



An Energy Action Plan for Richfield

June 2021



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 the main electric utility serving Richfield. 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 D*.

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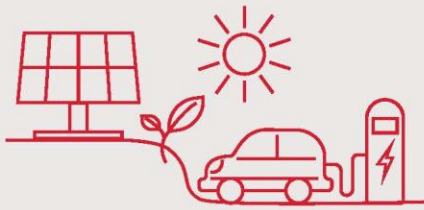
Executive Summary

Richfield Energy Action Plan



A Community-led Plan

The City of Richfield invited community leaders, business owners, and residents to usher this plan creation as a part of an Energy Action Team. This team set the plan's ambition level, contents and grounded the plan in the needs of the Richfield community.

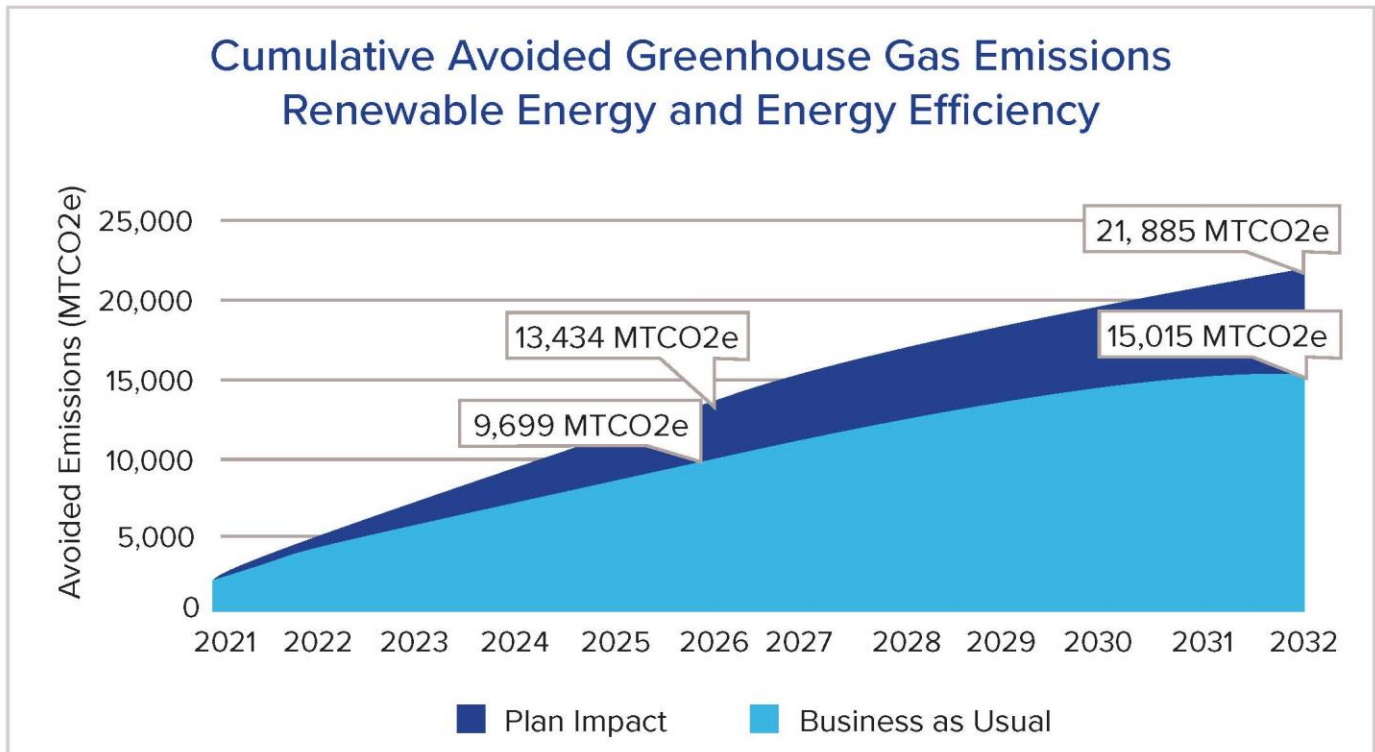


Vision

“The City of Richfield is leading equitable action to mitigate climate change by reducing our greenhouse gas emissions. Our Energy Action Plan gives structure and measure to our goals for energy efficiency and clean energy. Our collaborative effort will serve our residents, businesses and organizations with access to opportunities to adopt sustainable energy practices.”

Community Goal

Richfield will reduce community-wide greenhouse gas emissions from electricity and natural gas by 15 percent (below a 2019 baseline) by 2032.



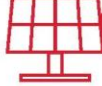
Focus Areas



Reduce High Energy Burden for Residents



Energy Efficiency: Residents, Businesses and Organizations



Renewable Energy Residents, Businesses and Organizations

Targets

Reduce High Energy Burden—Prioritize work that reduces residences experiencing energy burden and increases connections to resources by reaching **1,325 homeowners and renters by 2026**

Renewable Energy—Increase participation in renewable energy programs among residents, organizations, and businesses by 2026

Energy Efficiency—Save residents, organizations and businesses **\$2.5 million** through energy efficiency projects by 2026

Plan Impact

The greenhouse gas avoidance of this plan is equivalent to the removal of emissions from about 4,800 passenger vehicles driven for a year. That impact along with the energy cost savings of this plan, benefit our community members' health and wellbeing. We look forward to creating new relationships and partnerships as we implement this plan that strengthen our community in the process.



Municipal Electric Vehicle



Tree Planting at Donaldson Park with Tree Trust



Municipal Solar Panels

INTRODUCTION



Richfield is a unique community, rich in diversity and residents who care for each other and the progress of the community. Richfield has strived to reduce our city's greenhouse gasses to have a positive impact on climate change. As part of those efforts, Richfield approved a Climate Action Plan in 2020 that laid out six goals, including developing and promoting energy efficiency and renewable energy actions. As a next step to that work, this Energy Action Plan assigns strategies, measurements, and action steps to those goals. In addition to these plans, the City created a sustainability commission and committed to other sustainability and resiliency practices, such as waste reduction and natural resource management. The City of Richfield is committed to doing this work alongside our residents to ensure community-led actions and outcomes.

