



# Burnsville Energy Action Plan

June 2024



**PARTNERS IN ENERGY**  
An Xcel Energy Community Collaboration

# ACKNOWLEDGEMENTS

Thank you to the following individuals who contributed many hours of service to developing this Energy Action Plan.

The content of this plan is derived from a series of planning workshops hosted by Xcel Energy’s Partners in Energy. Xcel Energy is an electric utility serving Burnsville. Partners in Energy is a two-year collaboration to develop and implement a community’s energy goals. For more information about the planning workshops, see *Appendix 4: Xcel Energy’s Partners in Energy Planning Process*.

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# BURNSVILLE ENERGY ACTION PLAN

## Our Energy Vision

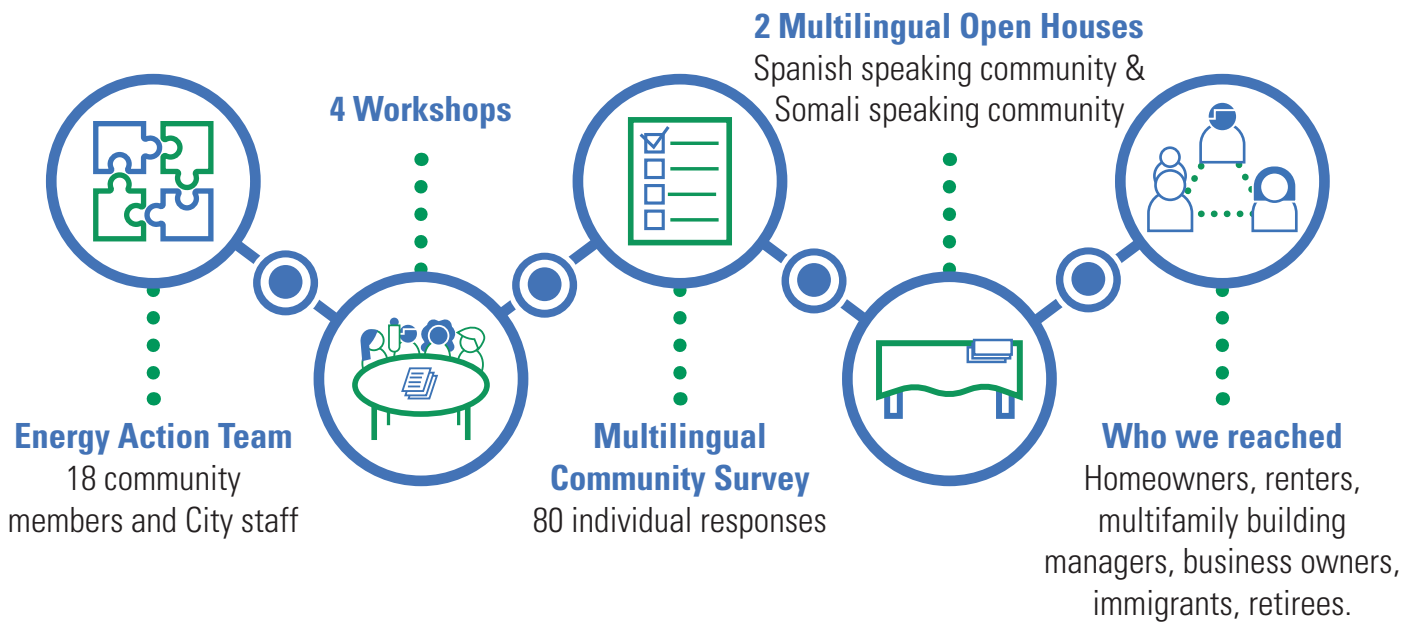
Burnsville strives to make energy use cleaner and more efficient by engaging the community in effective energy actions. This plan will help make Burnsville a better place to live and preserve our resources for future generations.



## Focus Areas



## Community Engagement



## Our Impact

Aligning with the Burnsville Sustainability Plan, we will measure progress on the following goals and strategies from the *Buildings and Energy Efficiency and Renewable Energy* sections:



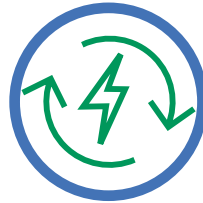
Achieve a 10% decrease in residential and commercial electric use from 2016 numbers by 2030.



Achieve a 7.5% on-site solar (or REC purchase) for residential and commercial by 2030.



Achieve a 5% reduction in residential and commercial natural gas use over 2016 numbers by 2030.



Increase participation in shared renewable energy with the goal of achieving 100% increase in community solar garden subscriptions over 2019 numbers by 2030.

## How We Are Going to Get There

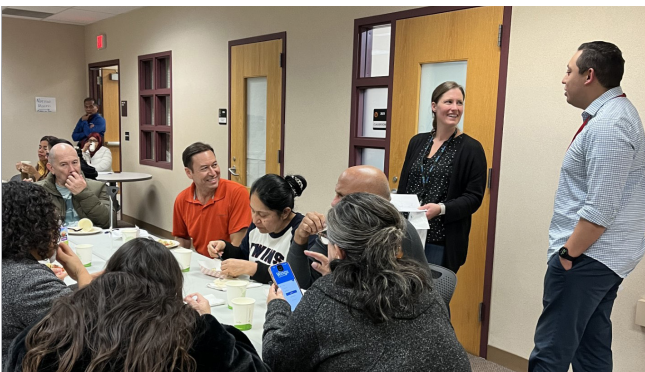
The City of Burnsville and its partners, community members, and volunteers will take actions identified in this plan that will help put us on a path to achieve our goals.

Support community members who need it most by sharing energy resources and assistance to lower energy bills.

Collaborate with businesses, social service organizations, and multi-family buildings to encourage participation in energy programs and opportunities.

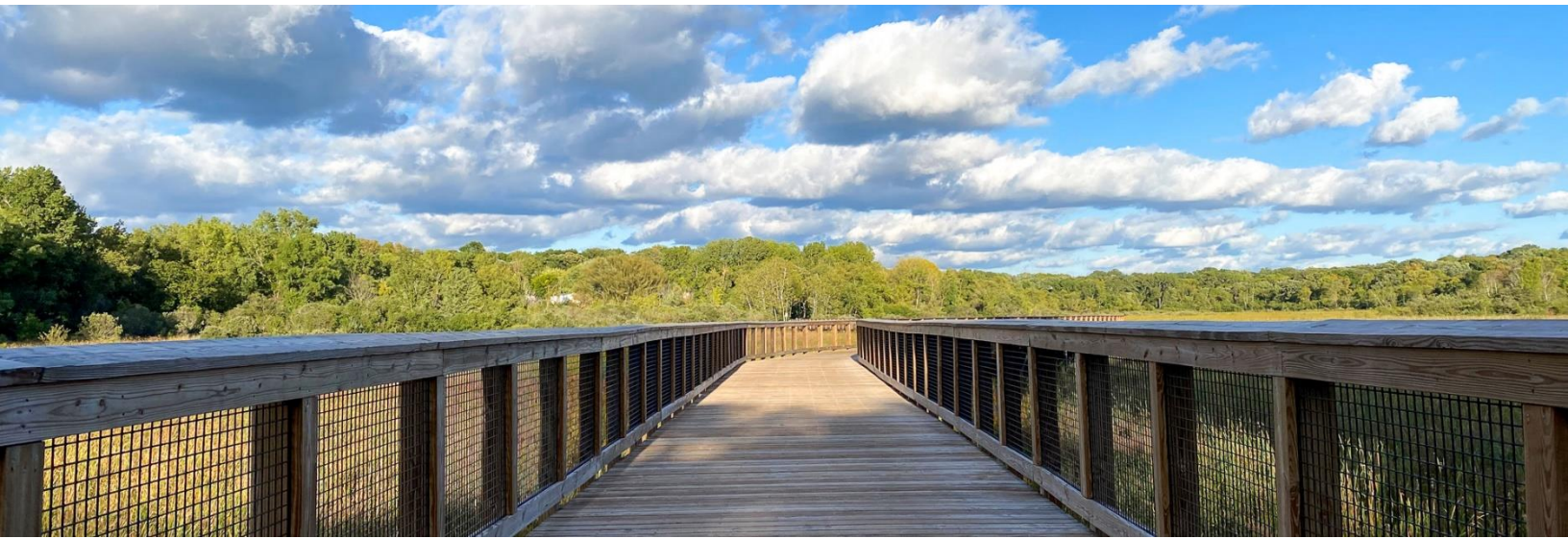
Conduct outreach and education campaigns to raise awareness of how to reduce energy use and remove barriers to accessing renewable energy.

Organize funding resources and incentives for the community to participate in energy programs that result in more comfortable and healthy homes and buildings.



## Get Involved

Visit [burnsvillemn.gov/energy](https://burnsvillemn.gov/energy) to read more about the Energy Action Plan and find ways you can support. To learn how you can get involved, contact Sustainability Coordinator Bridget Rathsack at [bridget.rathsack@burnsvillemn.gov](mailto:bridget.rathsack@burnsvillemn.gov).



## INTRODUCTION

Burnsville is a large suburb in the south metro of the Twin Cities with a diverse, vibrant community. The city has 64,000 residents that call this place home. The City of Burnsville recognizes the intrinsic worth of economic development, effective public transit and connectivity, strong schools and community services, pedestrian and bicycle corridors, parks and recreation amenities, coordinated parking programs, urban design, and conservation guidelines. It houses 800 acres of parkland making up 79 parks. It is home to Ames Center, Buck Hill Ski Area, and part of the Minnesota Valley National Wildlife Refuge. The community includes diverse restaurants and shops and hosts numerous community events and celebrations including an annual Burnsville Festival, International Festival, Art and All That Jazz Festival, and more. The community is located conveniently near the Minneapolis-St. Paul International Airport (MSP) and the Mall of America.

### Who are we talking about?

**We, Our and the City** refer to the City of Burnsville.

**Community** refers to the broader Burnsville community, including residents, businesses, and other stakeholders.

**Energy Action Team** is the group of individuals whose input created our Energy Action Plan.

**Energy Action Plan** refers to this document for the City of Burnsville.

### Why We Want an Energy Action Plan

The City of Burnsville's Vision is: "A vibrant city, boldly leading and welcoming to all." The City's six strategic priorities help reach this Vision: Sustainability, Community Vibrancy, Community Engagement, Infrastructure, Safety and Organizational Culture. This Energy Action Plan will help create a vibrant community with engagement across all sectors on ways to save energy and money, and create more comfortable and safe homes and businesses in Burnsville.



This will continue our tradition of sustainability leadership. The City of Burnsville has been leading critical sustainability planning efforts across the state since 2009 when we executed our first Sustainability Guide Plan. The 2009 Sustainability Guide Plan was a first-of-its-kind effort in the region to understand the city's role in climate change and chart a course for a healthier, more sustainable future. In 2020, the Sustainability Plan was updated to guide community-wide sustainability initiatives through 2030. We achieved step 5 in GreenSteps Cities, have the bronze designation in SolSmart, and have incorporated sustainability into our 2040 Comprehensive Plan. Our online [Sustainability Hub](#) is a place where we share and track our progress toward our goals to build transparency in our plan.

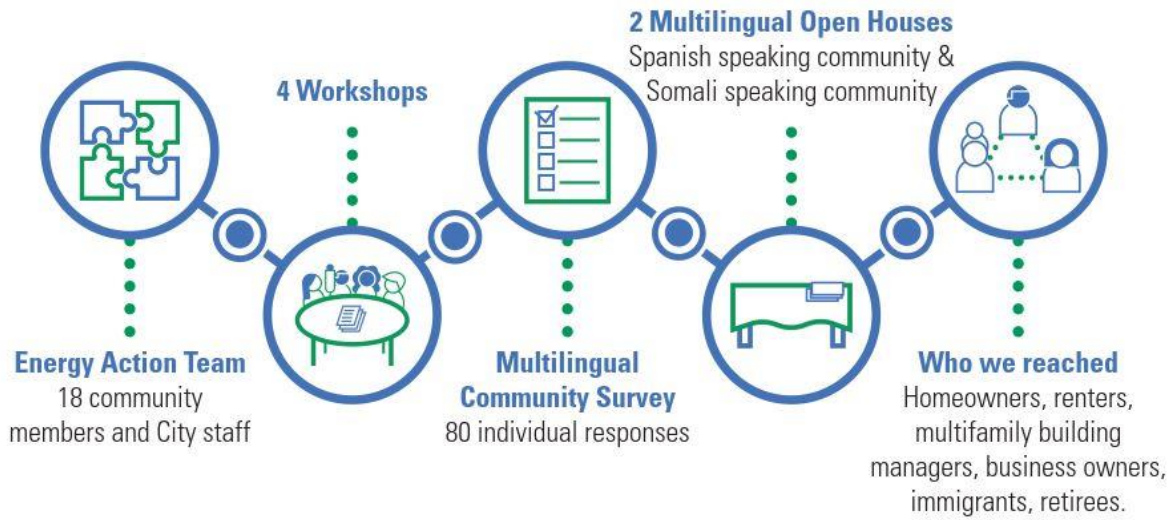
The City of Burnsville's Sustainability Plan and 2040 Comprehensive Plan include goals related to energy reduction, renewable energy, and sustainable transportation. However, understanding how to effectively achieve those goals is challenging, especially considering three electricity utilities service Burnsville. This Energy Action Plan will help Burnsville identify energy efficiency and renewable energy options, prioritize them, and create a road map specific to Burnsville's goals. We seek to increase both energy efficiency and renewable energy to help reach our greenhouse gas emission reduction goals. There has never been an intentional campaign to educate residents and businesses on energy efficiency and cost saving opportunities, and we know this is the foundation to an energy plan, particularly to help those most vulnerable in our community.

## **Our Engagement & Outreach Process**

The creation of this Energy Action Plan was a six-month process that helped our community characterize its energy use, identify our energy-related targets, and develop engaging strategies to guide change toward our energy future. Starting in June 2023, the Energy Action Plan was driven by a series of planning workshops with a team committed to representing local energy priorities, in collaboration with City of Burnsville and Xcel Energy's Partners in Energy. We also had other utility representatives on the team including Dakota Electric Association, CenterPoint Energy, and Minnesota Valley Electric Cooperative. We created opportunities for community-wide feedback, sharing a public survey and hosting open houses for input from Spanish-speaking and Somali-speaking community members.

Engagement by the numbers:

- Four planning workshops with an 18-person Energy Action Team
- Two multilingual open houses serving the Spanish-speaking and Somali-speaking communities
- 80 community-wide survey responses to gain input from the public



See *Appendix 4: Xcel Energy's Partners in Energy Planning Process* for more information about the planning process and Xcel Energy Partners in Energy.





## WHERE WE ARE NOW

An integral part of the Partners in Energy planning process is reviewing historic energy data that informs the community’s energy baseline. Burnsville is served by three electric utilities and one natural gas utility. Xcel Energy, Dakota Electric Association, and CenterPoint Energy provided data for 2020–2022. Minnesota Valley Electric Association (MVEC) did not provide the same level of energy data, so it is excluded from this data reporting.

All utilities participated in the planning process, including MVEC representatives. Residents and businesses that reside in MVEC territory will be included in implementation efforts and MVEC will be providing assistance to their members to help support this plan.

This section includes a summary of energy use, greenhouse gas emissions, and utility energy conservation and renewable energy programs for Burnsville. See *Appendix 2: Baseline Energy Analysis* for a comprehensive picture of Burnsville’s energy baseline.

## Community Demographics

Figure 1. Overview of Burnsville's community demographics



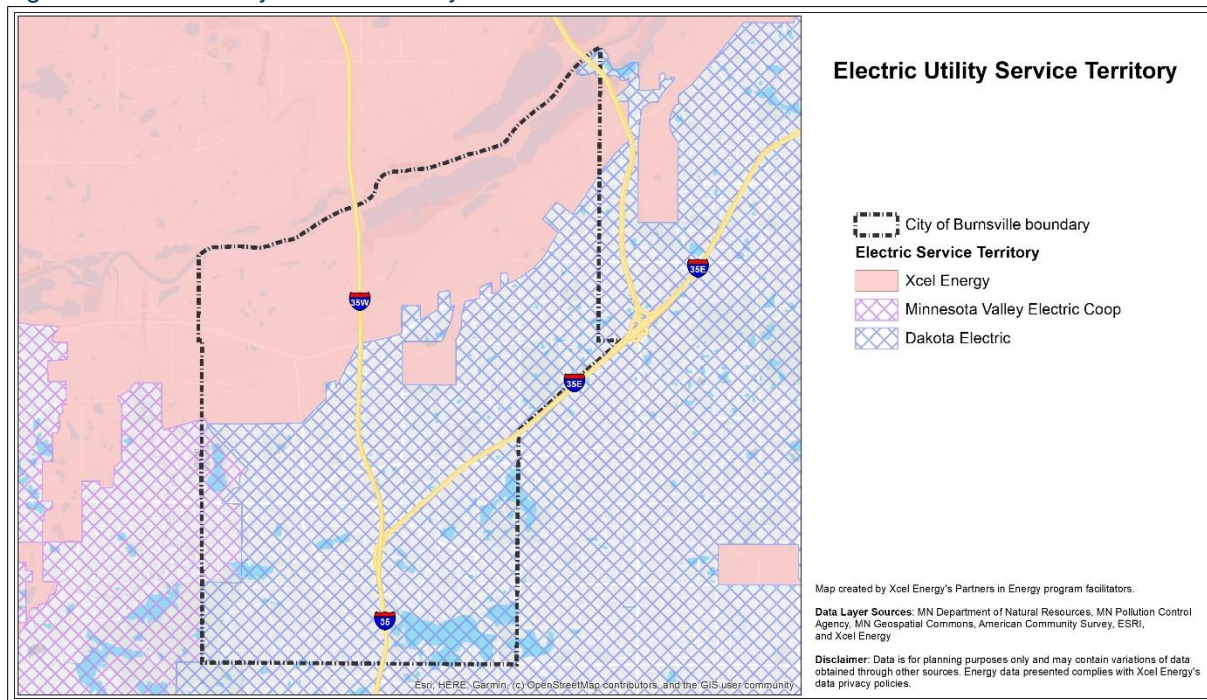
Burnsville has a population of almost 64,000 people with a median age of 38. Twenty percent of people speak a language other than English, with the top languages being Spanish and Somali. The median household income is almost \$80,000 and the poverty rate is 7%. Of the almost 26,000 housing units, 91% are built before the year 2000, which presents significant opportunity for energy efficiency improvements because of the age and older building codes. Renter-occupied units make up 32% of the housing units.

