce increase fuel efficiency in the City's vehicle fleet by 40 percent and increase energy efficiency in City facilities by 20 percent by the year 2015. The final report showed improvements for the vehicle fleet and City buildings to be 44.4 percent and 21.8 percent, respectively. The City hopes to capitalize on the immense success of the initiative through the newly launched Sustainable Eden Prairie.

Sustainable Eden Prairie

Sustainable Eden Prairie is an ongoing effort focusing on education and implementation of sustainable practices to protect the environment and natural resources that community members in Eden Prairie enjoy. The City plans to lead by example, providing a foundation for residents and businesses to carry out sustainable practices in energy, landscape, waste, and water. To engage residents, the City offers regular updates on sustainability actions and tips through its various communication channels. While the City has a great amount of experience in energy conservation with its own internal practices through the 20-40-15 initiative, Eden Prairie hopes to capitalize on the guidance from the Partners in Energy planning process to broaden its engagement beyond City staff and operations. Partners in Energy will provide information on best practices that Eden Prairie can mobilize to broaden its scope.

GreenStep Cities

The City of Eden Prairie is one of the highest achieving communities involved in the statewide GreenStep Cities program. Eden Prairie joined in 2011 and in June 2017 became one of the first communities to achieve Step 5 status, the highest status in the state, which recognizes improvement in measurements of sustainability. Eden Prairie has completed 55 best practices established by the program, covering the five central areas of buildings and lighting, land use, transportation, environmental management, and economic and community development. Many of the best practice areas are aimed at lowering energy consumption. Partners in Energy will work in tandem with these best practice areas.

Comprehensive Plan

The City is in the process of updating its comprehensive plan known as Aspire Eden Prairie 2040. The City will incorporate resiliency throughout the comprehensive plan, understanding that resiliency and sustainability are important to all aspects of the plan (e.g. housing, transportation, economic development). The Energy Action Plan will be referenced in the comprehensive plan as it relates to solar and other renewable energy efforts.

Artistic Depiction of Eden Prairie at the Eden Prairie City Hall

LoGoPEP

Eden Prairie is also participating in the Local Government Project for Energy Planning, or LoGoPEP. LoGoPEP is designed to build upon existing efforts to engage local governments in committing to actionable strategies for energy and greenhouse gas emission reductions. LoGoPEP will provide communities with planning tools and actual results to measure progress toward their goals. This project is being developed at the Twin Cities metropolitan regional scale with the goal of future replicability and institutionalization throughout the state. The goal of the project is to support the integration of energy plans into the comprehensive planning process for Twin Cities metropolitan area cities.

Climate Mayors

In June 2017 Mayor Nancy Tyra-Lukens joined the Climate Mayors — also known as Mayors National Climate Action Agenda — a network of more than 300 U.S. mayors representing more than 62 million Americans.[32]

[32] Eden Prairie website, “Mayor Tyra-Lukens Joins climate Mayors,” June 14, 2017, http://edenprairie.org/Home/Components/News/News/2771/28?backlist=%2F, Accessed June 20, 2017.

Climate Mayors is a coalition of mayors working together to strengthen local efforts for reducing greenhouse gas emissions. The Climate Mayor's commitment intends to build upon Eden Prairie's existing sustainability efforts and help the community continue to lead by example through initiatives such as Sustainable Eden Prairie and its adoption of this Energy Action Plan. This Energy Action Plan intends to connect Eden Prairie's energy savings goals with its commitment to reduce greenhouse gas use across the community.

Appendix 5: The Planning Process

Eden Prairie's Energy Action Team convened for a series of five workshops dedicated to creating an Energy Action Plan, starting in March and concluding in July 2017. Team members were expected to bring their own experiences and expertise as community members to the table to assess data and community needs and create actionable items and strategies for the plan. Each of the five workshops is summarized briefly below.