Who are we talking about?

We, Our, and the City refer to the city of Richfield

Community refers to the broader Richfield Community

Energy Action Team is the group of individuals who's input created our Energy Action Plan

Energy Action Plan refers to this document created for the City of Richfield

Our Engagement & Outreach Process

The creation of this Energy Action Plan was a six-month process to help support our community, characterize our energy use, identify our energy-related goals, and develop engaging strategies to guide change toward our energy future. Starting in November 2021, the Energy Action Plan was driven by a series of planning workshops with a planning team committed to representing local energy priorities in collaboration with City of Richfield and Xcel Energy's Partners in Energy. By the numbers, we engaged the City of Richfield, the Energy Action Team, and broader community with four surveys, five workshops, 15 participants, a community-wide energy survey, and many more interactions with other stakeholders. See *Appendix D* for more information about the planning process and Xcel Energy's Partners in Energy.

Why We Want an Energy Action Plan

Richfield's interest in working with Partners in Energy was rooted in a strong commitment and recent push to elevate sustainability efforts citywide. Our elected officials, residents, municipal staff, and business leaders are eager to undertake new environmental initiatives, including energy efficiency practices. Partners in Energy was identified as a collaboration that would help jump-start Richfield's larger-scale sustainability efforts by focusing on the roles that energy consumption, reduction, and efficiency play in our lives and activities in Richfield. The Energy Action Plan process helps develop energy efficiency and renewable energy education and actions for everyone who lives, works, or learns in Richfield, and coordinates efforts between residents, businesses, community organizations, municipal staff, and utilities.

WHERE WE ARE NOW



An integral part of the Partners in Energy planning process is reviewing community demographics and historic energy data to inform our understanding of the community and its energy baseline.

See *Appendix B* for a comprehensive picture of Richfield’s baseline energy data.

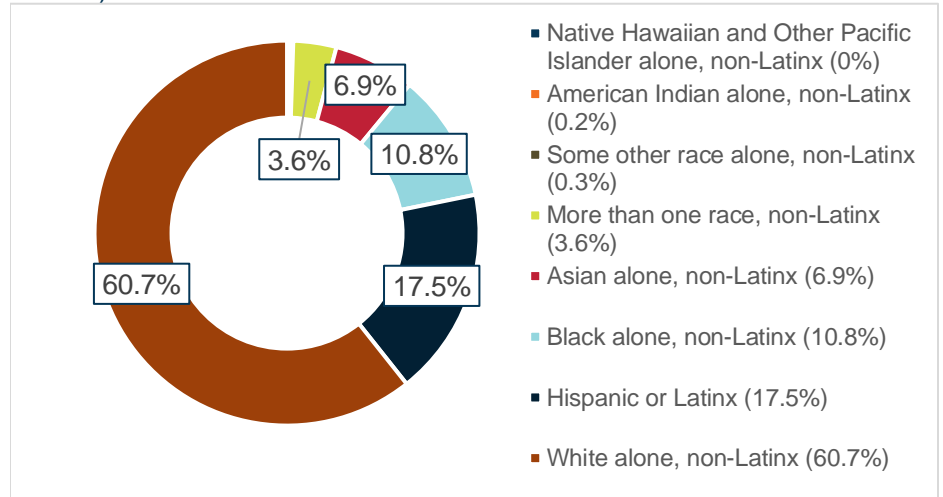
Community Demographics

Data from the U.S. Census Bureau and the Metropolitan Council informed the team about Richfield’s community makeup, helping us to better understand the characteristics of our population and residences.

Population

According to the Metropolitan Council Community Profile, Richfield’s population stands at 36,993 people, living in 15,352 households. The median age in Richfield is 35.7 years, slightly younger than Minnesota’s 38.0 median age.¹

Figure 1: Richfield Population by Race and Ethnicity (Source: Metropolitan Council)



¹ [2019 American Community Survey One-Year Estimates](#)

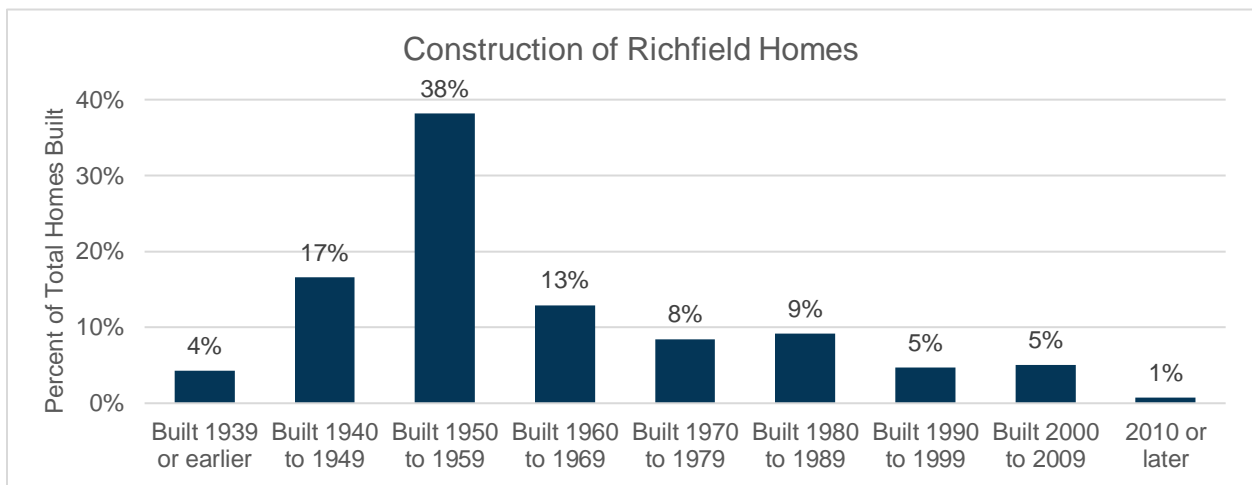
Richfield is a diverse city. The population has grown much more diverse over the past 30 years. In 1990, Richfield’s population was 93% white, with Hispanic residents accounting for 1% and Black residents 2%. The most recent data available, shown in *Figure 1* above, indicates that Richfield is much more diverse today.