## Energy Data

### Energy Utilities

Burnsville is served by three electric utilities—Xcel Energy, Dakota Electric Association, and Minnesota Valley Electric Cooperative—and one natural gas utility, CenterPoint Energy. Dakota Electric Association is the largest electric utility provider, serving most of the city south of Highway 13. Xcel Energy’s service territory is concentrated on the northern edge of the city along the Minnesota River, and Minnesota Valley Electric Cooperative serves smaller portion of the city near southwestern edge of Burnsville. CenterPoint Energy services the entirety of Burnsville for natural gas.

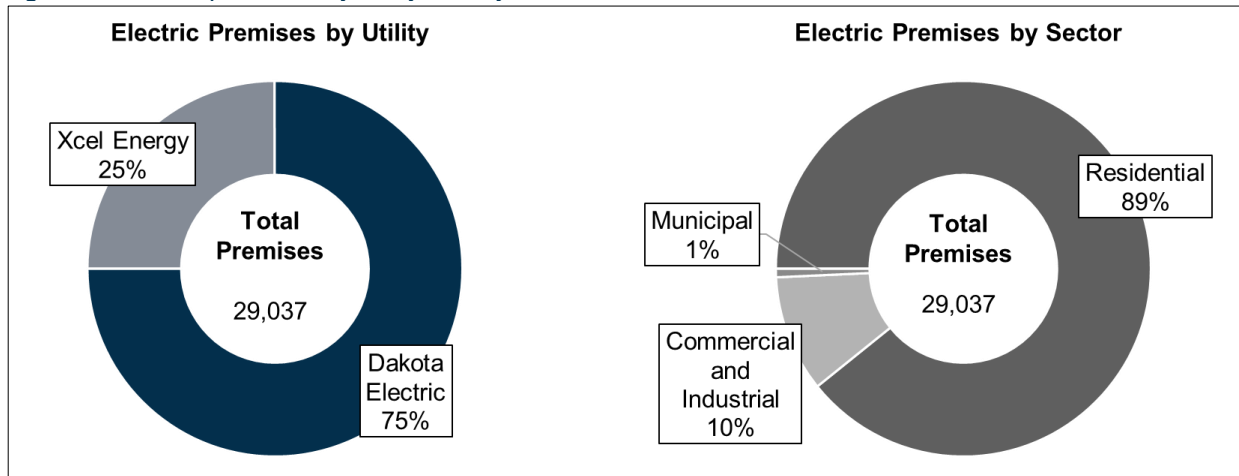
Figure 2. Electric utility service territory in Burnsville



### Premises

As of 2022, there were 29,037 electric premises and 22,190 natural gas premises in Burnsville. Minnesota Valley Electric Cooperative serves a small portion of Burnsville electric premises but are not included in the baseline data. With Minnesota Valley Electric Cooperative excluded, the baseline data shows Dakota Electric Association serving 75% of electric premises in Burnsville, 25% served by Xcel Energy, and 100% of natural gas premises are served by CenterPoint Energy.

Figure 3. Electric premises by utility and by sector



### Energy Use

To understand energy consumption trends, we looked at electricity and natural gas consumption by sector over the three-year baseline period. In an average year, Burnsville consumes 491 million kWh of electricity and 33 million therms of natural gas (Figure 4). The commercial and industrial sector consumes more energy than the residential sector in Burnsville even though the sector represents only 10% of electric and natural gas premises. When looking at electricity consumption by utility, Dakota Electric Association premises on average consume 71% of all electricity in Burnsville and Xcel Energy premises on average consume 29% (Figure 5).

Figure 4. Average electricity and natural gas consumption by sector, 2020–2022

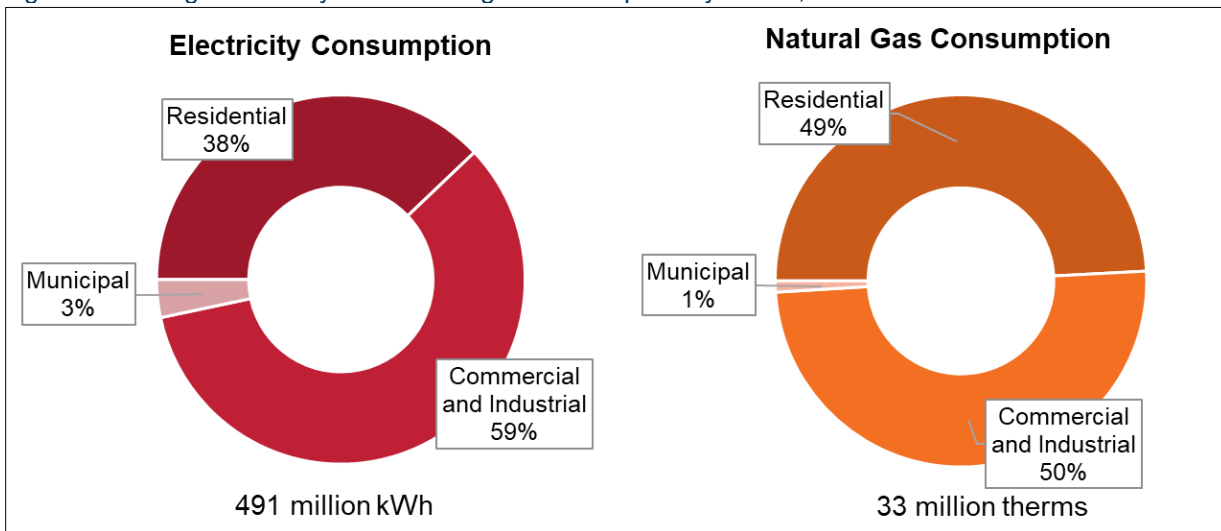
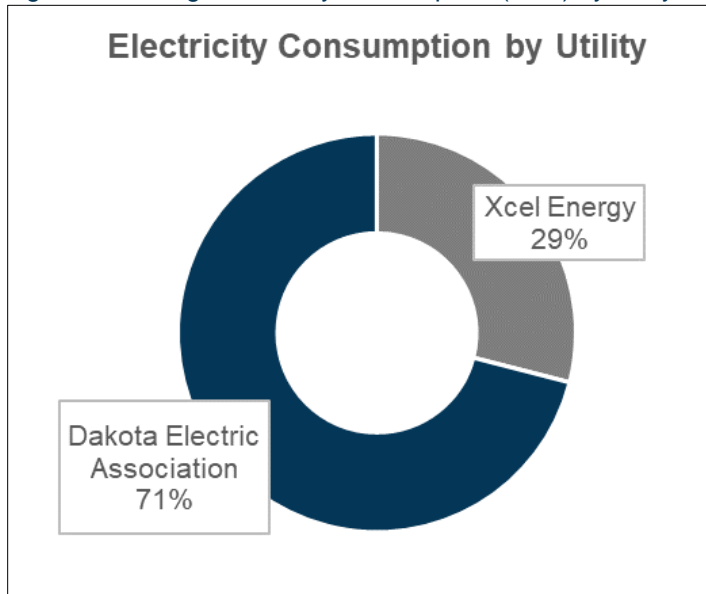




Figure 5. Average electricity consumption (kWh) by utility in Burnsville, 2020–2022



During the three-year baseline period, Burnsville’s electricity consumption increased (Figure 6). Natural gas consumption also increased over the three-year baseline, which occurred in both the residential and commercial/industrial sectors (Figure 7).

Figure 6. Annual electricity consumption by sector and Cooling Degree Days, 2020–2022

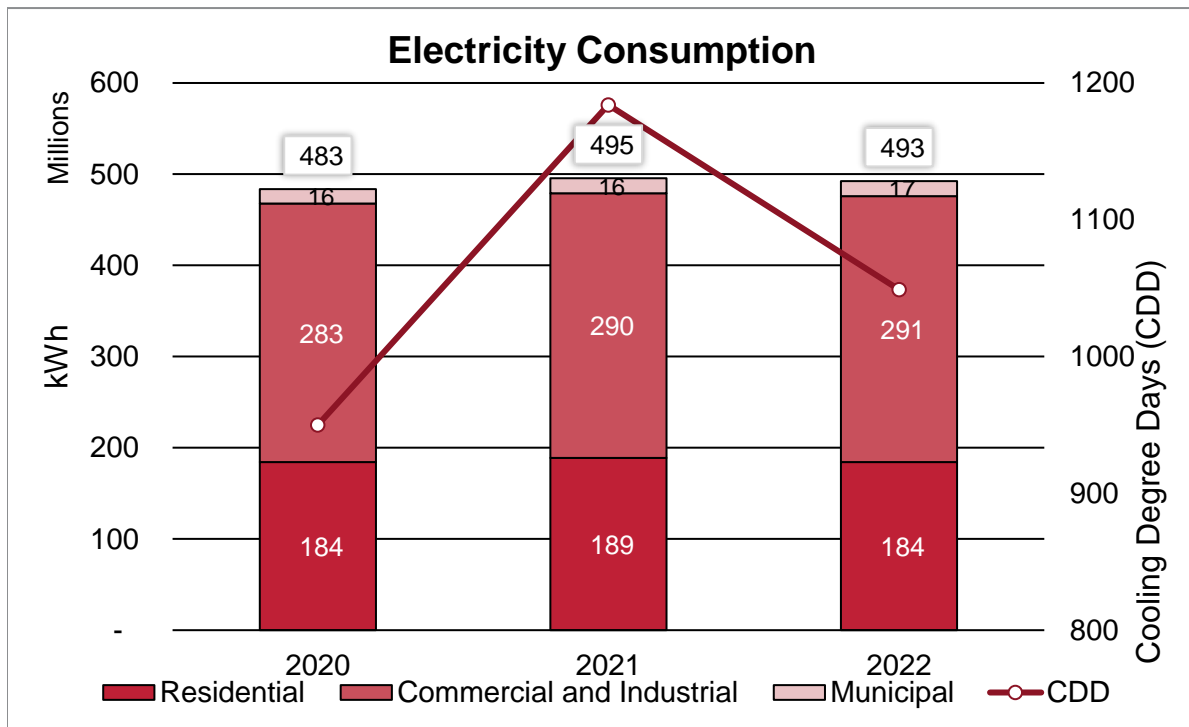
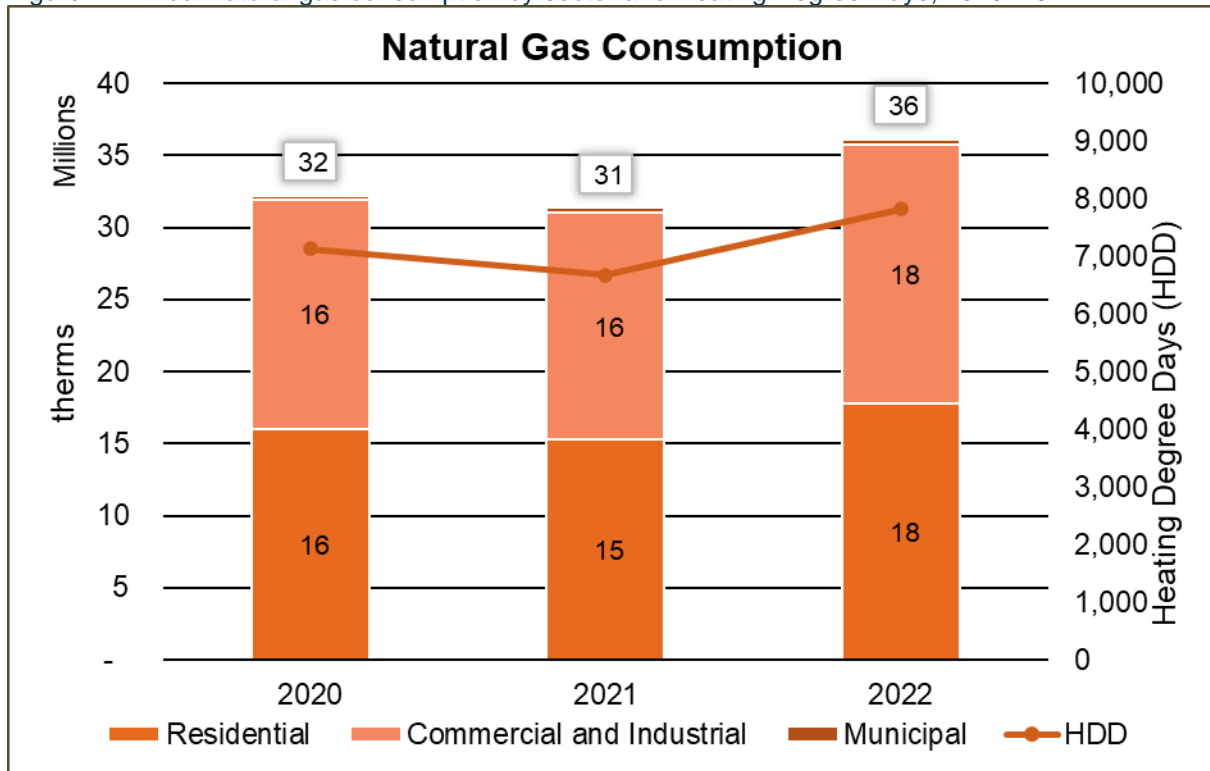


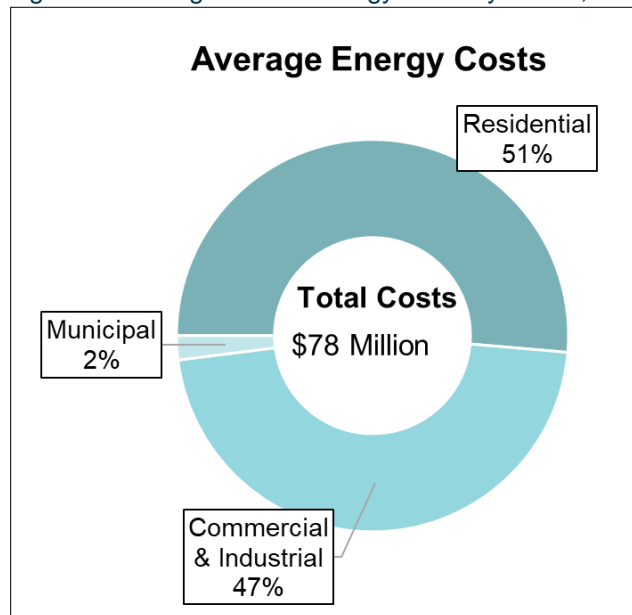
Figure 7. Annual natural gas consumption by sector and Heating Degree Days, 2020–2022



### Energy Costs and Energy Burden

In an average year, Burnsville spends \$78 million dollars on energy costs. The residential sector accounts for just over half of total energy costs.

Figure 8. Average annual energy costs by sector, 2020–2022



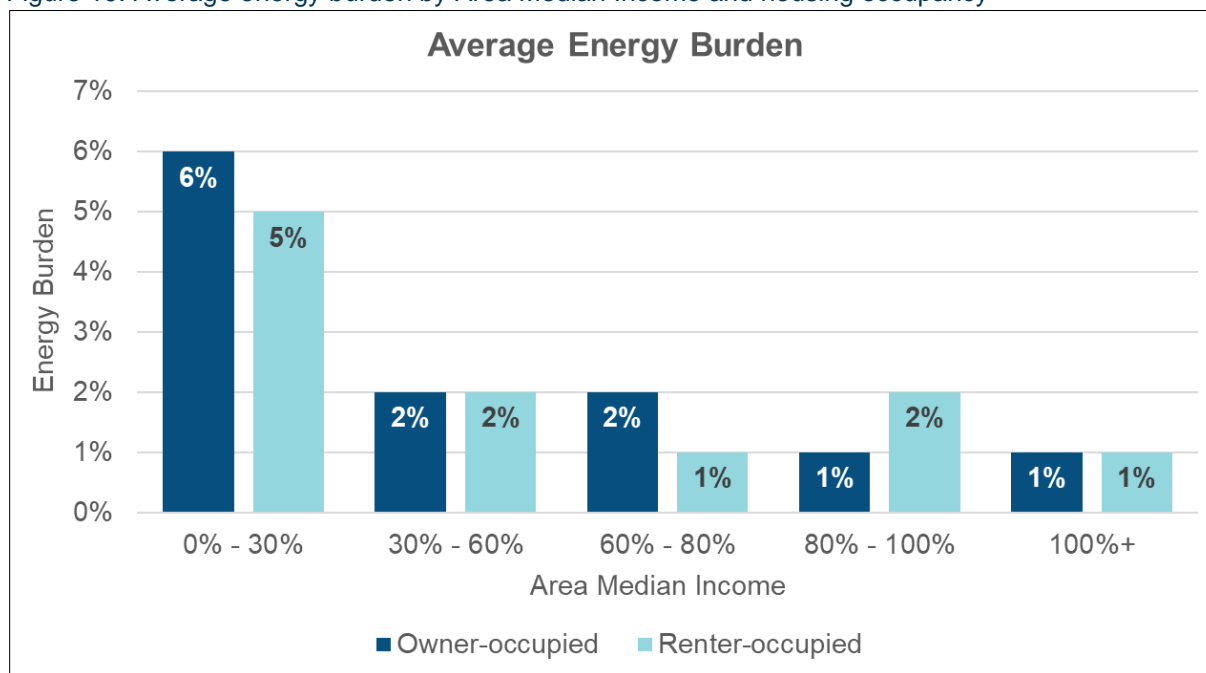
Electricity costs for all sectors combined accounts for the largest share of energy costs, averaging \$48.9 million dollars a year. Per premise, the commercial and industrial and municipal sectors spend the most on energy; however, due to the unique nature of each business and municipal premise, actual per premise costs may be higher or lower based on the premise's use. For example, industrial premises likely spend more on energy due to higher consumption than a smaller retail business.