Workshop 1

The purpose of the first Partners in Energy workshop is to establish a baseline upon which to build a successful plan. During this workshop, the Energy Action Team was given an overview of the data and the planning process, and they began contributing their experiences and perspectives on energy and the community to begin creating a customized plan tailored to the its strengths and needs. Community facilitators presented the planning team with baseline data for both the community's electric use, as well as data summarizing the makeup of the community including demographics, housing, and economic data. The planning team had the opportunity to contribute their own ideas of what makes up Eden Prairie's values and assets, who are the key stakeholders, and what are the most vital communication channels for community members. The Energy Action Team also began forming a vision and set of principles that would help shape the planning process in the future.

Participants at Workshop 1 at Eden Prairie City Hall

Workshop 2

During workshop 2, the planning team worked to get a better idea of what the plan would look like in the future. The team first worked to refine the vision and principles to guide the plan, then established three focus areas for targeted efforts within the plan: Eden Prairie residents, large commercial and industrial users, and public, nonprofit, and service organizations. These areas are further defined in the Focus Area section of this plan. In order to create more informed strategies, Yvonne Pfeifer, Xcel Energy's Community Energy Efficiency Manager, gave an overview of Xcel Energy's programs and Audrey Partridge, CenterPoint Energy's Local Energy Policy Manager, gave an

overview of CenterPoint Energy's conservation program options. The planning team broke out into small groups for each focus area, based on team members' expertise and interests. With Xcel Energy program information in mind, the breakout groups began designing strategies to be refined at later workshops.

Workshop 3

Workshop 3 was focused on setting goals, both for individual focus areas and for the overall plan and community. The planning team saw examples of goals from other Partners in Energy communities and looked at potential goal scenario options. Next, the team broke up into the focus area groups established during the previous workshop to create goal proposals for each individual focus area. After setting draft goals for each focus area, the small groups were asked to revisit those goals to assess the potential impact of each of the proposed goals on energy use and feasibility. This activity was intended to help small groups prioritize goals that would have the most impact and be the easiest to implement. Finally, the group came back together to propose revised community-wide goals to incorporate in the plan.

Workshop 4

The purpose of planning workshop 4 was to further refine to goals and strategies for each focus area and for the group as a whole. Prior to workshop 4, community facilitators took the goals proposed during workshop 3 and mapped out the impact those goals could have on community-wide energy use. With knowledge of the impact of community-wide and focus area goals, the small groups convened to review goals and strategies, including specifics about target audiences and communication methods. To aid the group's ability to assess the effectiveness of different strategies and tactics, community facilitators presented a brief overview of the importance of community-based social marketing. Yvonne Pfeifer also gave an overview of Renewable Energy Credits, or RECs, and their impact on carbon savings and renewable energy goals.

Workshop 5

Planning workshop 5 served as the final opportunity for the Energy Action Team to discuss and refine goals and strategies and select its community-wide target. The group began by reviewing the planning process so far and discussing how it has shaped the draft Energy Action Plan. Facilitators presented impact modeling results, and the group assessed whether the appropriate level of ambition was achieved. The team then returned to its small groups to refine strategies and discuss roles and responsibilities related to implementation. The group discussed the timeline for plan review and approval and next steps for implementation launch. The meeting concluded with an analysis of the plan's strengths, weaknesses, opportunities, and threats, with an emphasis on mitigating areas that could reduce the overall impact of the plan.

Appendix 6: Eden Prairie Largest Buildings

The following table lists the 25 largest buildings in Eden Prairie by square footage.[33] Among these buildings are likely to be some of the largest commercial energy users, and these are key targets for outreach to reduce energy use in this sector.