Housing Stock

Richfield’s housing history is like many first-ring suburbs in the Twin Cities. With its land available for development and attractive proximity to employment centers in both Minneapolis and Saint Paul, Richfield boomed in the 1940s and 1950s.

The composition of Richfield’s housing stock indicates that the majority of homes, having been built before today’s more rigorous energy efficiency codes, are likely to see substantial benefits in terms of increased efficiency and comfort from programs like home energy audits. Most of Richfield’s housing stock consists of single-family building

Figure 2: Richfield's Home Construction (Source: Met Council)



and multi-family buildings with five or more units.

Figure 3: U.S. Census Bureau Decennial Census and Metropolitan Council Housing Stock Estimates

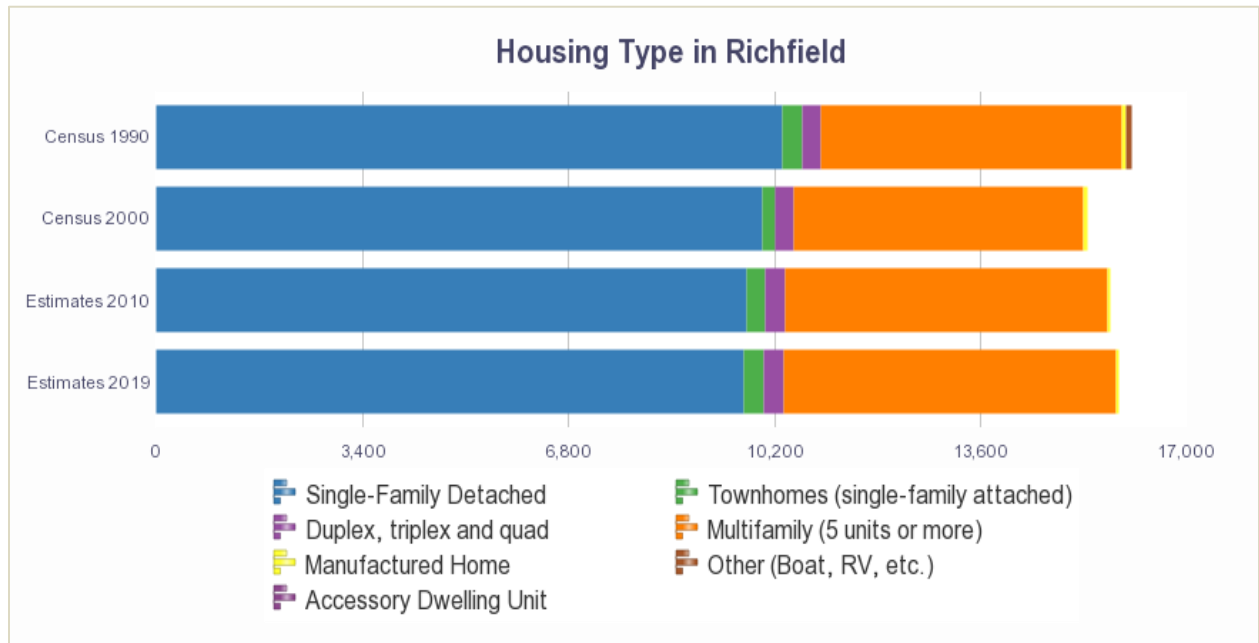
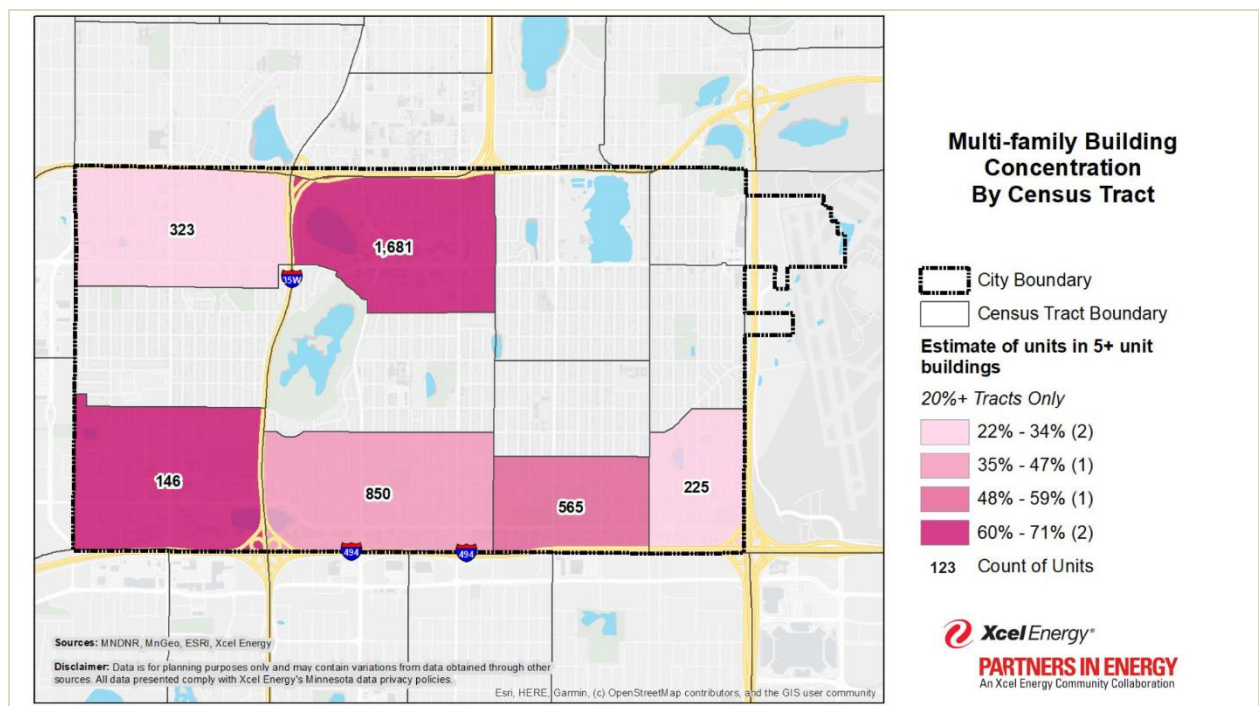