Figure 9. Average annual energy costs by sector by fuel type, 2020—2022

Sector	Electricity Costs	Natural Gas Costs	Costs per Premise
Residential	\$23.6 million	\$16.5 million	\$1,750
Commercial & Industrial	\$24 million	\$12.4 million	\$14,000
Municipal	\$1.3 million	\$286,000	\$16,900

When looking at the residential sector, energy burden is a measure of how much of a household's income goes toward energy costs. The average Burnsville residential premise spends \$1,750 a year on energy. According to Department of Energy's Low-income Energy Affordability Tool, Burnsville's average energy burden is 2%, but for Burnsville's lowest income residents, this energy burden can be as high as 6% (Figure 10). A household's energy burden is considered high when it is at or above 6%.

Figure 10. Average energy burden by Area Median Income and housing occupancy

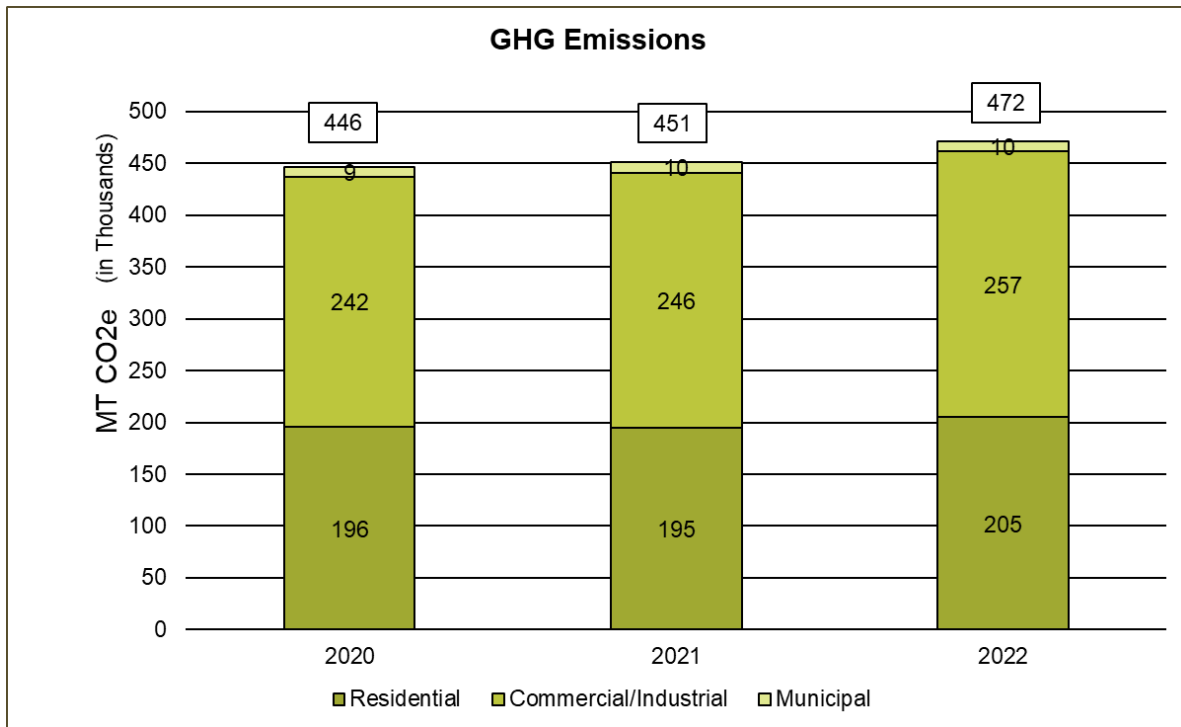


### Greenhouse Gas Emissions

Greenhouse gas emissions have increased year-over-year in Burnsville. In 2022, electricity and natural gas consumption in Burnsville resulted in 471,700 metric tons of carbon dioxide equivalent (MTCO<sub>2</sub>e). Emissions from the commercial and industrial sector represent the largest portion of emissions in 2022 (256,600 MTCO<sub>2</sub>e), which aligns with total energy consumption.

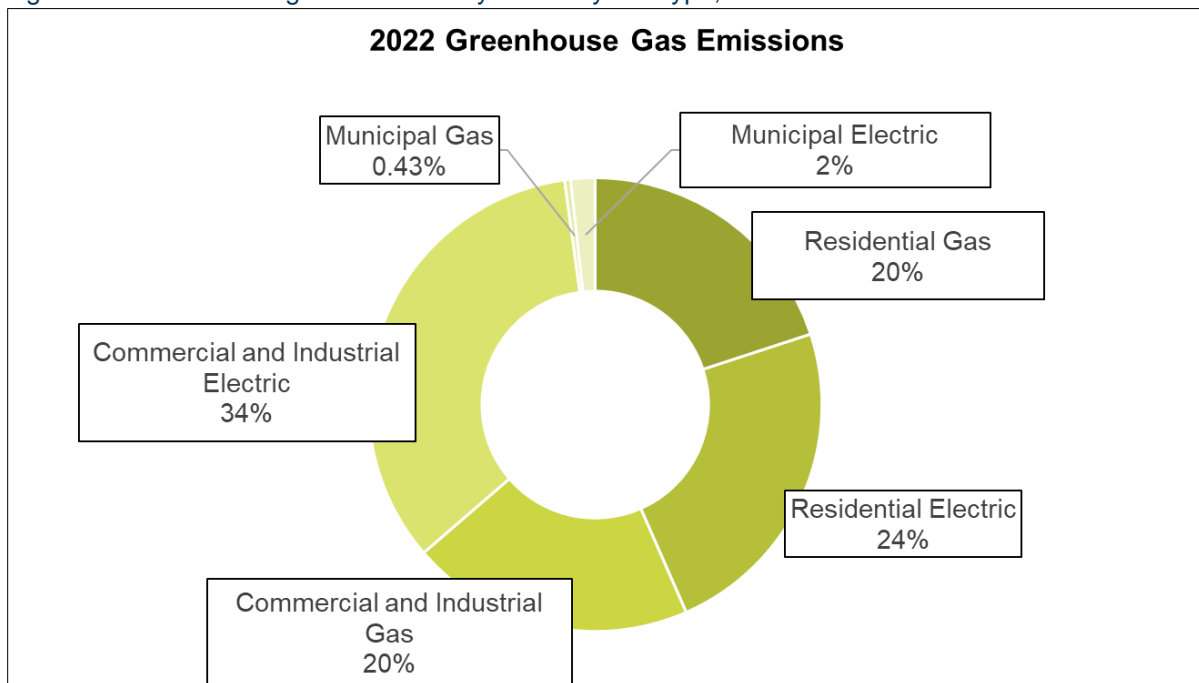


Figure 11. Greenhouse gas emissions by sector in Burnsville



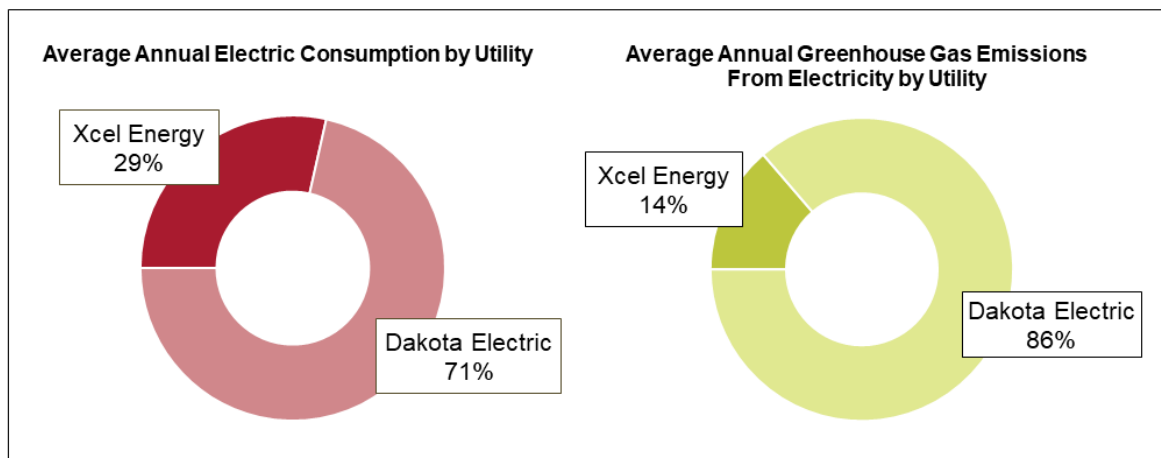
Over the baseline period, electricity emissions account for the largest portion of greenhouse emissions in Burnsville annually with almost 60% of emissions in 2022 attributed to grid electricity consumption.

Figure 12. Greenhouse gas emissions by sector by fuel type, 2022



Dakota Electric Association average annual electricity consumption represents 86% of greenhouse gas emissions with almost 242,000 MTCO<sub>2</sub>e emitted. Xcel Energy average annual electricity consumption represents the remaining greenhouse gas emissions (14%). Due to Xcel Energy's investment in carbon-free generation, emissions from Xcel Energy premises have decreased year-over-year.<sup>1</sup>

Figure 13. Electricity consumption compared to greenhouse gas emissions by utility



### Energy Efficiency Program Participation & Savings

Xcel Energy, Dakota Electric Association, and CenterPoint Energy offer efficiency programs for residential, commercial/industrial, and municipal sector premises. By participating in certain programs, such as rebate programs for more energy efficient equipment, customers save energy. Some programs, like energy audits or assessments, can include direct installations of energy-saving devices with the assessment, while some assessments may only result in reports and recommendations.

In an average year, the participation of residents and businesses in efficiency programs in Burnsville saves 4 million kWh of electricity and 165,500 therms of natural gas. Residential sector premises participate at a higher rate than the commercial and industrial sector but save less energy overall when comparing sectors. (Figure 14)

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<sup>1</sup> Xcel Energy's Upper Midwest Energy Plan, [https://www.xcelenergy.com/company/rates\\_and\\_regulations/resource\\_plan\\_overview/upper\\_midwest\\_energy\\_plan](https://www.xcelenergy.com/company/rates_and_regulations/resource_plan_overview/upper_midwest_energy_plan)

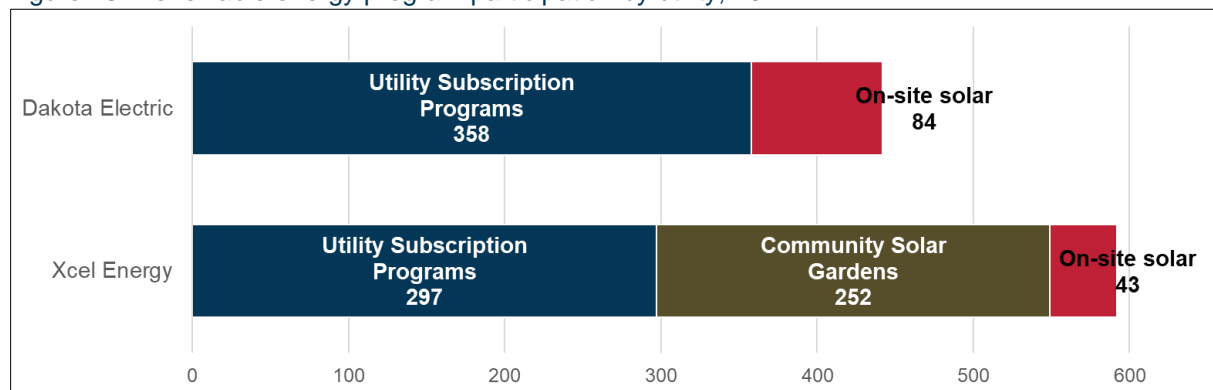
Figure 14. Average annual program participation and savings by utility by sector segment, 2020–2022

<b>Xcel Energy</b>	<b>Average Annual Participation</b>	<b>Average Annual Savings (kWh)</b>
Residential	320	96,000
Low-Income	2	2,200
Commercial/Industrial	66	1,161,000
<b>Dakota Electric Association</b>	<b>Average Annual Participation</b>	<b>Average Annual Savings (kWh)</b>
Residential	1,610	540,400
Low-Income	42	23,300
Commercial/Industrial	38	2,250,000
<b>CenterPoint Energy</b>	<b>Average Annual Participation</b>	<b>Average Annual Savings (therms)</b>
Residential	1,000	92,000
Low-Income	9	512
Commercial/Industrial	67	73,000

### Renewable Energy

Both Xcel Energy and Dakota Electric Association offer renewable energy programs to Burnsville residents and businesses in the form of subscription programs and on-site installations. Subscription programs, including green power purchase programs and community solar gardens, are the most popular in Burnsville with more than 900 premises participating in 2022. On-site solar installations, although less popular than subscription programs, still have a large share of participants with 127 on-site solar installations in Burnsville in 2022.

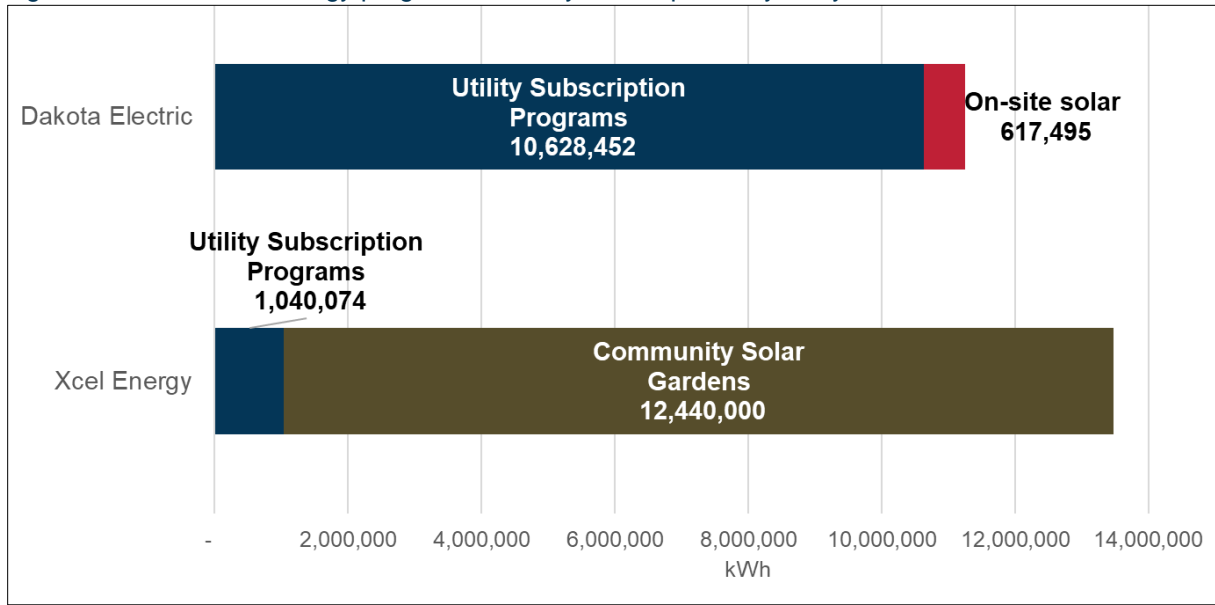
Figure 15. Renewable energy program participation by utility, 2022

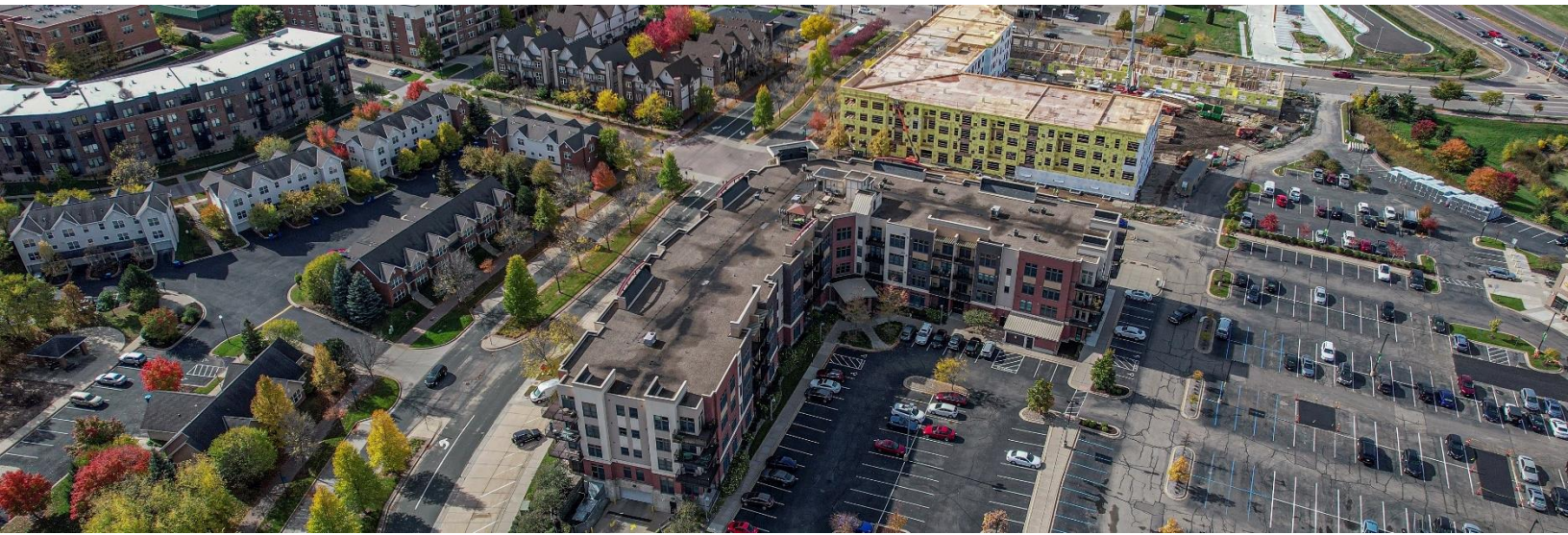


When participating in a subscription program, a premise subscribes a portion of their electricity consumption to the program. More than 24.1 million kWh of electricity is subscribed to a utility subscription or community solar garden program, which is approximately 4.9% of Burnsville’s 2022 electricity use.