Rank	Address	Company/Institution	Size (Sq. Ft.)
1	8251 FLYING CLOUD DR	Eden Prairie Center (Mall)	604,700
2	17185 VALLEY VIEW RD	Eden Prairie High School	598,268
3	11020 OPTUM CIR	Optum	575,498
4	13625 TECHNOLOGY DR	Optum	561,613
5	11000 OPTUM CIR	Optum	549,338
6	14000 TECHNOLOGY DR	MTS Systems	412,631
7	11095 VIKING DR	Geneva Office Exchange	390,393
8	7075 FLYING CLOUD DR	Bluestem Brands Inc.	345,503
9	13100 COLLEGE VIEW DR	Hennepin Technical College	338,015
10	8100 SCHOOL RD	Central Middle School	321,559
11	12600 PLAZA DR	Menards	303,268
12	9301 EDEN PRAIRIE RD	Grace Church	300,000
13	9023 COLUMBINE RD	Kroll Ontrack	298,582
14	12005 TECHNOLOGY DR	Emerson Electronic Controls	298,394
15	14900 TECHNOLOGY DR	Eaton Corporation	293,568
16	11000 VIKING DR	Lifetouch Portrait Studios Inc.	292,491
17	11000 PRAIRIE LAKES DR	Prairie Lakes Corporate Center - Kraus-Anderson Realty Company	240,766
18	8080 MITCHELL RD	Eden Prairie City Center	239,815
19	10301 70TH ST W	Liberty Property Trust	233,463
20	7500 FLYING CLOUD DR	Excelsior Group	228,637
21	10050 CROSSTOWN CIR	BioScrip (Iret Properties)	215,454
22	8301 FLYING CLOUD DR	Former Sears Site (Eden Prairie Center)	212,375
23	6740 SHADY OAK RD	EVINE Live	208,250
24	6131 BLUE CIRCLE DR	American Family Insurance	207,999
25	3 CAPITAL DR	Element Fleet Management	205,574

[33] Eden Prairie Assessor Data, 2016

Appendix 7: Implementation Roles and Responsibilities

Focus Area 1	Goal:	• 75% of households participate in renewable energy or energy efficiency programs by 2025									
	Measuring Success:	• Annual participation in Xcel Energy conservation programs. • Annual participation in Windsource and Renewable*Connect. • On-site solar installations through City permit data. • City dollars spent on Home Energy Squad buy downs. • Number of participants in community-wide energy challenge. • Number of multifamily property owner/renter meetings conducted about energy efficiency.									
	Strategy	Actions	Timeline Q4 2017	Q1 2018	Q2 2018	Q3 2018	Q4 2018	Q1 2019	Years 2-3	Responsible	Support	Xcel Energy Support
Residential Energy	1. Engage residents in energy efficiency and renewable energy actions through a community-wide marketing campaign	Conduct a survey of community residents to inform messaging and marketing tactics								City	Conservation Commission	Design survey, summarize responses
		Use community input to design an effective campaign brand with targeted messaging, including: • Signing up for Home Energy Squad visits, with an emphasis on 'enhanced' visits • Signing up for refrigerator recycling • Increasing knowledge of ENERGY STAR® appliances and equipment • Signing up for Windsource® and Renewable*Connect®								City	Conservation Commission	Assist with campaign design
		Post information about Home Energy Squad, Refrigerator Recycling, and renewable energy options on the City website and social media channels								City	n/a	Draft website content
		Add an efficient home, with permission, to the Sustainable Eden Prairie Tour; Include virtual tour of home on City website and other social media channels								City	Conservation Commission	Assist in drafting website content
		Publish stories of efficiency actions taken by community leaders in their own homes								City	Conservation Commission	Assist in writing stories
		Publish quarterly articles in Life in the Prairie								City		Assist in drafting articles
		Leverage social media to support the campaign								City	Conservation Commission	Assist in designing social media campaign
		Send information with water mailers about efficient appliances and equipment to zip codes where houses were mostly built in the 1980s and 1990s								City		Provide information to include in mailers
		Work with local businesses that sell LEDs and home appliances to disseminate information about efficient appliances and equipment, and the Xcel Energy rebates that accompany them								Conservation Commission	City	Provide information about Xcel Energy programs and rebates
		Target low-income households, with the goal of 75 low-income households participating annually in conservation programs								City	Conservation and Human Rights and Diversity Commission	Provide information about available low-income programs
		Conduct targeted outreach towards households nearing the end of equipment and appliance life cycles								City	Conservation Commission	Provide information about appliance rebate programs
		Develop informational materials comparing renewable energy options, including Windsource®, Renewable*Connect®, community solar gardens and rooftop solar								Xcel Energy	Conservation Commission	Develop comparison table
		Designate $10,000 to buy down the cost of 'HES Enhanced' from $100 to $50								City	Conservation Commission	