Figure 4: Richfield Boundary Map with Multi-Family Building Concentration (Sources: MN DNR, MnGeo, Esri, Xcel Energy)



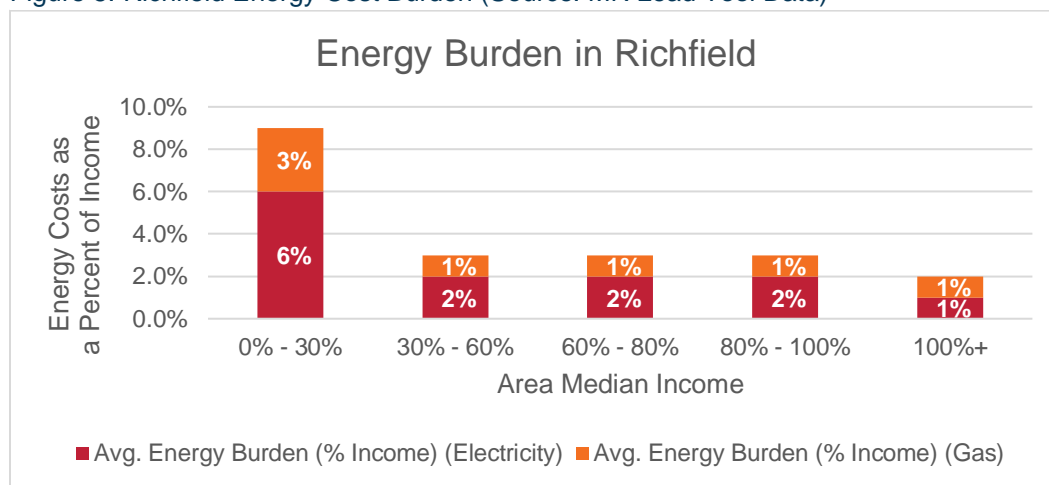
Income and Energy Burden

Richfield is a solidly middle-class city. According to the Metropolitan Council, median household income is \$63,400, lower than the metropolitan area median income (\$76,900).

One measure that indicates the role that energy expenses play in a household's quality of life is called "energy burden." Energy burden is the percentage of household income spent on home energy bills. A "high energy burden" means more than 6% of income is spent on home energy bills. A "severe energy burden" means more than 10% of income is spent on home energy bills.²

In Richfield, average energy burden is 2%, but the numbers vary substantially based on a household's income.³ The energy burden data for Richfield indicates that for those whose income is 0% to 30% of the area's median income, energy cost burden is 9% of their income.

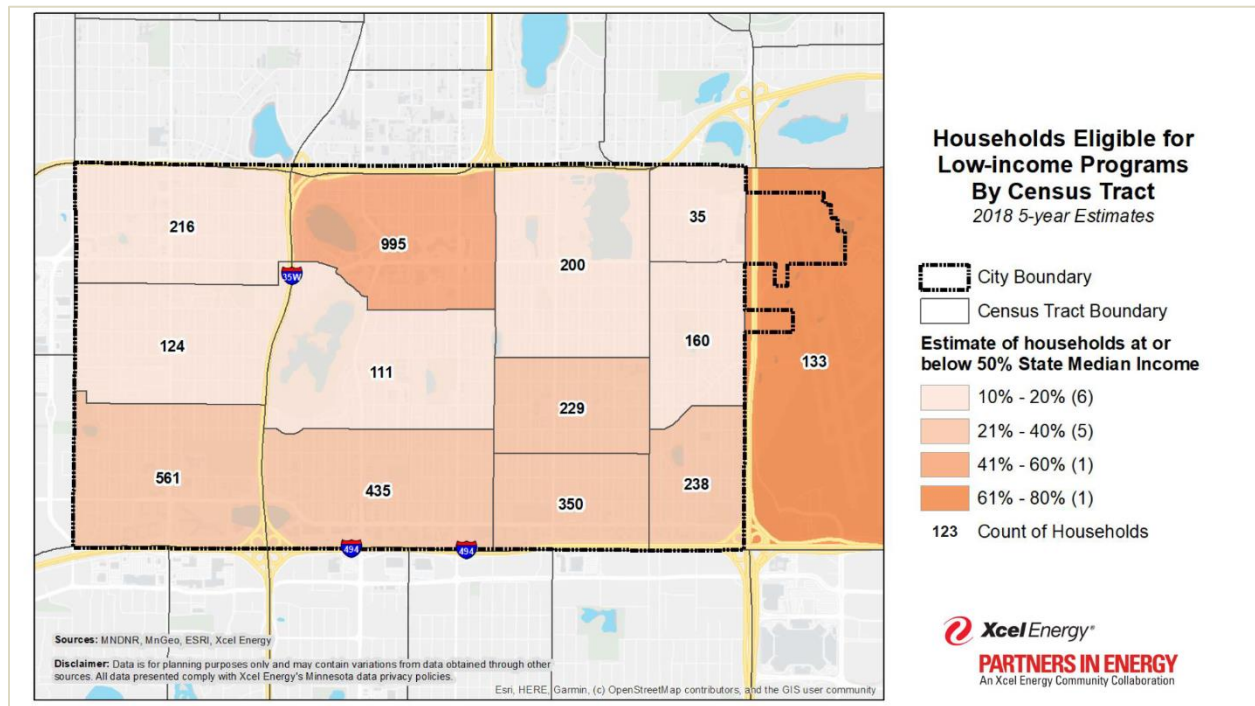
Figure 5: Richfield Energy Cost Burden (Source: MN Lead Tool Data)



² ACEEE definition of "Energy Burden"

³ Office of Energy Efficiency and Renewable Energy Lead Tool: <https://www.energy.gov/eere/slsc/maps/lead-tool>.