Figure 16. Renewable energy program electricity subscriptions by utility in kWh, 2022





## WHERE WE ARE GOING

### Energy Vision Statement

During the planning process, the Energy Action Team created a vision statement for this Energy Action Plan to guide the process and reflect the community's intentions.

#### Vision

**Burnsville strives to make energy use cleaner and more efficient by engaging the community in effective energy actions. This plan will help make Burnsville a better place to live and preserve our resources for future generations.**

### Focus Areas

To achieve a community-wide commitment to energy stewardship, the Energy Action Team identified the following focus areas to prioritize strategies and resources. These focus areas were chosen to provide a holistic approach to energy stewardship, while focusing efforts on specific sectors and audiences.

Figure 17. Burnsville's Focus Areas

Reducing  
Energy  
Burden

Residential  
Energy  
Efficiency

Multi-family  
Buildings

Business  
Energy  
Efficiency

Renewable  
Energy

## **Reducing Energy Burden**

Energy burden is the percentage of gross household income spent on energy costs. High energy burden is defined by the American Council for an Energy-Efficient Economy (ACEEE)<sup>2</sup> as spending more than 6% of your income on energy. This focus area aims to reduce the energy burden for income-qualified residents by offering energy assistance and helping them save energy and money by implementing energy efficiency measures. Income-qualified residents living in homes, multi-family buildings, and manufactured homes will be the target audience. This can include renters and owners.

## **Residential Energy Efficiency**

Residential Energy Efficiency will focus on supporting residents to conserve energy through energy efficiency projects, behavior change, and Demand Side Management (DSM) program participation. The residential sector consists of living quarters for private households, such as single-family homes, duplexes, rentals, and other housing units.

## **Multi-family Buildings**

Multi-family Buildings is called out as a specific focus area to place attention on strategies that support renters, people living in affordable housing, and property owners of multi-family buildings. The energy data we receive for multi-family buildings cannot be categorized into the residential or business sector since it depends on how the building is metered, so this focus area will support increasing energy efficiency for multi-family buildings and will not be limited to any sector.

## **Business Energy Efficiency**

Business Energy Efficiency will focus on helping businesses in Burnsville save energy by implementing energy efficient technologies, weatherizing their buildings, and participating in utility programs. The commercial and industrial sector consists of service-providing facilities; Federal, State, and local governments; and other private and public organizations, like schools. Buildings can include strip malls, office space, hospitals, manufacturing, and food processing facilities.

## **Renewable Energy**

The Renewable Energy focus area includes options to use both wind and solar energy to power homes and businesses in Burnsville. Renewable energy can be accessed through utility subscription programs, community solar gardens, or on-site solar. There was also interest from the team to explore innovative technologies and geothermal energy as possibilities for renewable energy.

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<sup>2</sup> <https://www.aceee.org/energy-burden>

## Goals and Energy Action Plan Impact

The City of Burnsville updated their Sustainability Plan in 2020. To align efforts across both the Sustainability Plan and this Energy Action Plan, we are using the energy-specific goals and strategies from the Sustainability Plan to guide implementation and measure progress. We created annual targets by focus area to help Burnsville measure success during implementation (*Figure 18*). Combined, these annual targets will put Burnsville on a path to achieve the Sustainability Plan goals for decreasing energy consumption and increasing renewable energy support.

### Our Goals

#### Buildings and Energy Efficiency:

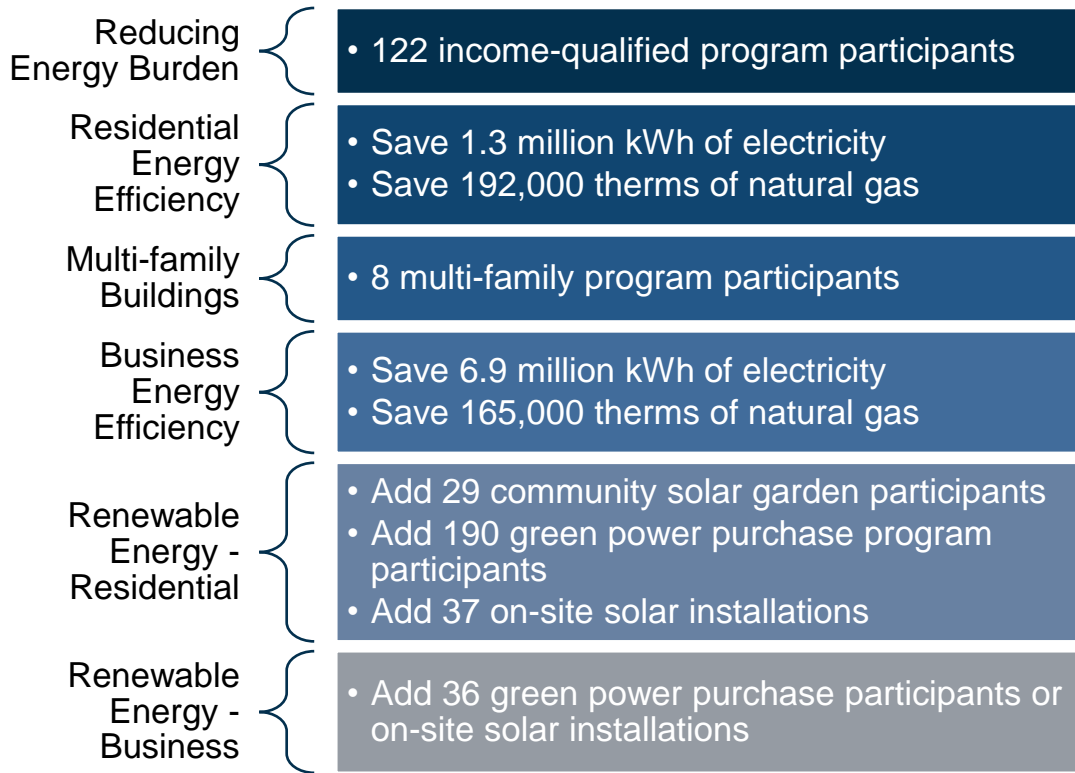
- BE-A: 10% decrease in residential and commercial electric use from 2016 numbers by 2030.
- BE-B: 5% reduction in residential and commercial natural gas use over 2016 numbers by 2030.

#### Renewable Energy:

- RE-A: 7.5% on-site solar (or REC purchase) for residential and commercial by 2030.
- Strategy RE6: Increase participation in shared renewable energy with the goal of achieving 100% increase in community solar garden subscriptions over 2019 numbers by 2030 (to 408 households).

*\*Goals are from Buildings and Energy Efficiency and Renewable Energy sections of Burnsville Sustainability Plan.*

Figure 18. Annual focus area targets and impacts



These targets were created using data available during the planning process and guided by Burnsville's existing Sustainability Plan goals and strategies. *Appendix 3: Methodology for Measuring Success* includes a breakdown of annual targets by utility and program.





## COMMUNITY-WIDE ENGAGEMENT

The City of Burnsville felt it was important to get input from the entire community to understand their energy priorities and to include many perspectives and ideas in the plan. To make this successful, we provided a few different opportunities to engage the broader community.

### Multilingual Open Houses

We planned two events for specific groups in the community who have historically been underserved: the Spanish-speaking community and Somali-speaking community. To make it accessible and inviting, we hosted open houses with food, conversation with interpreters, and giveaways. We provided a short survey, activities, educational resources, and time to hear from people about their concerns around energy.

Figure 19. Energy action open house outreach flyer in Spanish (left) and Somali (right)

<p><b>CASA ABIERTA DE ACCIÓN ENERGÉTICA</b></p> <p><b>Martes, 10 de octubre</b> Visítanos en cualquier momento entre las 6:30 - 8:00 p.m. Diamondhead Education Center 200 Burnsville Pkwy Burnsville, MN 55337</p> <p>Comparte lo que es importante para ti y tu comunidad con respecto al uso de energía en hogares y edificios en Burnsville y aprende cómo puedes ahorrar energía y dinero en tu factura de servicios públicos.</p> <p>Únete a nosotros para:</p> <ul style="list-style-type: none"> <li> Cena <b>GRATIS</b>, conversación y buena compañía</li> <li> Actividades infantiles <b>GRATUITAS</b></li> <li> Bombillas LED <b>GRATIS</b> para que te las lleves a casa</li> </ul> <p>Este evento de puertas abiertas solo se ofrecerá en español</p> <p>Obtén más información en <a href="http://burnsvillemn.gov/energy">burnsvillemn.gov/energy</a></p> <p> La ciudad de Burnsville y Xcel Energy están complacidos de trabajar juntos para organizar este evento para la comunidad.  <b>PARTNERS IN ENERGY</b> An Xcel Energy Community Collaborator</p>	<p><b>MADASHA WAXQABADKA TAMARTA EE FURAN</b></p> <p><b>Talaadada, 10-ka Oktoobar</b> Na soo mar inta u dhaxaysa 5 - 6:30 galabnimo Diamondhead Education Center 200 Burnsville Pkwy Burnsville, MN 55337</p> <p>Soo wadaag waxa muhiimka idiin ah adiga iyo bulshadaada marka la eego isticmaalka tamarta ee guryaha iyo dhismayaasha Burnsville oo ogow sida aad u tashiihan ama dhaqaalaysan lahayd tamarta iyo looga ta kaaga baxdo bilalko tamartaada.</p> <p>Nagu soo biir si aad u hesho:</p> <ul style="list-style-type: none"> <li> Casho <b>BILAASH</b>, sheeko iyo is-weheshi fiican</li> <li> Ciyaaro caruureed <b>LACAG LA'AAN AH</b></li> <li> Nalalka LED-ka ee tamarta dhaqaaleeyo oo <b>LACAG LA'AAN AH</b> oo aad guriga u sii qaadato</li> </ul> <p>Madashan furan waxaa lagu soo gudbin doonaa keliya Af-Soomaali</p> <p>Wax badan ka ogow barta <a href="http://burnsvillemn.gov/energy">burnsvillemn.gov/energy</a></p> <p> Mogaalada Burnsville iyo Xcel Energy waa ku faraxsan inay ka bixiisa kulankan oo ay baadi'ogaan.  <b>PARTNERS IN ENERGY</b> An Xcel Energy Community Collaborator</p>
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The events were held on a single night, with the Somali open house first, followed immediately by the Spanish open house. Thanks to the popularity of the Diamondhead Education Center where the open houses were held, over 60 community members stopped by for dinner and conversation.

We focused on two main topics to gather information from attendees. We wanted to know what was important to them regarding energy individually and in the community. We framed these topics in two questions to prompt our conversations.

**Question 1: What is important to you and your household regarding energy?**

**Question 2: What are your priorities around energy use in the community of Burnsville?**

Figure 20. Attendees at the multilingual open houses



From the conversations with attendees, the following themes emerged:

- Lowering energy bills/saving money was important.
- Many people were renters or lived in manufactured homes.
- Protecting the environment was important and residents want to do their part.
- Replacing HVAC equipment is often an emergency rather than planned. High costs and not knowing which contractors or service providers to call when equipment breaks inhibit HVAC maintenance and upgrades.
- There was uncertainty about who their energy provider is and how to reduce energy use.
- Attendees were interested in this topic and eager to learn more.
- Many were unaware that their energy utility has programs to help manage energy use.
- There is a big opportunity and desire for education around energy efficiency, renewable energy, and utility programs.
- Many attendees had difficulty finding energy efficiency technicians and maintenance services for manufactured homes and were interested in learning more about specific manufactured home resources.

Attendees had the opportunity to give feedback via a short survey on paper. The results are shown in *Figure 21* and *Figure 22*. Saving money on utility bills and reducing energy use were the attendees' top priorities. Maintaining a comfortable, healthy home was also important. Attendees reported that they go to the energy utilities for their energy information first followed by the City of Burnsville.

Figure 21. Short survey results: What is important to you and your family when it comes to energy?

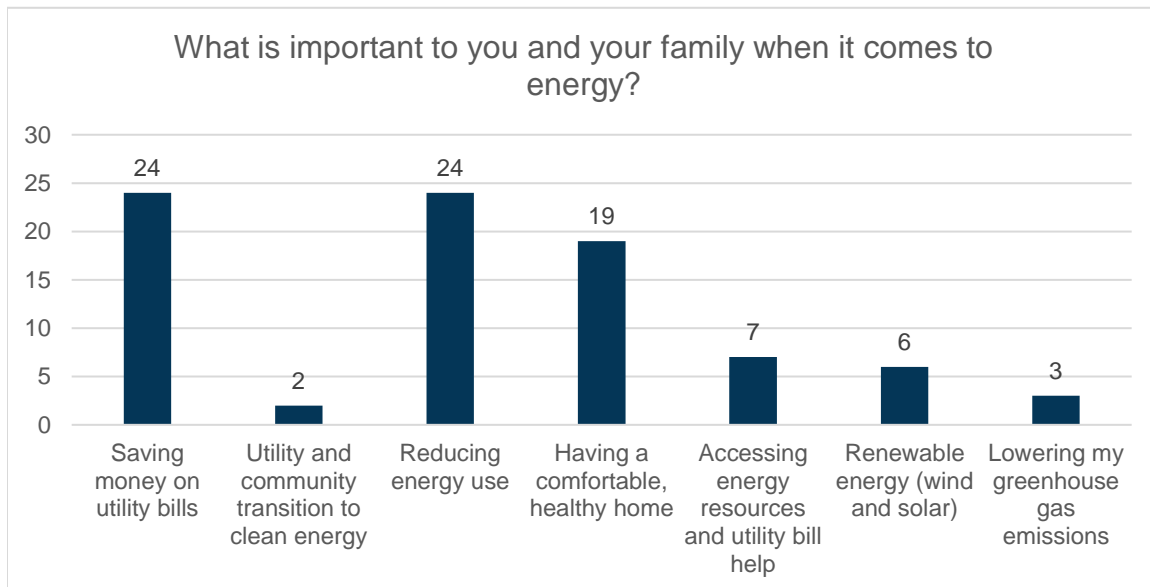
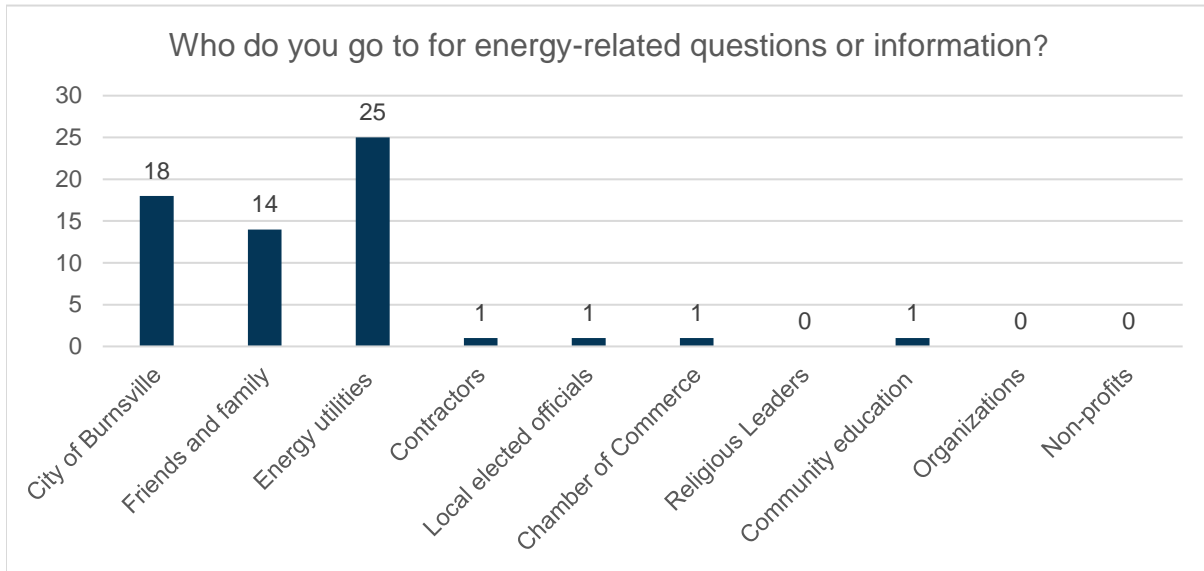




Figure 22. Short survey results: Who do you go to for energy-related questions or information?