	Strategy	Actions	Timeline							Responsible	Support	Xcel Energy Support
			Q4 2017	Q1 2018	Q2 2018	Q3 2018	Q4 2018	Q1 2019	Years 2-3			
Residential Energy	2. Engage residents through a community-wide energy challenge	Apply lessons learned from other Partners in Energy communities and from the Mayor's Water Challenge to design an effective energy challenge		■						City	Conservation Commission	Provide lessons learned from other Partners in Energy communities
		Encourage Eden Prairie residents to sign up for action to reduce their energy consumption; Design a campaign to publicly recognize households that choose to participate			■	■				Conservation Commission	City	
		Mobilize City Council and Conservation Commission to support the challenge and engage community in participating			■					Conservation Commission	City	
	3. Energy Savings in multi-family buildings	Build partnerships with multi-family property management companies to implement efficiency improvements in all units and in common spaces		■	■	■	■			City	Conservation Commission	
		Engage City officials already doing outreach to multifamily buildings in promoting energy efficiency -- Work with the Housing and Community Services Department to share energy efficiency information with property managers/building owners			■	■	■	■	■	City	Housing and Community Services Department	Provide information targeting multifamily building owners/managers
		Target residents of low-income multi-family buildings in Eden Prairie for in-unit energy efficiency upgrades, with the goal of at least one building participating in the first year.		■	■	■	■	■	■	City	Conservation Commission	Provide information on low-income and multifamily programs
		City and Conservation Commission to co-host a lunch and/or evening events about energy efficiency options for multi-family building owners/managers and then residents.				■				Conservation Commission	City	Provide experts to present about available multifamily program options, as available
	4. Increase energy efficiency and renewable energy in new construction and renovations	Leverage the existing Housing Rehabilitation Loan Program to support low- and moderate-income homes in making energy efficiency improvements		■	■	■	■	■	■	City	Conservation Commission	
		Research best practice policy options for increasing energy efficiency and renewable energy in new construction and renovation	■	■						City		Assist in researching policy options
		Implement an energy efficiency requirement based on the best policy option for Eden Prairie				■	■	■		City	Conservation Commission	
		Implement renewable-ready policies that apply to residential buildings				■	■	■		City	Conservation Commission	Assist in researching policy options
		Include information about Xcel Energy program offerings with all residential building permit requests		■	■	■	■	■	■	City		Provide program information
	Other Resources	• Eden Prairie Community Foundation, to help support bringing energy efficiency to low-income homes. • The Building Inspections Division, to integrate energy efficiency into inspections. • Local nonprofits, including People Reaching Out to People (PROP) and Eden Prairie Community Foundation, to support outreach to low-income homes. • The Human Rights and Diversity Commission to provide support for outreach to low-income residents.										

Focus Area 2	Goals:	• By 2025, 50% of the largest commercial/industrial energy users participate in Xcel programs over a standard 3-year measuring period. This results in an additional 7.5 incremental participants per year.
	Measuring Success:	• Annual participation in Xcel Energy Demand Side Management (DSM) programs among top 20 percent of energy users. • The number of participants at meetings and workshops targeting businesses. • Changes in three-year average energy use. • The number of businesses contacted.