Figure 6: Richfield's Income-Eligible Household Concentration Map



Energy Baseline

Xcel Energy and CenterPoint Energy provided data on energy use, participation counts, and utility energy conservation program savings for the City of Richfield, as detailed in the following sections. Electricity data from Xcel Energy and natural gas data from CenterPoint Energy was used to create a three-year baseline from 2017–2019.

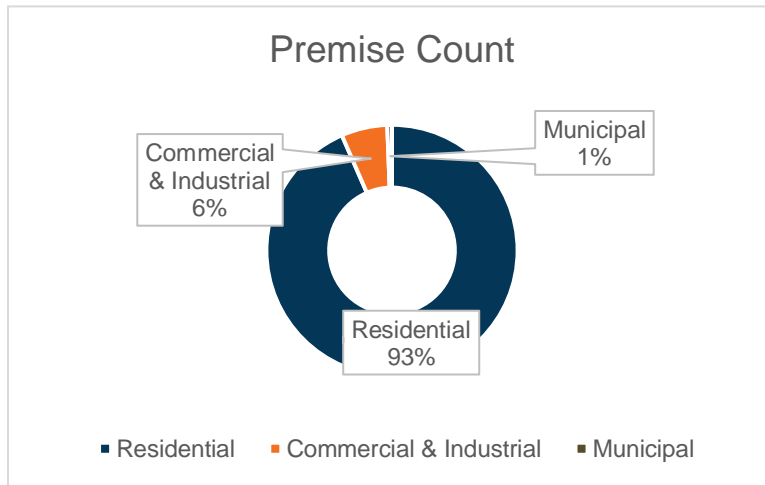
Energy Users

There are 16,829 premises in Richfield, a unique combination of service address and meter.⁴ 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.

The majority of Richfield premises are residential (15,716), followed by commercial and industrial (1,012) and municipal (101), as shown in *Figure 7*, below.

⁴ See Appendix E for a complete glossary of energy terms.

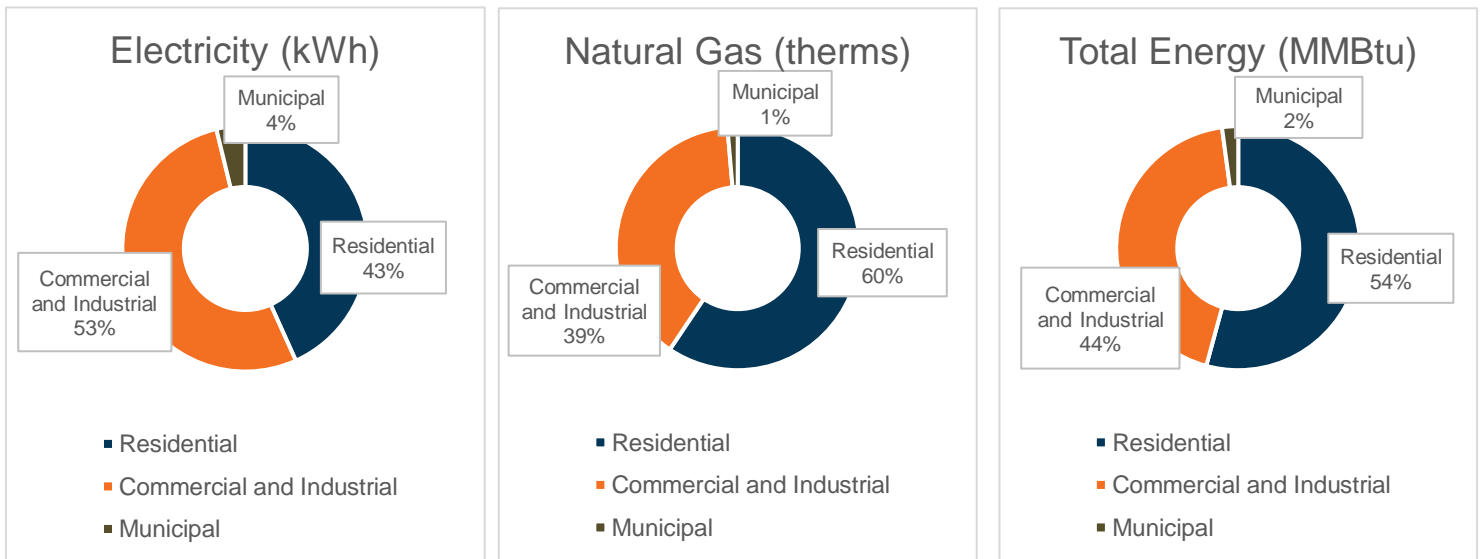
Figure 7: Richfield 2019 Premise Count



Energy Use and Costs

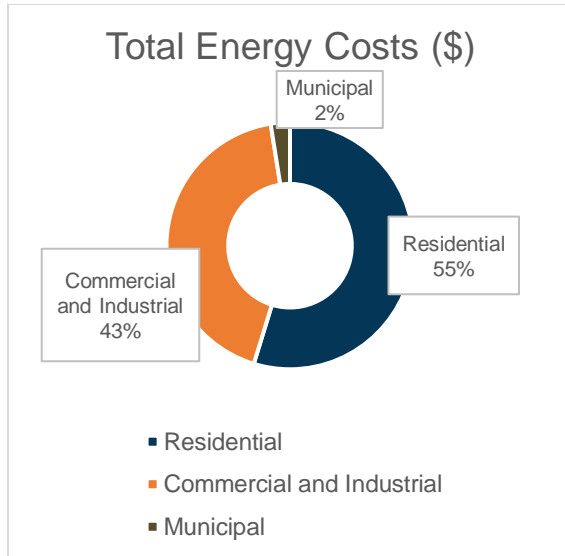
In 2019, Richfield residents and businesses consumed 206.4 million kWh of electricity and 16.3 million therms of natural gas, spending \$35.3 million on energy in all sectors. Commercial and industrial premises, which represent 6% of total premises, consumed 53% of electricity and 40% of natural gas in 2019. Comparatively, residences make up 93% of all premises and consumed 44% of electricity and 59% of natural gas in 2019. Municipal premises, which were measured separately from the other premises, represent 1% of all premises and consumed 4% of electricity and 1% of natural gas in 2019.