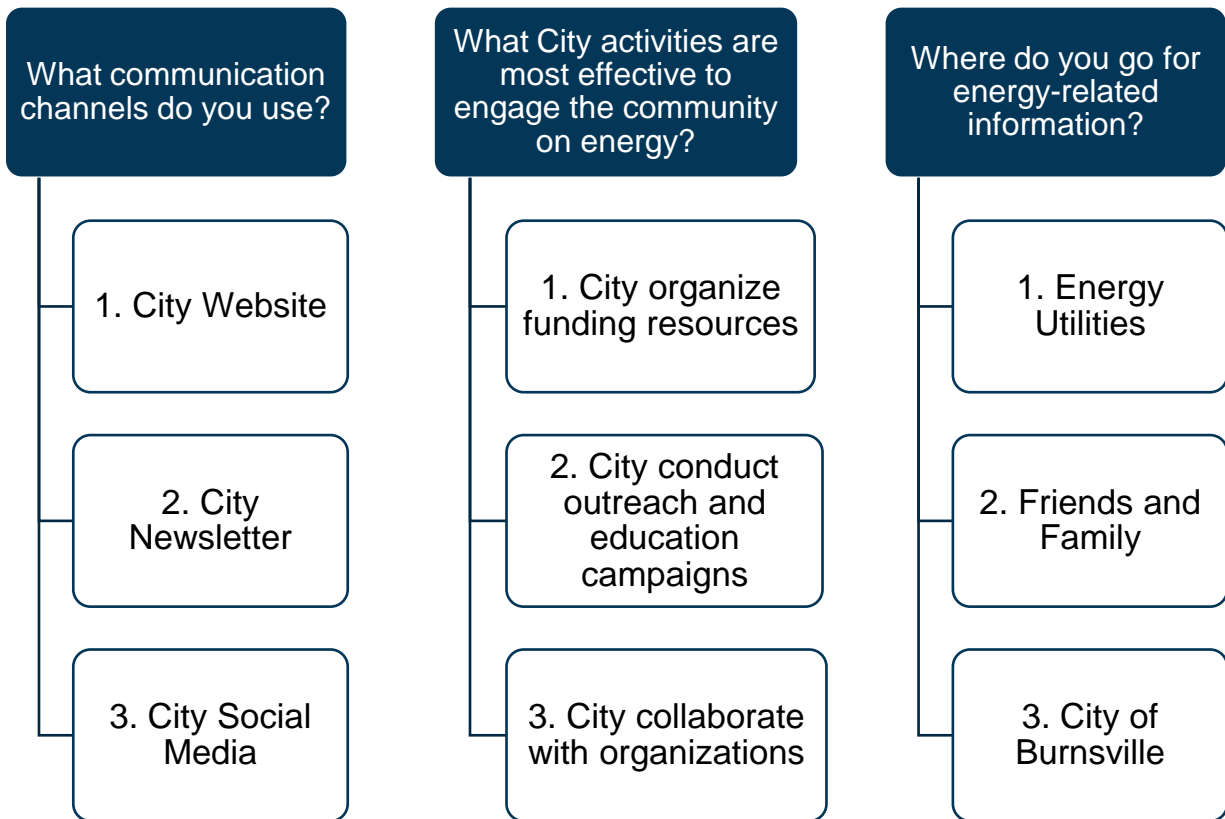


In addition to the survey and conversations about energy priorities, utility representatives attended the open house to answer community members' questions and share resources. Spanish- and Somali-speaking representatives from the Home Energy Squad, Xcel Energy, and Dakota Electric Association attended and were able to connect residents with the utility programs best suited to their needs. Many community members who lived in single-family homes and manufactured homes were excited to sign up for a Home Energy Squad visit to address specific concerns.

### Community-wide Survey

We created a community-wide survey asking the Burnsville community members questions about energy to help inform the strategies in this plan, understand their views on the issue, and determine how we can best reach people. Digital and print versions of the survey were promoted on city communication channels and in-person at multi-family buildings and events. The survey was open for one month and we received over 80 responses. The survey had optional questions for people to share their demographics. From those who opted to share their information with us, the respondents to this survey were mostly homeowners, 84% identified as white, and half of them were age 60 and above. Some results are shown in *Figure 23*. The top three responses to the question, "Where do you go for energy-related information?" were the same at the multilingual open houses and in the community-wide survey.

Figure 23. Top three answers from questions asked in the community-wide survey







## HOW WE ARE GOING TO GET THERE

The Energy Action Team developed strategies using the baseline data, goals from the Sustainability Plan, and feedback from the community-wide outreach to make these actions comprehensive and representative of the whole community.

The following considerations stood out from the community engagement during the planning process and should be applied to all strategies within this plan.

### Equity

Be equitable in implementation and intended outcomes by translating materials, using deliberate means of communication to reach audiences, and building authentic relationships within the community by attending community events and conversations.

### Inclusive

Be understanding of and open to the community and the various ways people interact with and think about energy. Meet people where they are at. Understand your audience's values, priorities, and energy knowledge, and help them make decisions that benefit them and their families.

The following section outlines our implementation plan, including focus areas, strategies, and tactics to achieve our goals. These initiatives will be led by the City of Burnsville and supported by Partners in Energy, Xcel Energy, the Energy Action Team, and other utilities. Each focus area has background information, three to four strategies, and specific tactics describing the actions we plan to take. For a more detailed work plan with a timeline, see Appendix 1: Implementation Work Plan.

## Focus Area: Reducing Energy Burden

### Why is this a priority?

Reducing energy burden was important to ensure this plan supports the communities who need it most. Energy burden is the percentage of income spent on energy costs. Community members with the lowest incomes often pay the highest percentage of that income on utility bills.



### Who is the target audience?

We plan to create campaigns targeted at income-qualified households, renters, and manufactured home residents. With new federal funding coming in 2024 from the Inflation Reduction Act, we want to make sure people know about the incentives available to reduce costs for energy efficiency projects. We will partner with organizations in Burnsville that are connected to communities that could benefit from saving energy and remove barriers to programs that can help lower energy bills.

### Annual Target

- 122 income-qualified program participants

### Strategy 1: Perform outreach to income-qualified households and share how to lower energy bills and save money.

Tactics
1A: Create videos on energy efficiency for specific audiences and home types.
1B: Share on social media, newsletters, and mailings about how to save money and energy.
1C: Translate materials and videos into Spanish and Somali and distribute at local mosques, places of worship, community centers, grocery stores, restaurants, etc.
1D: Gather testimonials and share success stories in outreach.
1E: Host an event with food and activities that shares information about energy efficiency, programs, and energy assistance, ideally in partnership with another event or activity.

### Strategy 2: Create a targeted outreach campaign for manufactured homes to increase energy efficiency.

Tactics
2A: Create marketing materials for manufactured home offices, mailers, and door-to-door outreach.
2B: Develop messaging on how to overcome barriers unique to manufactured homes like high bills, difficulty accessing financing and rebates, contractors not being willing to service manufactured homes, etc.

### Strategy 3: Research and share information on funding, incentives, and free programs to increase energy efficiency.

Tactics
3A: Create materials and communications that share low interest loan programs, federal funding, and rebates to help complete projects.
3B: Explore creating funds through the City to support energy efficiency projects.
3C: Explore partnering with group-buy programs for new technologies, such as heat pumps.

3D: Share information on contractor trainings to provide education and information on energy efficiency, incentives, and equipment.

### **Strategy 4: Partner with agencies, organizations, and schools to support communities experiencing high energy burden.**

#### **Tactics**

4A: Research and connect with food shelves, nonprofits, schools, community education centers, and multi-family management companies as possible partners.

4B: Use joint communication channels and events to share resources and provide support to apply to programs to help reduce time and energy spent on paperwork.

4C: Create a flyer for building and housing inspectors to give out at each visit with information on energy cost reduction and low-income assistance in multiple languages.

### **Focus Area: Residential Energy Efficiency**

#### **Why is this a priority?**

From the many conversations we had with community members during the planning process, it was essential that we included a focus area dedicated to helping residents increase their homes' energy efficiency and save money. Many people care about the environment and reducing their energy use, but don't necessarily make the connection that one benefits the other.

They are also not usually aware of the many programs and rebates that their utilities offer to help them conserve energy. Because of the large population of homeowners and renters in Burnsville making up 89% of total premises, we know engaging this audience will also significantly impact achieving our goals.



#### **Who is the target audience?**

This focus area targets people who live in Burnsville and includes a wide range of audiences. We will engage immigrants, students, homeowners, renters, retirees, seniors, multilingual families, and manufactured homeowners. We will create targeted campaigns to reach these audiences, as well as broad education and awareness campaigns to reach all of Burnsville. We will take advantage of the many events that happen in Burnsville to share energy resources, create a digital resource hub for accessible information, and empower residents with the knowledge of how reducing energy use can create a comfortable, healthy home and save money.

#### **Annual Target**

- Save 1.3 million kWh of electricity
- Save 192,350 therms of natural gas

**Strategy 5: Create a resource hub on City website to share energy information to residents.**

**Tactics**

5A: Share utility territory map and energy resources, including utility programs, steps for energy efficiency, and sources for appliances and products.

5B: Share how residents can lower energy costs through rebates, financing, and incentives available through the Inflation Reduction Act (IRA), State, utilities, and City.

**Strategy 6: Create a targeted campaign to promote Home Energy Squad in specific neighborhoods.**

**Tactics**

6A: Create outreach materials like flyers and postcards to mail and drop door-to-door. Translate into multiple languages to reach more people.

6B: Follow up with targeted outreach campaign to educate about next steps after initial home assessment to help complete energy efficiency projects.

**Strategy 7: Create a volunteer network to help support energy outreach to the community.**

**Tactics**

7A: Collaborate with Community Engagement department to design network.

7B: Create application, contact list, and levels of engagement.

7C: Create a toolkit for volunteers to use at events, share with neighbors, etc.

**Strategy 8: Create energy education opportunities for the community through campaigns and events.**

**Tactics**

8A: Create materials with actionable tasks for residents that share about programs, how to save energy, and how energy efficiency creates a comfortable, healthy home. Share about energy efficient technologies, such as heat pumps.

8B: Share on community bulletin boards and during events, including Night to Unite, Fire Muster. Include a toolkit in the Engagement Vehicle of Awesomeness (EVA).

8C: Partner with trusted organizations to perform outreach through their communication channels and at events.

8D: Help residents understand their utility bill and provide information available to engage in energy efficiency.



## Focus Area: Multi-family Buildings

### Why is this a priority?

A focus on multi-family buildings can help people living in large complexes and affordable housing units save energy and money. Tenants can save energy and money through individual actions in their units, but there is also opportunity to engage property owners through whole building audits and energy efficiency or renewable energy projects. Burnsville's multi-family buildings constitute a large part of housing in the community and can significantly impact energy savings.



### Who is the target audience?

This focus area targets multi-family buildings including apartments, townhomes, condos, and affordable housing units. We will work through different communication channels and avenues for outreach to target tenants, building managers, property owners, HOAs, contractors, and facilities managers.

### Annual Target

- Eight multi-family building program participants

### Strategy 9: Create an Energy Recognition Program for multi-family buildings.

#### Tactics

9A: Provide an open call for participation through City and partner communication channels.

9B: Create materials and collateral featuring case studies and learnings.

9C: Include educational information in annual licensing process, including options for energy efficiency and renewables, along with incentives, rebates, and cost-saving potential.

### Strategy 10: Perform outreach to building management companies and owners to share how energy efficiency can be beneficial.

#### Tactics

10A: Create a digital resource hub on City website to share information to multi-family building owners and managers.

10B: Partner with multifamily building agencies, MHA, MMHA, IREM, Dakota County CDA, etc. to share information broadly.

10C: Create materials to promote multi-family building programs and how to save money, marketing the return on investment when upgrading equipment or completing projects. Incentivize energy audits as the first step and share bonus rebates for income-qualified buildings.

10D: Invite Multi-Family Building Efficiency Program implementer to present or table at Chamber of Commerce meetings and City business events.

10E: Pilot with different sized buildings with City staff working with program vendors to create Burnsville specific case studies.



**Strategy 11: Create targeted education campaign for renters in multiple languages to communicate about opportunities to save energy and money.**

<b>Tactics</b>
11A: Create outreach materials with a list of top 10 behavior change tips and resources specific to renters.
11B: Share digitally, through mailings, and door-to-door at specific properties.
11C: Explore providing a City resource navigator to share information to renters and multi-family building tenants to help them lower their energy bills.

**Focus Area: Business Energy Efficiency**

**Why is this a priority?**

The Commercial and Industrial sector accounts for 53% of total energy consumption in Burnsville. Because of the large amount of energy used by businesses, it is important to create strategies that target businesses to save energy and reach our goals. Business owners can also benefit from energy efficiency measures, and it will be important to convey the return on investment for completing projects.



**Who is the target audience?**

Small- and medium-sized businesses and those that may need more customized support will be the target audience. Collaborating with business groups and the Community Development department and providing case studies will contribute to outreach and increase business participation in programs.

**Annual Target**

- Save 6.9 million kWh of electricity
- Save 164,950 therms of natural gas

**Strategy 12: Perform targeted outreach to businesses through door-to-door interactions and communication channels to increase energy efficiency.**

<b>Tactics</b>
12A: Target small- to medium-sized businesses for one campaign and large users for other campaign.
12B: Share information on utility programs, building assessments, building supplies, efficient equipment, maintenance of existing equipment, and LED lighting.
12C: Collaborate with Economic Development department to create materials that they can utilize to welcome new businesses and bring to business visits and events.

### Strategy 13: Host events and business tours for people at different levels of the business to increase energy efficiency.

#### Tactics

13A: Collaborate with the Chamber of Commerce, City Economic Development team, and Mayor CEO group to present at meetings and events.

13B: Create presentations about the cost/benefit analysis of engaging in energy efficiency, utility rebates, and return on investment.

13C: Provide a tour of a business as a case study to share opportunities and ideas.

13D: Pilot a referral program for businesses that includes incentives.

### Strategy 14: Share benefits of energy efficient businesses to prospective leases and building owners.

#### Tactics

14A: Coordinate with the Community Development department to share information about how to make your business energy efficient and how to take the next step by supporting renewables.

14B: Share energy efficiency upgrades to the owner who may lease or run the business through phone calls, emails, and mailers.

## Focus Area: Renewable Energy

### Why is this a priority?

Lowering greenhouse gas emissions and increasing renewable energy support were key for the Energy Action Team. Both electric utilities in Burnsville offer on-site solar programs and renewable energy subscription programs that enable homeowners and renters to source their electricity from wind and solar. There is opportunity to educate the public about these programs to increase renewable energy support in Burnsville.



### Who is the target audience?

We will focus on increasing participation in subscription programs for both residents and businesses and use new funding from the Inflation Reduction Act as additional incentives to complete renewable energy projects. The City of Burnsville municipal buildings support renewable energy through subscription programs and will act as a leader and share their story to encourage the community to do the same.

### Annual Targets

Residential:

- Add 29 community solar garden participants
- Add 190 green power purchase program participants
- Add 37 on-site solar installations

Business:

- Add 36 green power purchase participants or on-site solar installations

**Strategy 15: Create a digital resource hub on City website for renewable energy information and financial support.**

<b>Tactics</b>
15A: Share information on how to find certified solar contractors for residents, using state and other nonprofit resources.
15B: Share step-by-step process for residents to install solar, leveraging resources created by other groups.
15C: Share information about renewable energy subscription programs available to homeowners, renters, and businesses.
15D: Share information about low-interest loan options and other financing mechanisms for residents and businesses, including tax incentives.

**Strategy 16: Conduct community-wide outreach to encourage residents and businesses to support renewable energy.**

<b>Tactics</b>
16A: Perform outreach to residents by distributing renewable information through City and partner communication channels and at events. Partner with community education and other local organizations to table at events, seminars, and farmers markets to provide education and information on renewables.
16B: Perform outreach to businesses by creating materials and digital campaigns that share the benefits of supporting renewable energy.
16C: Share financial incentives and funding assistance to help residents and businesses install solar (paired with energy efficiency) and participate in community solar gardens.
16D: Plan a Parade of Solar Homes showcasing residents who have solar as case studies.
16E: Conduct a renewable energy challenge as competition among community members to sign up for renewable energy programs.

**Strategy 17: Explore and research options to support solar generation and installations in Burnsville.**

<b>Tactics</b>
17A: Work with a third party to assess residential and commercial roofs and infrastructure for possible solar projects.
17B: Consider providing incentives to new development projects to include renewable technology in the construction.

17C: Consider including resources on energy efficiency and renewables during the development/re-development applications.

17D: Share solar group-buy opportunities with the Burnsville community to seek additional cost savings.

## Resources for Implementation

For successful implementation, the Energy Action Team identified several resources, including communication channels, and places and groups in Burnsville that can support the strategies.