	Strategy	Actions	Timeline: Q4 2017	Q1 2018	Q2 2018	Q3 2018	Q4 2018	Q1 2019	Years 2-3	Responsible	Support	Xcel Energy Support
Large Commercial/Industrial	**1. Use established networks to raise awareness about available energy rebates and programs**	Work with industry associations such as the Commercial Real Estate Development Association (NAIOP), the Minnesota Shopping Center Association (MSCA), and the Building Owners and Managers Association (BOMA) to share relevant information about energy savings programs with members.								City	Energy Action Team	Provide customized information on commercial programs
		Coordinate with the Chamber of Commerce to incorporate energy efficiency education sessions for local businesses, when Eden Prairie businesses are most likely to be reached								City	Energy Action Team	Provide customized information and expert presenters
		Conduct outreach on energy saving resources targeting property managers; Offer in-person workshops and direct outreach to discuss easy energy savings program options								City	Conservation Commisson	Provide customized information on commercial programs
		Develop focused informational materials about recommended energy conservation actions for tenants, to help property managers of multi-tenant buildings engage their tenants								City		Assist in developing informational materials
	2. Use trusted messengers to conduct targeted outreach to individual businesses	Coordinate with city permitting, fire, and building inspectors in sharing relevant information about energy saving programs during regular engagements with local businesses, focusing on both new and existing businesses								City		Provide customized information on commercial programs
		Identify past program participants to serve as case studies/champions to similar businesses								City	Conservation Commisson	Draft case studies
		Leverage existing monthly business networking meetings held by Economic Development Manager to include information about the Energy Action Plan and identify businesses interested in taking energy action.								City	Conservation Commisson	Provide customized information on commercial programs
		Train Economic Development Manager on Xcel Energy programs and prepare talking points and written materials to guide meetings. Refer to energy efficiency specialists at Xcel Energy for follow-up.								City		Develop talking points, provide customized training
	3. Engage local service providers and contractors to ensure they are identifying energy efficiency opportunities	Coordinate with Xcel Energy to promote the Trade Partner program to local contractors								City	Energy Action Team	Provide content for contractor training
		Offer a Trade Partner training and education session in coordination with other local Partners in Energy cities to help contractors navigate the energy efficiency rebates and incentives available to contractors								City		

	Strategy	Actions	Timeline							Responsible	Support	Xcel Energy Support
			Q4 2017	Q1 2018	Q2 2018	Q3 2018	Q4 2018	Q1 2019	Years 2-3			
Large Commercial/Industrial	4. Provide technical tools to assist commercial buildings in taking action	Conduct an email survey of what largest energy users have already done to reduce energy use								City	Conservation Commisson	Draft survey and tabulate results
		Create an easy access checklist of the top things large commercial buildings can do to save energy								Xcel Energy	Energy Action Team	Develop checklist
		Promote existing self-assessment tools that help estimate potential energy savings								Conservation Commission	Energy Action Team	Assist in identifying relevant tools
		Create a list of common measures that include generic ROI information that can be broadly applicable								Conservation Commission	Energy Action Team	Assist in developing list of common measures with ROI information
		Make information available through the City and Chamber of Commerce websites								City	Chamber of Commerce	Draft website content
	Other Resources	• Chamber of Commerce, to support business outreach and engagement and disseminate information about energy efficiency program options. • Industry associations, including the Commercial Real Estate Development Association (NAIOP), the Minnesota Shopping Center Association (MSCA), and the Building Owners and Managers Association (BOMA), to share relevant information about energy savings programs with members. • Educational and networking platforms offered by industry associations • Existing tools for energy efficiency calculations, e.g. http://www.vfds.org/vfd-savings-calculator.html or https://www.ledwaves.com/pages/led-calc										

Focus Area 3	Goals:	• By 2025, Eden Prairie public, nonprofit, and service organizations will reduce energy use 20 percent below a 2016 baseline. • By 2025, the City of Eden Prairie will support renewable energy development equal to 25percent of its energy use. • By 2025, the Eden Prairie School District will reduce its energy use by an additional 10 percent. • By 2025, all Eden Prairie public, nonprofit, and service organizations will support renewable energy development equal to 10 percent of their energy use.
	Measuring Success	• Savings achieved through participation in conservation programs. • Subscriptions to Windsource and Renewable*Connect by public, nonprofit, and service organizations. • On-site renewable energy installations and energy generation capacity. • Number of participants in lunch-and-learn events.