Figure 8: 2019 Energy Consumption (Source: Xcel Energy and CenterPoint Energy)



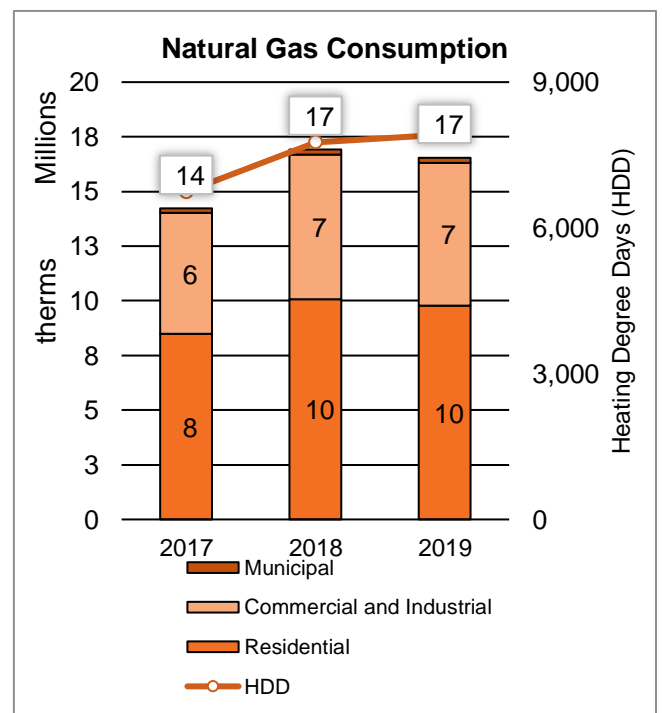
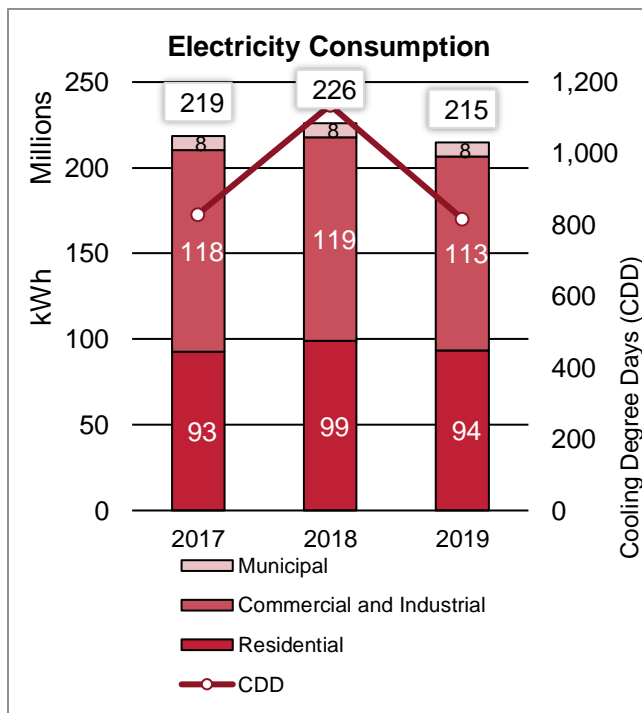
The average Richfield residential customer spends \$1,200 per year on energy. Commercial and industrial premise spending varies with the size of the business (e.g., a retail store versus a large industrial facility) but averages \$15,300 per year on energy costs per premise.

Figure 9: Total average energy cost by sector



Sector	Electricity Costs	Natural Gas Costs	Costs per premise
Municipal	\$785,532	\$140,560	\$9,200
Commercial & Industrial	\$11.8 million	\$4.0 million	\$15,611
Residential	\$12.1 million	\$8.1 million	\$1,287

Figure 11: 2017–2019 Electricity and Natural Gas Consumption by Sector (Source: Xcel Energy and CenterPoint Energy)

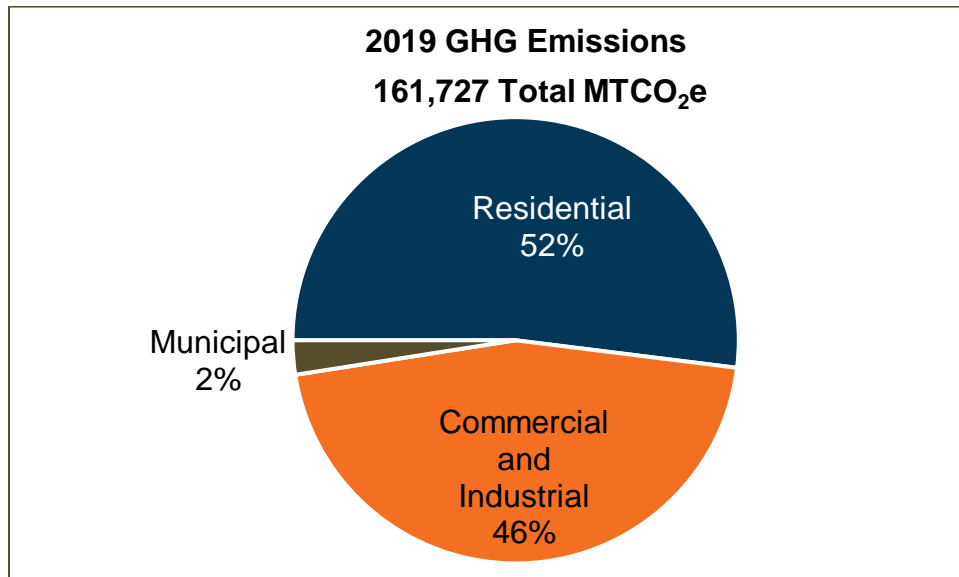


Breaking out consumption by fuel source over the baseline shows how energy use has changed over the past three years. Total electricity consumption decreased 2% between 2017 and 2019, and natural gas consumption increased 16% for the same time period. The increase in natural gas consumption aligns with an increase in heating degree days.