### Communication Channels

- Burnsville Bulletin
- City social media
- City events
- City website
- Local newspaper
- Partner e-newsletters
- Radio
- Local media
- Neighborhood groups
- Utility channels
- Chamber of Commerce
- Experience Burnsville
- School Clubs – Eco or Sustainability
- Multi-family community room bulletin boards
- Door knocking
- Word of mouth
- Postcards/mailers
- Library bulletin board

### Places and Groups

- 360 Communities
- Libraries
- Schools
- Ames Center
- Chamber of Commerce
- Local co-ops and grocers
- Places of worship
- Dog parks
- Diamondhead Education Center
- Box stores
- VFW
- Lions Club
- Yellow Ribbons
- American Legion
- Hardware stores
- Lake Associations
- Real estate agents
- Food shelves
- Festivals
- CAP agency
- Weatherization Service Provider
- Utilities



## HOW WE STAY ON COURSE

Partners in Energy will support implementation of the Energy Action Plan. The Energy Action Plan is a living document and targets and strategies will be assessed and refined as needed based on data and community staff capacity.

### Data and Reporting

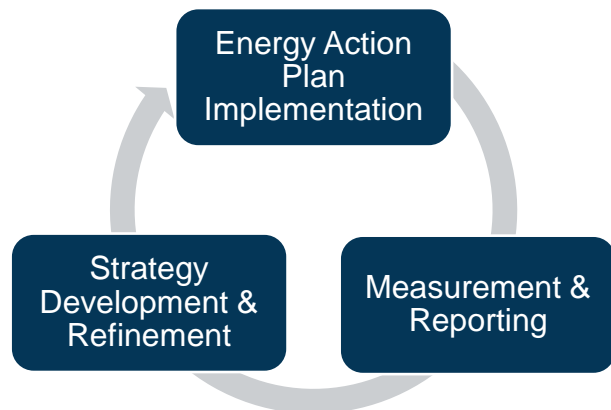
Partners in Energy will provide biannual progress reports with metrics of success and overall progress toward goals for Xcel Energy rebates and programs. These reports will be available publicly and shared with the City and Energy Action Team.

If available, ad-hoc participation reports for specific Xcel Energy programs (e.g., Home Energy Squad) can be provided to measure success of campaigns and determine if we need to change course. Dakota Electric Association, CenterPoint Energy, and Minnesota Valley Electric Cooperative were involved in the planning process and the City of Burnsville will request data progress reports from them to measure progress toward goals.

### Project Management

Partners in Energy will host regular project management check-in calls with staff for the first 18 months of implementation to ensure we stay on course to achieve our strategies. Partners in Energy will also support outreach to the Energy Action Team and community connectors to facilitate strategy implementation. At the implementation midpoint, we will convene to assess progress toward goals and discuss strategy refinement.

Figure 24. Actions and tracking





## **Roles and Responsibilities**

Implementing the strategies outlined in this plan will require leadership and collaboration among the City of Burnsville, members of the Energy Action Team, community representatives, Xcel Energy, and other utilities that serve Burnsville.

### **City of Burnsville**

The City of Burnsville will provide a primary point of contact for implementation and will assign members to attend regular project management check-ins. The City commits to leverage existing communication channels and community connections to promote the Energy Action Plan. In addition, the City of Burnsville will lead strategies specific to City-owned buildings.

### **Energy Action Team**

The Energy Action Team formed to create this plan will support implementation by serving as ambassadors to their networks, promoting Burnsville's energy vision, encouraging participation in programs and outreach campaigns, and sharing success stories. When relevant, members will serve as partners and leaders in strategies. Energy Action Team members may be invited to project management calls or other check-in meetings to ensure strategies are implemented successfully.

### **Xcel Energy**

Xcel Energy will provide data reporting, project management, marketing and communications support, and program expertise for the first 18 months of implementation with a focus on supporting strategies in Xcel Energy territory. Xcel Energy will also provide a dedicated community facilitator to serve as a primary point of contact. Partners in Energy digital resources, including webinars, community portal, and community events will be available to the Burnsville team. After the first 18 months of implementation, Xcel Energy will continue to provide ad-hoc support and data to Burnsville.

### **Other Utilities**

Dakota Electric, CenterPoint Energy, and Minnesota Valley Electric Cooperative will provide program and energy resources, materials, and outreach support during implementation. When requested, they will support specific outreach campaigns when the audience is in their territory. They will share their energy expertise and data when requested.

# APPENDIX 1: IMPLEMENTATION WORK PLAN

This appendix gives additional detail on the timing for each strategy. This appendix will serve as a work plan for the Energy Action Team and Partners in Energy.

Focus Area: Reducing Energy Burden		Timeline		
Strategy	Tactics	Short Term 0-6 months	Medium Term 6-12 months	Long Term 12-24 months
<b>Strategy 1: Perform outreach to income-qualified households and share how to lower energy bills and save money.</b>	1A: Create videos on energy efficiency for specific audiences and home types.			
	1B: Share on social media, newsletters, and mailings about how to save money and energy.			
	1C: Translate materials and videos into Spanish and Somali and distribute at local mosques, places of worship, community centers, grocery stores, restaurants, etc.			
	1D: Gather testimonials and share success stories in outreach.			
	1E: Host an event with food and activities that shares information about energy efficiency, programs, and energy assistance, ideally in partnership with another event or activity.			
<b>Strategy 2: Create a targeted outreach campaign for manufactured homes to increase energy efficiency.</b>	2A: Create marketing materials for manufactured home offices, mailers, and door-to-door outreach.			
	2B: Develop messaging on how to overcome barriers unique to manufactured homes like high bills, difficulty accessing financing and rebates, contractors not being willing to service manufactured homes, etc.			
<b>Strategy 3: Research and share information on funding, incentives, and free programs to increase energy efficiency.</b>	3A: Create materials and communications that share low interest loan programs, federal funding, and rebates to help complete projects.			
	3B: Explore creating funds through the City to support energy efficiency projects.			
	3C: Explore partnering with group-buy programs for energy efficient technologies, such as heat pumps.			
	3D: Share information on contractor trainings to provide education and information on energy efficiency, incentives, and equipment.			

<b>Strategy 4: Partner with agencies, organizations, and schools to support communities experiencing high energy burden.</b>	4A: Research and connect with food shelves, nonprofits, schools, community education centers, and multi-family management companies as possible partners.			
	4B: Use joint communication channels and events to share resources and provide support to apply to programs to help reduce time and energy spent on paperwork.			
	4C: Create a flyer for building and housing inspectors to give out at each visit with information on energy cost reduction, and low-income assistance in multiple languages.			

<b>Focus Area: Residential Energy Efficiency</b>		<b>Timeline</b>		
<b>Strategy</b>	<b>Tactics</b>	<b>Short Term 0-6 months</b>	<b>Medium Term 6-12 months</b>	<b>Long Term 12-24 months</b>
<b>Strategy 5: Create a resource hub on City website to share energy information to residents.</b>	5A: Share utility territory map and energy resources, including utility programs, steps for energy efficiency, and sources for appliances and products.			
	5B: Share how residents can lower energy costs through rebates, financing, and incentives available through the Inflation Reduction Act (IRA), State, utilities, and City.			
<b>Strategy 6: Create a targeted campaign to promote Home Energy Squad in specific neighborhoods.</b>	6A: Create outreach materials like flyers and postcards to mail and drop door-to-door. Translate into multiple languages to reach more people.			
	6B: Follow up with targeted outreach campaign to educate about next steps after initial home assessment to complete energy efficiency projects.			
<b>Strategy 7: Create a volunteer network to help support energy outreach to the community.</b>	7A: Collaborate with Community Engagement department to design network.			
	7B: Create application, contact list, and levels of engagement.			
	7C: Create a toolkit for volunteers to use at events, share with neighbors, etc.			
<b>Strategy 8: Create energy education opportunities for the community through campaigns and events.</b>	8A: Create materials with actionable tasks for residents that share about programs, how to save energy, and how energy efficiency creates a comfortable, healthy home. Share about energy efficient technologies, such as heat pumps.			
	8B: Share on community bulletin boards and during events, including Night to Unite and Fire Muster. Include a toolkit in the Engagement Vehicle of Awesomeness (EVA).			
	8C: Partner with trusted organizations to perform outreach through their communication channels and at events.			
	8D: Help residents understand their utility bill and provide information available to engage in energy efficiency.			

<b>Focus Area: Multi-family Buildings</b>		<b>Timeline</b>		
<b>Strategy</b>	<b>Tactics</b>	<b>Short Term 0-6 months</b>	<b>Medium Term 6-12 months</b>	<b>Long Term 12-24 months</b>
<b>Strategy 9: Create an Energy Recognition Program for multi-family buildings.</b>	9A: Provide an open call for participation through City and partner communication channels.			
	9B: Create materials and collateral featuring case studies and learnings.			
	9C: Include educational information in annual licensing process, including options for energy efficiency and renewables, along with incentives, rebates, and cost-saving potential.			
<b>Strategy 10: Perform outreach to building management companies and owners to share how energy efficiency can be beneficial.</b>	10A: Create a digital resource hub on City website to share information to multi-family building owners and managers.			
	10B: Partner with multifamily building agencies, MHA, MMHA, IREM, Dakota County CDA, etc. to share information broadly.			
	10C: Create materials to promote multi-family building programs and how to save money, marketing the return on investment when upgrading equipment or completing projects. Incentivize energy audits as the first step and share bonus rebates for income-qualified buildings.			
	10D: Invite Multi-Family Building Efficiency Program implementer to present or table at Chamber of Commerce meetings and City business events.			
	10E: Pilot with different sized buildings with City staff working with program vendors to create Burnsville-specific case studies.			
<b>Strategy 11: Create targeted education campaign for renters in multiple languages to communicate opportunities to save energy and money.</b>	11A: Create outreach materials with a list of top 10 behavior change tips and resources specific to renters.			
	11B: Share digitally, through mailings, and door-to-door at specific properties.			
	11C: Explore providing a City resource navigator to share information to renters and multi-family building tenants to help them lower their energy bills.			



<b>Focus Area: Business Energy Efficiency</b>		<b>Timeline</b>		
<b>Strategy</b>	<b>Tactics</b>	<b>Short Term 0-6 months</b>	<b>Medium Term 6-12 months</b>	<b>Long Term 12-24 months</b>
<b>Strategy 12: Perform targeted outreach to businesses through door-to-door interactions and communication channels to increase energy efficiency.</b>	12A: Target small to medium-sized businesses for one campaign and large users for other campaign.			
	12B: Share information on utility programs, building assessments, building supplies, efficient equipment, maintenance of existing equipment, and LED lighting.			
	12C: Collaborate with Economic Development department to create materials that they can utilize to welcome new businesses and bring to business visits and events.			
<b>Strategy 13: Host events and business tours for people at different levels of the business to increase energy efficiency.</b>	13A: Collaborate with the Chamber of Commerce, City Economic Development team, and Mayor CEO group to present at meetings and events.			
	13B: Create presentations on the cost/benefit analysis of engaging in energy efficiency, utility rebates, and return on investment.			
	13C: Provide a tour of a business as a case study to share opportunities and ideas.			
	13D: Pilot a referral program for businesses that includes incentives.			
<b>Strategy 14: Share benefits of energy efficient businesses to prospective leases and building owners.</b>	14A: Coordinate with Community Development department to share information about how to make your business energy efficient and how to take the next step by supporting renewables.			
	14B: Share energy efficiency upgrades to the owner who may lease or run the business through phone calls, emails, and mailers.			

Focus Area: Renewable Energy		Timeline		
Strategy	Tactics	Short Term 0-6 months	Medium Term 6-12 months	Long Term 12-24 months
<b>Strategy 15: Create a digital resource hub on City website for renewable energy information and financial support.</b>	15A: Share information on how to find certified solar contractors for residents, using state and other nonprofit resources.			
	15B: Share step-by-step process for residents to install solar, leveraging resources created by other groups.			
	15C: Share information about renewable energy subscription programs available to homeowners, renters, and businesses.			
	15D: Share information about low-interest loan options and other financing mechanisms for residents and businesses, including tax incentives.			
<b>Strategy 16: Conduct community-wide outreach to encourage residents and businesses to support renewable energy.</b>	16A: Perform outreach to residents by distributing renewable information through City and partner communication channels and at events. Partner with community education and other local organizations to table at events, seminars, and farmers markets to provide education and information on renewables.			
	16B: Perform outreach to businesses by creating materials and digital campaigns that share the benefits of supporting renewable energy.			
	16C: Share financial incentives and funding assistance to help residents and businesses install solar (paired with energy efficiency) and participate in community solar gardens.			
	16D: Plan a Parade of Solar Homes, showcasing residents who have solar as case studies.			
	16E: Conduct a renewable energy challenge as competition among community members to sign up for renewable energy programs.			
<b>Strategy 17: Explore and research options to support solar generation and installations in Burnsville.</b>	17A: Work with a third party to assess residential and commercial roofs and infrastructure for possible solar projects.			
	17B: Consider providing incentives to new development projects to include renewable technology in the construction.			
	17C: Consider including resources on energy efficiency and renewables during the development/re-development applications.			
	17D: Share solar group-buy opportunities with the Burnsville community to seek additional cost savings.			

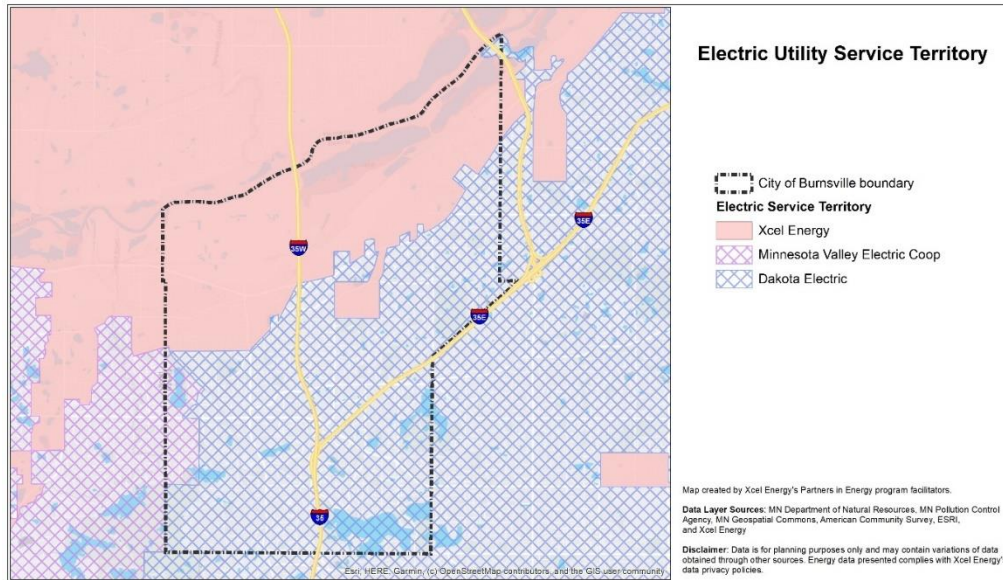


## APPENDIX 2: BASELINE ENERGY ANALYSIS

This appendix includes data from Xcel Energy, CenterPoint Energy, and Dakota Electric Association for their service territory in Burnsville to establish a community energy baseline. Minnesota Valley Electric Cooperative did not provide the same level of data as the other utilities, so it is excluded from the baseline analysis. Unless otherwise noted, data was provided for 2020–2022. Xcel Energy provides electricity to Burnsville and provided data on electricity consumption, program participation and savings, and renewable energy programs. CenterPoint Energy provides natural gas service to all of Burnsville and provided consumption and program data. Dakota Electric Association services Burnsville for electricity and provided consumption, efficiency program, and renewable energy program data.

## Electric Service Territory

Figure 25. Electric utility service territories in Burnsville



Burnsville is served by three electric utilities: Xcel Energy, Dakota Electric Association, and Minnesota Valley Electric Cooperative.

## Premises

As of 2022, there were 29,037 electric premises and 22,190 natural gas premises in Burnsville. Dakota Electric Association serves 75% of electric premises and Xcel Energy serves 25% of premises. All natural gas premises are served by CenterPoint Energy. The residential sector represents the largest portion of both electric and natural gas premises (89%). Minnesota Valley Electric Cooperative serves a small portion of Burnsville electric premises but are not included in the baseline data.

Table 1. Electric premises by utility by sector, 2022

Utility	Sector	Premises	Share
<b>Xcel Energy</b>	Residential	5,997	21%
	Commercial/Industrial	1,201	4%
	Municipal	52	0.2%
<b>Dakota Electric Association</b>	Residential	19,909	68%
	Commercial/Industrial	1,719	6%
	Municipal	159	1%
<b>Total</b>	<b>All</b>	<b>29,037</b>	<b>100%</b>

Table 2. Natural gas premises by utility by sector, 2022

Utility	Sector	Premises	Share
<b>CenterPoint Energy</b>	Residential	19,952	90%
	Commercial/Industrial	2,202	10%
	Municipal	36	0.2%
<b>Total</b>	<b>All</b>	<b>22,190</b>	<b>100%</b>

## Electricity Consumption

Electric consumption increased over the baseline year (2020), averaging 490 million kWh of electricity across all sectors each year. Dakota Electric Association, which serves the majority of electric premises in Burnsville, represents the largest portion of electric consumption in Burnsville. Combining electricity consumption for the commercial/industrial sector from both electric utilities, the sector accounts for 59% of electricity consumed in Burnsville.