	Strategy	Actions	Timeline: Q4 2017	Q1 2018	Q2 2018	Q3 2018	Q4 2018	Q1 2019	Years 2-3	Responsible	Support	Xcel Energy Support
Public, Nonprofit, and Service	**1. Recognize leadership among institutions who take action as a way to encourage others**	Showcase city and school district as leader/role model in savings energy and investing in renewable in their own buildings through case studies/newsletter articles								City	School District	Draft case studies
		Develop case studies of completed energy projects implemented by churches, schools, and non-profits								Conservation Commission	City	Draft case studies
	2. Provide targeted information and support to institution facility managers to encourage energy and cost savings	Build partnerships with Creation Care/Green committees to learn about existing efforts and identify needs for additional support or information								Conservation Commission	City	
		Host three lunch and learn events for facility managers of churches and non-profits to share conservation program options and case study examples; Follow-up to encourage action, focusing support on maintenance that is already planned								Conservation Commission	City	Provide experts to present at events, assist in connecting interested institutions to relevant programs
		Promote key programs with Return-on-Investment estimates that are most relevant to public, nonprofit, and service organizations								Conservation Commission	City	Provide targeted program information
		Create a tool kit to help public, nonprofit, and service organizations set their own energy conservation goals								Conservation Commission	City	Assist in developing tool kit
	3. Promote renewable energy options to Eden Prairie institutions	Survey Eden Prairie public, nonprofit, and service organizations to determine the number of existing renewable energy installations and to gauge interest in renewable energy								City	Conservation Commission	Assist in developing survey
		Develop targeted information materials describing renewable subscription and on-site installation options available to public, nonprofit, and service organizations								City	Conservation Commission	Assist in developing targeted information materials
		Develop a cost/ROI comparison tool that includes criteria for evaluating renewable energy options								City	Conservation Commission	Assist in developing tool
		Focus one lunch and learn event on renewable energy program and financing options								City	Conservation Commission	Provide experts to present at event

	Strategy	Actions	Timeline							Responsible	Support	Xcel Energy Support
			Q4 2017	Q1 2018	Q2 2018	Q3 2018	Q4 2018	Q1 2019	Years 2-3			
Public, Nonprofit, and Service	**4. Pursue on-site renewable energy on City buildings**	Identify City buildings that are good candidates for on-site solar	■							City	Conservation Commission	
		Research available contract and financing options, and develop a proposal for consideration by City Council			■	■	■			City	Conservation Commission	Assist in identifying financing options
		Complete at least one on-site install within three years						■		City	Conservation Commission	
	5. Capture additional energy savings at Eden Prairie schools by engaging students and teachers in energy conservation	Identify school principals willing to show leadership in energy conservation	■							School District	Conservation Commission	
		Work with principals to recruit teachers to lead behavior change campaigns in schools		■						School District	Conservation Commission	
		Develop lesson plans and marketing materials targeting actions students and teachers can take to save energy at school			■	■				School District	Conservation Commission	Assist in developing lesson plans
		Provide recognition for schools that successfully conserve energy through behavior change					■	■		School District	Conservation Commission	
	Other resources	• Minnesota Interfaith Power and Light to co-host renewable energy workshop for faith communities. • Tree Huggers student group to play a leadership role in student engagement efforts • Creation Care/Green Committees to serve as key liaisons and project managers for religious organizations. • Conservation Minnesota to support implementation. • Alliance for Sustainability to serve as an information resource. • Community volunteers to play a key role in outreach to faith communities and nonprofits.										