Greenhouse Gas Emissions

In 2019, Richfield’s energy use resulted in 161,700 MTCO₂e of energy-related greenhouse gas emissions. This is equivalent to the greenhouse gas emissions from 35,172 passenger vehicles driven for one year.⁵ Residential premises account for the largest percentage of emissions, representing 52% of total energy-related greenhouse gas emissions in 2019.

Figure 12: Green House Gas Emissions by Sector (Source: Xcel Energy and CenterPoint Energy)



⁵ U.S. Environmental Protection Agency Greenhouse Gas Equivalencies Calculator. <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>.

Renewable Energy

Local renewable energy use is a result of both customer subscription programs and on-site installations. In 2019, 904 residential premises and one commercial and industrial premise subscribed to a renewable energy subscription program through the utility. These programs are a way to access renewable energy direct from the utility at 100kWh intervals to provide some or all a premises' electricity. Participation in Xcel Energy's Solar*Rewards® on-site solar incentive program, allows homes and businesses to install solar panels onsite and sell the energy back to the utility for any excess produced beyond the premises' use. This program had 12 business participants and 24 residential participants in 2019, whereas Solar*Rewards Community®, a third-party subscription solar garden program gained 211 residential premises participating, and 2 commercial and industrial premises. This program allows you to subscribe to a community solar garden near you to get your electricity.

Table 1: Richfield Renewable Energy Participation 2019 (Source: Xcel Energy)

Total Renewable Energy Subscriptions	Residential	Commercial & Industrial
Subscriber Count	904	1
Total Annual Electricity Subscribed (kWh)	2,742,098	1,200

Other Renewable Energy Program Participation	Residential	Commercial & Industrial
Solar*Rewards Community®	24	12
Solar*Rewards®	211	2
Total Annual Electricity (kWh)	1,200,227	855,771

Energy Efficiency Program Participation & Savings

Xcel Energy and CenterPoint Energy offer programs to Richfield residents and businesses to increase energy efficiency at their homes or buildings. Rebates for new equipment, audit programs, and discounted and no-cost energy measures are available in addition to load management programs. From 2017 to 2019, more than 3,600 Richfield residents and businesses participated in energy efficiency programs, resulting in savings of over 11 million kWh of electricity.

Richfield residents and businesses strongly favored just a few of Xcel Energy's efficiency programs. Nearly all savings during the baseline period were attributable to five residential and five commercial/industrial programs.

Table 2: Xcel Energy Efficiency Program Contributions to Energy Savings

	3-Year Baseline	
Residential DSM Program	Average Annual Participation	Average Annual Electricity Savings (kWh)
Residential Heating	188	126,057
Residential Cooling	255	67,904
Refrigerator Recycling	70	59,003
Home Energy Squad	58	55,025
Home Energy Savings Program	24	16,473
Percent of Total	54%	96%

	3-Year Baseline	
Commercial DSM Program	Average Annual Participation	Average Annual Electricity Savings (kWh)
Lighting Efficiency	45	2,396,424
Small Business Lighting	31	731,920
Data Center Efficiency	0	109,009
Motor Efficiency	2	46,564
Cooling	6	45,398
Percent of Total	79%	98%

Table 3: CenterPoint Energy Efficiency Program Contributions to Energy Savings

	3-Year Baseline	
Residential Program	Average Annual Participation	Average Annual Gas Savings (Therms)
Natural Gas Efficiency Rebates	701	54,423
Air Sealing & Insulation Projects	33	6,497
DIY Home Efficiency Kits	226	5,193
Home Energy Squad (Audit & Direct Install)	64	2,323
New Home Natural Gas Efficiency Projects	10	1,365
Percent of Total	35%	68%

	3-Year Baseline	
Commercial/Industrial/Multi-Family Program	Average Annual Participation	Average Annual Gas Savings (Therms)
Natural Gas Efficiency Rebates	74	42,163
Percent of Total	100%	100%

WHERE WE ARE GOING



Energy Vision Statement

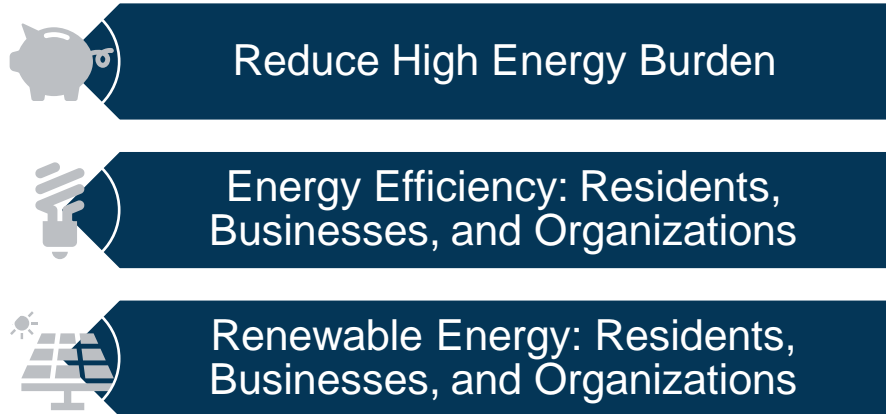
During the planning process, the Energy Action Team created a vision statement for this Energy Action Plan.

This statement helped guide the planning process and reflects the intention of the community.

The City of Richfield is leading equitable action to mitigate climate change by reducing our greenhouse gas emissions. Our Energy Action Plan gives structure and measure to our goals for energy efficiency and clean energy. Our collaborative effort will serve our residents, businesses, and organizations with access to opportunities to adopt sustainable energy practices.

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 after careful thought about Richfield’s demographics, buildings, and businesses, as well as residents’ hopes for an energy future.

Goals

Working together, the Energy Action Team set near- and long-term goals for each focus area to measure success:

Reduce High Energy Burden — Prioritize work that reduces the number of residences experiencing energy burden and increases connections to resources by reaching 1,325 homeowners and renters by 2026.