Table 3. Annual Xcel Energy electricity consumption (kWh) by sector, 2020–2022

Sector	2020	2021	2022
Residential	39,046,342	40,187,564	38,708,951
Commercial/Industrial	91,647,047	93,051,577	93,566,245
Municipal	7,888,567	7,837,276	7,851,231
<b>Total</b>	<b>138,581,956</b>	<b>141,076,417</b>	<b>140,126,427</b>
<b>Year-Over-Year Change</b>	<b>–</b>	<b>2%</b>	<b>-1%</b>

Table 4. Annual Dakota Electric Association electricity consumption (kWh) by sector, 2020–2022

Sector	2020	2021	2022
Residential	145,394,729	148,628,968	145,624,087
Commercial/Industrial	191,751,287	197,209,892	197,886,334
Municipal	7,753,433	8,526,314	8,865,983
<b>Total</b>	<b>344,899,449</b>	<b>354,365,174</b>	<b>352,376,404</b>
<b>Year-Over-Year Change</b>	<b>–</b>	<b>3%</b>	<b>-1%</b>

Table 5. Average electricity consumption (kWh) by utility for all sectors, 2020–2022

Utility	Average Consumption	Share
Xcel Energy	139,928,267	29%
Dakota Electric Association	350,547,009	71%
<b>Total</b>	<b>490,475,276</b>	<b>100%</b>

Table 6. Average electricity consumption (kWh) by sector for all electric utilities, 2020–2022

Sector	Average Consumption	Share
Residential	185,863,547	38%
Commercial/Industrial	288,370,794	59%
Municipal	16,240,935	3%
<b>Total</b>	<b>490,475,276</b>	<b>100%</b>



## Natural Gas Consumption

Natural Gas consumption increased over the baseline year, averaging 33 million therms of natural gas for all sectors each year. The residential and natural gas sectors consume a similar amount of natural gas, even though the residential sector represents 90% of premises in Burnsville.

Table 7. Annual CenterPoint Energy natural gas consumption (therms) by sector, 2020–2022

Sector	2020	2021	2022
Residential	15,990,462	15,266,449	17,753,186
Commercial/Industrial	15,955,089	15,762,539	17,990,013
Municipal	260,085	329,373	380,249
<b>Total</b>	<b>32,205,636</b>	<b>31,358,361</b>	<b>36,123,448</b>
<b>Year-Over-Year Change</b>	<b>–</b>	<b>-3%</b>	<b>15%</b>

Table 8. Average natural gas consumption (therms) by sector for CenterPoint Energy, 2020–2022

Sector	Average Consumption	Share
<b>Residential</b>	16,336,699	49%
<b>Commercial/Industrial</b>	16,569,214	50%
<b>Municipal</b>	323,236	1%
<b>Total</b>	<b>33,229,148</b>	<b>100%</b>

## Energy Costs

In addition to consumption data, Xcel Energy, Dakota Electric Association, and CenterPoint Energy provided revenue data. Energy cost trends reflect similar trends to energy consumption with year-over-year fluctuations but see larger year-over-year percentage changes. To calculate average per-premise costs, Partners in Energy used the average of reported sector revenue divided by average premise count for that utility and sector.

Table 9. Annual Xcel Energy revenue by sector, 2020–2022

Sector	2020	2021	2022
Residential	\$5,066,986	\$5,233,149	\$5,644,950
Commercial/Industrial	\$9,612,709	\$10,690,557	\$12,388,553
Municipal	\$652,155	\$706,866	\$818,351
<b>Total</b>	<b>\$15,331,850</b>	<b>\$16,630,572</b>	<b>\$18,851,854</b>
<b>Year-Over-Year Change</b>	<b>–</b>	<b>8%</b>	<b>13%</b>

Table 10. Annual Dakota Electric Association revenue by sector, 2020–2022

Sector	2020	2021	2022
Residential	\$17,621,265	\$18,815,510	\$18,402,143
Commercial/Industrial	\$12,710,150	\$13,337,640	\$13,381,715
Municipal	\$489,687	\$556,956	\$568,443
<b>Total</b>	<b>\$30,821,102</b>	<b>\$32,710,106</b>	<b>\$32,352,301</b>
<b>Year-Over-Year Change</b>	<b>–</b>	<b>6%</b>	<b>-1%</b>

Table 11. Annual CenterPoint Energy revenue by sector, 2020–2022

Sector	2020	2021	2022
Residential	\$12,660,775	\$15,160,889	\$21,684,095
Commercial/Industrial	\$8,763,800	\$11,510,150	\$16,874,365
Municipal	\$167,500	\$276,138	\$415,166
<b>Total</b>	<b>\$21,592,075</b>	<b>\$26,947,177</b>	<b>\$38,973,625</b>
<b>Year-Over-Year Change</b>	<b>–</b>	<b>25%</b>	<b>45%</b>

Table 12. Average per premise energy costs by sector by utility, 2020–2022

Sector and Utility	Per Premise Cost
<b>Residential</b>	
<b>Xcel Energy</b>	\$904
Dakota Electric	\$927
CenterPoint Energy	\$838
<b>Commercial/Industrial</b>	
<b>Xcel Energy</b>	\$9,150
Dakota Electric	\$7,633
CenterPoint Energy	\$5,617
<b>Municipal</b>	
<b>Xcel Energy</b>	\$14,231
Dakota Electric	\$3,379
CenterPoint Energy	\$8,102

## Greenhouse Gas Emissions

Electricity and natural gas consumption result in energy-related greenhouse gas emissions. Emissions are influenced by trends in consumption and grid decarbonization. Emissions have increased since the baseline year, primarily due to an increase in electricity emissions from Dakota Electric Association and an increase in natural gas emissions from CenterPoint Energy, which align with an increase in consumption in the utility’s service territory. Emissions from electricity consumption in Xcel Energy’s service territory has decreased since the baseline year even though consumption is higher in part to Xcel Energy’s investment in carbon-free generation.<sup>3</sup>

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<sup>3</sup> Xcel Energy’s Upper Midwest Energy Plan, [https://www.xcelenergy.com/company/rates\\_and\\_regulations/resource\\_plan\\_overview/upper\\_midwest\\_energy\\_plan](https://www.xcelenergy.com/company/rates_and_regulations/resource_plan_overview/upper_midwest_energy_plan)  
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Table 13. Annual greenhouse gas emissions (MTCO<sub>2</sub>e) by utility by sector, 2020–2022

Utility	2020	2021	2022
Xcel Energy	37,590	40,379	37,011
Dakota Electric Association	237,795	244,321	242,950
CenterPoint Energy	170,919	166,422	191,711
<b>Total</b>	<b>446,304</b>	<b>451,122</b>	<b>471,672</b>
<b>Year-Over-Year Change</b>	<b>–</b>	<b>1%</b>	<b>5%</b>

Table 14. Annual greenhouse gas emissions (MTCO<sub>2</sub>e) by sector for all utilities, 2020–2022

Sector	2020	2021	2022
Residential	195,698	194,997	204,844
Commercial/Industrial	241,740	246,255	256,623
Municipal	8,866	9,870	10,204
<b>Total</b>	<b>446,304</b>	<b>451,122</b>	<b>471,671</b>

Table 15. Annual emissions factors used to calculate energy-related greenhouse gas emissions, 2020–2022<sup>4</sup>

Utility	Fuel Type	Metric	2020	2021	2022
Xcel Energy	Electricity	lbs/MWh	598	631	582
Dakota Electric Association	Electricity	Tons CO <sub>2</sub> /MWh	1,675.5	1,675.5	1,675.5
CenterPoint Energy	Natural Gas	MTCO <sub>2</sub> e/Dth	117.0	117.0	117.0

## Program Participation and Savings

Xcel Energy, Dakota Electric Association, and CenterPoint Energy offer efficiency programs for residential, commercial/industrial, and municipal sector premises. For the purposes of reporting, municipal premise participation and savings are reported in the commercial/industrial sector for each utility. CenterPoint Energy and Dakota Electric Association reported residential and low-income (“income-qualified”) programs separately, which is reflected in *Table 16*.

Table 16. Xcel Energy residential sector program participation and savings by program, 2020–2022

Residential Program	Participation			Savings (kWh)		
	2020	2021	2022	2020	2021	2022
Efficient New Home Construction	0	2	1	0	1,682	1,354
Home Energy Audit	0	8	14	0	0	0
Home Energy Savings Program	0	0	0	0	0	0
Home Energy Squad	13	14	13	15,482	11,823	11,989
HomeSmart	8	5	8	0	0	0

<sup>4</sup> Greenhouse gas emissions estimates may change slightly based upon third-party verification of utility emissions factors.

Residential Program	Participation			Savings (kWh)		
	2020	2021	2022	2020	2021	2022
HVAC Rebates	137	139	98	62,219	62,006	41,397
Insulation Rebate	1	2	0	189	312	0
Low-Income Home Energy Squad	3	1	3	4,084	374	2,135
Multi-family Energy Savings Program	0	0	0	0	0	0
Refrigerator Recycling	24	26	16	17,892	16,306	13,513
Residential Saver's Switch	176	99	40	354	104	44
Smart Thermostat	4	50	44	532	1,868	860
Whole Home Efficiency	0	1	0	0	20,071	0
<b>Total</b>	<b>366</b>	<b>347</b>	<b>237</b>	<b>100,752</b>	<b>114,546</b>	<b>71,292</b>

Table 17. Xcel Energy Commercial/Industrial sector program participation and savings by program, 2020–2022

Commercial/Industrial Program	Participation			Savings (kWh)		
	2020	2021	2022	2020	2021	2022
Business Energy Assessments	0	0	0	0	0	0
Custom Efficiency	0	0	0	0	0	0
Electric Rate Savings	1	11	0	-7,080	-40,940	0
Energy Design Assistance	1	0	1	310,750	0	484,232
Energy Efficient Buildings	0	0	0	0	0	0
Fluid System Optimization	2		1	10880		7779
Foodservice Equipment	0	0	0	0	0	0
HVAC+R Efficiency	3	11	19	4676	111712	6108
Lighting Efficiency	19	30	23	552,052	335,605	617,145
Multi-Family Building Efficiency	2	7	3	85,272	23,571	710
Saver's Switch for Business	2	7	2	14	28	4
Small Business Lighting	18	21	13	444,627	345,718	189,956
Turn Key Services	0	0	0	0	0	0
<b>Total</b>	<b>48</b>	<b>87</b>	<b>62</b>	<b>1,401,191</b>	<b>775,694</b>	<b>1,305,934</b>

Table 18. Dakota Electric Association residential sector program participation and savings by program, 2020–2022

Residential Program	Participation			Savings (kWh)		
	2020	2021	2022	2020	2021	2022
A/C Tune Up Rebate	49	43	14	4,606	4,042	1,316
AC 15 SEER	76	100	56	37,924	49,900	27,944
AC 16 SEER	114	75	107	62,472	41,100	58,636
ASHP 16+ SEER	5	6	9	31,255	37,506	56,259
ASHP 14.5+ SEER	1	2	2	6,229	12,458	12,458
Minisplit ASHP - Elec heat offset	1	0	1	11,742	0	94
Minisplit ASHP - Gas heat offset	4	1	7	14,220	499	3,493
Heat Pump Water Heater Rebate	1	9	0	2,128	4,932	0
Clothes Dryer Rebate	30	11	7	7,500	2,750	1,750
Cycled Air Rebate kWh	0	2	0	0	160	0
Dehumidifier Rebates	79	17	21	34,365	7,395	9,135
ECM Motor Rebate	291	305	25	213,012	223,260	18,300
Refrigerator Rebate	108	26	5	113,076	27,222	5,235
Freezer Rebate	7	4	0	8,372	4,784	0
Appliance Recycle Freezer	4	6	11	4,536	6,804	12,474
Appliance Recycle Refrigerator	18	70	63	16,470	64,050	57,645
LED Light Rebate	1,064	824	986	47,880	37,080	44,370
Pool Pump Rebate	5	4	5	10,500	8,400	10,500
ETS Water Heater	0	2	0	0	240	0



Residential Program	Participation			Savings (kWh)		
	2020	2021	2022	2020	2021	2022
HES Visits - Market Rate	30	61	53	34,343	63,750	44,615
<b>Total</b>	<b>1,887</b>	<b>1,568</b>	<b>1,372</b>	<b>660,630</b>	<b>596,332</b>	<b>364,224</b>

Table 19. Dakota Electric Association income-qualified sector program participation and savings by program, 2020–2022

Income-Qualified Program	Participation			Savings (kWh)		
	2020	2021	2022	2020	2021	2022
HES Visits – IQ	4	5	7	3,060	4,950	13,258
IQ Refrigerator	3	9	8	3,141	9,423	8,376
IQ Freezer	2	5	1	2,454	6,135	1,227
IQ AC Tune UP	12	12	11	1,200	1,200	1,100
IQ Dishwasher	4	6	9	240	360	540
IQ Microwave	3	6	4	2,046	4,092	2,728
IQ Dehumidifier	2	1	1	870	435	435
IQ Clothes Washer	3	4	4	672	896	896
<b>Total</b>	<b>33</b>	<b>48</b>	<b>45</b>	<b>13,683</b>	<b>27,491</b>	<b>28,560</b>

Table 20. Dakota Electric Association Commercial/Industrial sector program participation and savings by program, 2020–2022

Commercial/Industrial Program	Participation			Savings (kWh)		
	2020	2021	2022	2020	2021	2022
Lighting	42	26	19	3,985,262	1,033,653	345,670
Motors and Drivers	3	1	1	876,977	5,430	13,506
HVAC	1	6	3	10,750	3,804	2,368
Custom	1	2	0	28,882	95,031	0
Building Study	1	0	0	337,583	0	0
Food Service	0	1	0	0	9,088	0
EVSE	1	0	0	n/a	n/a	n/a
AC Rebate	0	0	1	0	0	499
Appliance Recycle Refrig	0	0	1	0	0	1,047
ECM Motor Rebate	0	1	0	0	732	0
Water Heater Rebate (kW)	0	6	3	0	6	3
<b>Total</b>	<b>49</b>	<b>43</b>	<b>28</b>	<b>5,239,454</b>	<b>1,147,744</b>	<b>363,093</b>

Table 21. CenterPoint Energy residential sector program participation and savings by program, 2020–2022

Residential Program	Participation			Savings (therms)		
	2020	2021	2022	2020	2021	2022
Home Efficiency Rebates	1,233	600	561	85,856	69,644	71,270
DIY Home Efficiency	278	320	121	6,902	10,929	5,912
Home Insulation Rebates	117	39	28	12,162	7,518	3,602
Home Energy Squad	62	134	95	2,102	5,266	4,057
High-Efficiency Home	1	2	8	472	260	674
New Home Construction Rebates	0	3	1	0	138	44
<b>Total</b>	<b>1,691</b>	<b>1,098</b>	<b>814</b>	<b>107,495</b>	<b>93,754</b>	<b>85,558</b>

Table 22. CenterPoint Energy income-qualified sector program participation and savings by program, 2020–2022

Income-Qualified Program	Participation			Savings (therms)		
	2020	2021	2022	2020	2021	2022
Low-Income Weatherization	5	4	2	575	248	384
Low-Income Rental Efficiency	0	0	0	0	0	0
Low-Income Free Heating System Tune-Up	9	0	1	202	0	21
Non-Profit Affordable Housing Rebates	0	0	0	0	0	0
Low-Income Multi-Family Housing Rebates	0	0	1	0	0	289
<b>Total</b>	<b>14</b>	<b>4</b>	<b>4</b>	<b>777</b>	<b>248</b>	<b>694</b>

Table 23. CenterPoint Energy Commercial/Industrial sector program participation and savings by program, 2020–2022

Commercial/Industrial Program	Participation			Savings (therms)		
	2020	2021	2022	2020	2021	2022
Commercial Foodservice Equipment Rebates	8	0	4	5,988	0	11,571
C&I Heating and Water Heating Rebates	33	78	58	35,158	69,760	50,742
C&I Custom Rebates (Includes Engineering Assistance)	0	0	0	0	0	0
C&I Audit Services (Natural Gas Energy Analysis and Steam Trap Audits)	0	6	4	0	1,868	1,577

Commercial/Industrial Program	Participation			Savings (therms)		
	2020	2021	2022	2020	2021	2022
Energy Design Assistance	1	0	1	25,420	0	38,200
Industrial Process and Commercial Efficiency	0	0	0	0	0	0
Recommissioning Study & Rebates	0	0	0	0	0	0
Multi-Family Building Efficiency	1	6	0	5,691	1,444	0
<b>Total</b>	<b>43</b>	<b>90</b>	<b>67</b>	<b>72,257</b>	<b>73,072</b>	<b>102,090</b>

### Renewable Energy Programs

Both Xcel Energy and Dakota Electric Association offer renewable energy programs to Burnsville residents and businesses in the form of subscription programs and on-site installations. For reporting purposes, municipal premises are included in the commercial/industrial sector. Subscription programs, including green power purchase programs and community solar gardens, are the most popular in Burnsville in both sectors and for both utilities. For Dakota Electric Association territory, on-site solar installations are also popular, with 84 installations total across its service territory in 2022.

Table 24. Xcel Energy renewable energy program participation by sector, 2022<sup>5</sup>

Sector and Program	Participation	Electricity Subscribed (kWh)
<b>Residential</b>		
<b>Windsource</b> <sup>®</sup>	284	812,276
Renewable*Connect <sup>®</sup>	8	47,207
Solar*Rewards <sup>®</sup> Community	235	1,844,292
Net-Metering and Solar*Rewards <sup>®</sup>	20	n/a
<b>Commercial/Industrial</b>		
<b>Windsource</b> <sup>®</sup>	4	119,791
Renewable*Connect <sup>®</sup>	1	60,800
Solar*Rewards <sup>®</sup> Community	17	10,603,522
Net-Metering and Solar*Rewards <sup>®</sup>	23	n/a

<sup>5</sup> Solar\*Rewards and Net-Metering data sourced from Burnsville's 2022 Xcel Energy Community Energy Report  
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Table 25. Dakota Electric Association renewable energy program participation by sector, 2022

<b>Sector and Program</b>	<b>Participation</b>	<b>Electricity Subscribed (kWh)</b>
<b>Residential</b>		
<b>Wellspring</b>	195	986,094
On-site Solar	82	n/a
<b>Commercial/Industrial</b>		
<b>Wellspring</b>	163	9,642,358
On-site Solar	2	n/a



## APPENDIX 3: METHODOLOGY FOR MEASURING SUCCESS

As part of implementation support, Partners in Energy will provide data progress reports for Xcel Energy premises in Burnsville, including energy consumption, program participation, and program savings. Data from other utilities will need to be requested by the City of Burnsville to track progress toward goals.

The following section defines the values against which success of the Energy Action Plan implementation will be measured, including the Xcel Energy, Dakota Electric, and CenterPoint Energy program(s) included in the assumptions. Targets provided in this section are for planning purposes only and will be measured against the baseline or business-as-usual scenario created by Partners in Energy as noted in each section.

### Burnsville Sustainability Plan Goals

To create the targets included in this section, Partners in Energy used the following goals and strategies from the *Buildings and Energy Efficiency* and *Renewable Energy* sections of Burnsville's Sustainability Plan.

Buildings and Energy Efficiency:

- BE-A: 10% decrease in residential and commercial electric use from 2016 numbers by 2030
- BE-B: 5% reduction in residential and commercial natural gas use over 2016 numbers by 2030

Renewable Energy:

- RE-A: 7.5% on-site solar (or REC purchase) for residential and commercial by 2030



- Strategy RE6: Increase participation in shared renewable energy with the goal of achieving 100% increase in community solar garden subscriptions over 2019 numbers by 2030 (to 408 households).

## Focus Area Participation Targets

Partners in Energy created annual targets by focus area to help the Burnsville team measure success of Energy Action Plan implementation. Each focus area is broken down by utility, metric, baseline value, and an annual target.

Figure 26. Focus Area target summary

Reducing Energy Burden	• Income-qualified program participation
Residential Energy Efficiency	• Energy savings target by utility
Multi-family Buildings	• Multi-family building program participation
Business Energy Efficiency	• Energy savings target by utility
Renewable Energy	• Community solar garden participation • Green power purchase program participation and on-site solar installations

### Residential Energy Efficiency

For all utilities, the baseline column represents a three-year average of 2020–2022 savings for residential sector efficiency programs. Residential and income-qualified sectors are reported and modeled separately. Annual target assumes implementation starts in 2024 and represents the annual savings target by utility. All available residential efficiency programs from the utility will be included in tracking progress toward these targets.

Table 26. Residential Energy Efficiency annual targets

Utility	Metric	Baseline	Annual Target
Xcel Energy	kWh	95,530	191,060
Dakota Electric Association	kWh	563,640	1,127,280
CenterPoint Energy	therms	96,175	192,350

### Business Energy Efficiency

For all utilities, the baseline column represents a three-year average of 2020–2022 savings for commercial and industrial sector efficiency programs. Annual target assumes implementation starts in 2024 and represents the annual savings target by utility. All available business efficiency programs from the utility will be included in tracking progress toward these targets.

Table 27. Business Energy Efficiency annual targets

Utility	Metric	Baseline	Annual Target
<b>Xcel Energy</b>	kWh	1,207,991	2,415,983
<b>Dakota Electric Association</b>	kWh	2,250,097	4,500,194
<b>CenterPoint Energy</b>	therms	82,473	164,946

### Residential Renewable Energy

For all utilities, the baseline column represents the reported 2022 value. Annual target assumes implementation starts in 2024 and represents new participants joining the program. All available residential renewable energy programs from the utility will be included in tracking progress toward these targets. Renewable energy participants are counted cumulatively year over year. The annual targets will add to the baseline total each year.

Table 28. Residential Renewable Energy annual targets

Utility	Metric	Baseline	Annual Target
<b>Xcel Energy</b>	Community Solar Garden Participation	235	29
<b>Xcel Energy</b>	Green Power Purchase Participation	292	114
<b>Xcel Energy</b>	On-site Solar Installations	12	5
<b>Dakota Electric Association</b>	Green Power Purchase Participation	195	76
<b>Dakota Electric Association</b>	On-site Solar Installations	82	32

### Business Renewable Energy

For all utilities, the baseline column represents the reported 2022 value. Annual target assumes implementation starts in 2024 and represents new participants joining the program. All available business renewable energy programs from the utility will be included in tracking progress toward these targets, combining green power purchase programs and on-site solar installations as part of the annual target.

Table 29. Business Renewable Energy annual targets

Utility	Metric	Baseline	Annual Target
<b>Xcel Energy</b>	Green Power Purchase Participation and On-site Solar Installations	16	10
<b>Dakota Electric Association</b>	Green Power Purchase Participation and On-site Solar Installations	165	27

## Reducing Energy Burden

For all utilities, the baseline column represents a three-year average of 2020–2022 participation for the following income-qualified programs:

- Xcel Energy income-qualified programs include Low-income Home Energy Squad, Home Energy Savings Program, and Multi-family Energy Savings Program.
- Dakota Electric income-qualified programs include those reported as “income-qualified” during data intake.
- CenterPoint Energy income-qualified programs include those reported as “low-income segment” during data intake.

For both Xcel Energy and CenterPoint Energy, income-qualified programs that are also multi-family programs are included in the energy burden focus area. Annual target assumes implementation starts in 2024 and represents new participants in the program. All available income-qualified programs from the utility will be included in tracking progress toward these targets.

Table 30. Reducing Energy Burden annual targets

Utility	Metric	Baseline	Annual Target
<b>Xcel Energy</b>	Income-qualified Program Participation	2	23
<b>Dakota Electric Association</b>	Income-qualified Program Participation	42	84
<b>CenterPoint Energy</b>	Income-qualified Program Participation	7	15

## Multi-family Buildings

For the multi-family focus area, Xcel Energy and CenterPoint Energy jointly offer the Multi-Family Building Efficiency program, which is the only program included in the baseline. The baseline column represents a three-year average of 2020–2022 participation. For both utilities, income-qualified programs that are also multi-family programs are included in the energy burden focus area in addition to the multi-family focus area. Annual target assumes implementation starts in 2024 and represents new participants in the program. If new multi-family programs become available from utilities, they will be included in tracking progress toward these targets.

Table 31. Multi-family Buildings annual target

Utility	Metric	Baseline	Annual Target
Xcel Energy	Multi-family Program Participation	3	8
CenterPoint Energy			



## **APPENDIX 4: XCEL ENERGY'S PARTNERS IN ENERGY PLANNING PROCESS**

### **About Xcel Energy's Partners in Energy**

Xcel Energy is an electric and natural gas utility that provides the energy that powers millions of homes and businesses across eight western and midwestern states. Each community Xcel Energy serves has its own unique priorities and vision for its energy future. The energy landscape is dynamically changing with communities leading the way in setting energy and sustainability goals. To continue to innovatively support their communities, Xcel Energy launched Partners in Energy in the summer of 2014 as a collaborative resource with tailored services to complement each community's vision. The program offerings include support to develop an energy action plan or electric vehicle plan, tools to implement the plan and deliver results, and resources designed to help each community stay informed and achieve their outlined goals.



Partners in Energy Process for Success

Resources from Xcel Energy for Implementation

## Plan Development Process

The content of this plan is derived from a series of four planning workshops held in Burnsville with a planning team committed to representing local energy priorities and implementing plan strategies. The engagement process also included a multilingual open house event and community-wide survey. The planning process took place from June 2023 through November 2023.

### Workshop 1: What should Burnsville’s energy future look like?

June 2023

The Energy Action Team learned about Partners in Energy and Burnsville’s baseline energy use. Burnsville City staff also shared the history of City sustainability initiatives. After brainstorming what the future of energy action could look like in Burnsville, the team considered a vision for Burnsville’s energy future and discussed potential priorities and focus areas for the Energy Action Plan.

Figure 27. Burnsville’s Energy Action Team





## Workshop 2: How will we focus our efforts to achieve our vision?

July 2023

The Energy Action Team continued to discuss the vision statement and focus areas of the plan, nearing a consensus. Utility representatives presented on energy efficiency and renewable energy programs from Xcel Energy, CenterPoint Energy, Dakota Electric Association, and Minnesota Valley Electric Cooperative. Members left with an understanding of how historic participation in these programs could help model their goals.

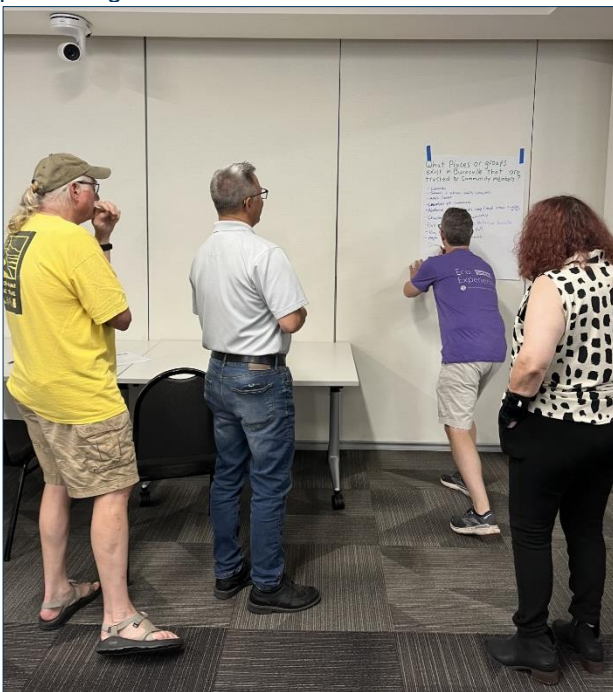
Figure 28. The Energy Action Team discusses focus areas



## Workshop 3: How will we measure success and what are we going to do?

August 2023

Figure 29. Team members brainstorm community assets and resources in Burnsville to achieve the plan's targets



The team started Workshop 3 by finalizing the plan's focus areas. They learned more about Burnsville's Sustainability Plan and the goals specific to the energy sector. Using those goals, annual targets were created for each focus area to track success. Team members then brainstormed strategies to engage the community on energy initiatives. They finished by sharing community assets and communication resources for achieving the annual targets.

## Multilingual Open Houses: What are Somali- and Spanish-speaker’s energy priorities? October 2023

The City of Burnsville and Partners in Energy hosted two open houses on one evening, inviting the Somali and Spanish-speaking communities of Burnsville to a meal to share what was important to them and the community regarding energy. Over 60 community members stopped by the event and shared their input on lowering energy bills, resources to help save energy, renewable energy, and more.

Figure 30. Community members sharing their energy priorities with Partners in Energy staff



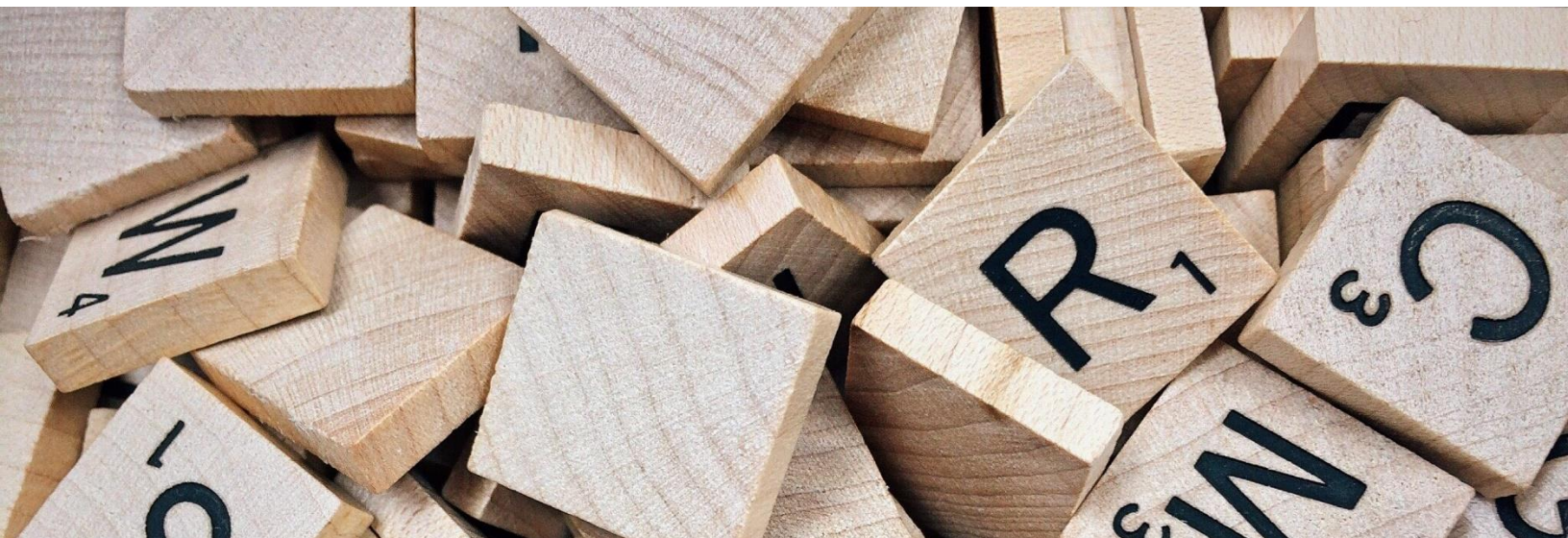
## Workshop 4: How are we going to do the work? April 2023

The team confirmed the annual targets within each focus area and discussed community-wide feedback from the survey and open houses. The team also reviewed the process for writing, reviewing, and approving the Energy Action Plan. They completed a few activities to refine and prioritize final strategies, as well as determine details for implementation and how the team members could support the work going forward. The team finished with sharing their experiences, and how appreciative they were of all their fellow team members’ enthusiasm and dedication to making Burnsville more sustainable.

Figure 31. Team members refine strategies for implementing the Energy Action Plan







## APPENDIX 5: GLOSSARY OF TERMS

**4 x 50:** Xcel Energy’s privacy rule, updated in 2023, which require all data summary statistics to contain at least 4 premises, with no single premise responsible for more than 50% of the total. Following these rules, if a premise is responsible for more than 50% of the total for that data set, it is removed from the summary.

**British Thermal Unit (BTU):** The amount of heat needed to raise one pound of water at maximum density through one degree Fahrenheit.

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

**Carbon-neutral:** Carbon-neutral, also described as “net zero,” could include carbon-free sources but is broader and refers to energy that removes or avoids as much carbon dioxide as is released over a set period of time. Carbon-neutral is sometimes used to describe a site that produces an excess amount of electricity from a renewable energy source, such as solar, compared to what it consumes. That excess energy is put back into the grid in an amount that offsets the carbon dioxide produced by the electricity it draws from the grid when it is not producing renewable energy.

**Conservation Improvement Programs (CIP):** Portfolio of approved utility energy efficiency and demand management programs. Minnesota electric utilities have a goal of saving 1.5% of their total energy sales each year via customer conservation efforts. Minnesota natural gas utilities have a goal of saving 0.5% of their total energy sales each year via customer conservation efforts.

**Demand Side Management (DSM):** Modification of consumer demand for energy through various methods, including education and financial incentives. DSM aims to encourage

consumers to decrease energy consumption, especially during peak hours, or to shift time-of-energy use to off-peak periods such as nighttime and weekend.

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

**Energy Burden:** Percentage of gross household income spent on energy costs.

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

**Energy Savings:** Comes from a permanent change that results in using less energy to achieve the same results. A new furnace uses X% less energy to keep your home at the same temperature (all things being equal), resulting in energy *savings* of X%. For accounting purposes, energy savings are only counted in the year the new equipment is installed.

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

**Grid Decarbonization:** The current planned reduction in the carbon intensity of electricity provided by electric utilities through the addition of low- or no-carbon energy sources to the electricity grid.

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

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

**Metric Tons of Carbon Dioxide Equivalent (MTCO<sub>2e</sub>):** A unit of measure for greenhouse gas emissions. The unit "CO<sub>2e</sub>" represents an amount of a greenhouse gas whose atmospheric impact has been standardized to that of one unit mass of carbon dioxide (CO<sub>2</sub>), based on the global warming potential (GWP) of the gas.

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

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

**Renewable Energy Certificate (REC):** For every megawatt-hour of clean, renewable electricity generation, a renewable energy certificate (REC) is created. A REC embodies all the environmental attributes of the generation and can be tracked and traded separately from the underlying electricity. Also known as a Renewable Energy Credit.

**Resilience:** The ability to prepare for and adapt to changing conditions and withstand and recover rapidly from disruptions. Resilience includes the ability to withstand and recover from deliberate attacks, accidents, or naturally occurring threats or incidents.

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

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

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

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

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

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



# **APPENDIX 6: IMPLEMENTATION MEMORANDUM OF UNDERSTANDING**