Energy Efficiency — Save residents, organizations, and businesses \$2.5 million through energy efficiency projects by 2026.

Renewable Energy — Increase participation in renewable energy programs among residents, organizations, and businesses by 2026.

All of the focus area goals then show an overall community-wide goal to **reduce community-wide greenhouse gas emissions from electricity and natural gas consumption 15% below a 2019 baseline by 2032.**

PLAN DEVELOPMENT

During this plan’s development, the U.S. Census community data showed that nearly 25% of Richfield residents spoke Spanish as a 1st language. In order to make decisions in the planning process that were inclusive of the Spanish speaking population, a Spanish-language survey (along with an English version of the survey) was conducted to better understand the energy priorities program awareness of Richfield residents. Those findings inform the Energy Action Team as they created priorities and strategies.

Both the City and Energy Action Team wanted good representation from community members that were representative of a true cross section of Richfield. The community removed barriers to participating on the team to ensure the community representation, with the understanding that volunteerism is a privilege that the community members may not have.

The plan development process was community-led from the ambition level to the action items.

The image shows a Zoom meeting interface. On the left, a grid of 11 blue boxes lists the planning steps: 1. Anchoring, 2. Baseline, 3. Vision, 4. Focus Areas, 5. Draft Goals, 6. Divergent Strategies, 7. Convergent Strategies, 8. Goal Refinement, 9. Action Planning, 10. Plan Finalization, and 11. Launch. On the right, there are six video feeds of participants. At the bottom left is the Richfield logo with the tagline 'The Urban Hometown'. At the bottom right is the Xcel Energy logo with the text 'PARTNERS IN ENERGY' and 'An Xcel Energy Community Collaboration'. A small number '3' is centered at the bottom of the screen.

Figure 13: Screen capture of Richfield's planning meeting 5

HOW WE ARE GOING TO GET THERE



In order to accomplish the goals of this plan, our City and community must work together to take specific actions that will accomplish energy savings and renewable energy adoptions. The following section outlines those specific actions that the Energy Action Team built by asking “What are we going to do to accomplish our goals?” and “How are we going to that work?”.

Strategies and Actions

Richfield’s Energy Hub

Richfield hopes to give residents a place to go to obtain any local energy-related information that they might need in an easily accessible and navigable web-based platform on our website. This can be a source for residents and businesses in our community to start research on everything from energy assistance to local incentives for energy-related projects. It will also be a place to update the community on current and relevant policies, resources, and opportunities. The Energy Hub will also provide resources in multiple languages and offer a feedback mechanism.



This is the first step of the Energy Action Plan implementation and will develop with resources over the course of execution of the strategies.

Actions for this strategy include:

- Creating short videos for each energy topic area in multiple languages to share on the Resource Hub and social platforms
- Sharing local, statewide, and federal financial incentives for energy projects for businesses and homes
- Updating resources as state, federal, and utility programs and incentives evolve

- Providing a way for residents and businesses to ask questions or add resources to the Hub

Focus Area: Reduce High Energy Burden

According to the Department of Energy, our community members with the lowest incomes are paying the highest percentage of that income on utility bills. Reflecting on Richfield's energy burden statistics, the Energy Action Team decided that to do the work of the plan equitably it was important to focus on supporting community members experiencing high energy burden.



Strategies

Strategy 1: Create a campaign to reach under-resourced residents that outlines free programs and rebates for efficient appliances, lighting, and other cost-saving measures.

Reducing individual home energy costs can save residents money on utility bills. Two easy ways to save are through efficient lighting and appliances. There are currently resources available to Richfield residents, so showcasing those easy steps in a campaign are a good first step to supporting energy-burdened households.

Actions for this strategy include:

- Create outreach materials with the audience of elderly residents in single-family homes to help access audits and free or reduced-cost programs.
- Create a resource document for social service organizations to use in outreach.
- Conduct a campaign for free or income-qualified resources that prioritizes high-density housing areas of the city.
- Create multiple/dual language flyers for tabling at events and other outreach opportunities.

Strategy 2: Spotlight and promote affordable renewable energy opportunities to increase access to renewable energy for under-resourced residents.

Currently, access to renewable energy options can add up-front costs to utility bills. This deters participation by and benefits to our under-resourced community members. Sharing free and reduced ways of participating in renewable energy options will be a way to include all residents in opportunities.

Actions for this strategy include:

- Identify, and promote existing sources of program funding for income-qualifying households to allow for no- or low-cost participation in renewable energy programs.

Strategy 3: Conduct renter education and outreach to promote behavior change opportunities and landlord engagement.

Many people experiencing energy burden in Richfield are renters who are paying utility bills.⁶ We can share energy-saving behavior changes and measures that renters can pursue and offer guidance in talking with landlords about energy efficiency practices that renters may not be able to undertake alone.

Actions for this strategy include:

- Create behavior change campaign materials aimed at saving energy in the homes of renters and encouraging landlords to implement energy savings projects.
- Coordinate this campaign to overlap with outreach to multi-family buildings as well as single-family rental properties.

Strategy 4: Create partnerships with social service and other organizations across sectors of community to connect with seniors, under-resourced populations, non-English speakers, and small businesses.

The City of Richfield has limited community connections and relationships with community leaders and social service organizations. We hope to develop stronger relationships with those community organizations while sharing relevant energy information for specific under-resourced resident audiences and gaining insight into what our community members who experience high energy burden might need.

Actions for this strategy include:

- Gather input from partners for recommendations on outreach materials needed, or platforms for reaching audiences.
- Create digital and paper communications based on recommendations from partner organizations with resources to reduce utility bills and work with social service organizations to distribute.

Focus Area: Energy Efficiency

Energy efficiency is the first step toward energy-cost savings for our residents, businesses, and organizations. This means existing homes and buildings undergo projects to decrease energy loss and that new homes and buildings are built in more efficient ways. Because of Richfield's older housing stock and buildings, this is an important focus area for the Energy Action Team.



⁶ Source: Low-Income Energy Affordability Data (LEAD) Tool (<https://www.energy.gov/eere/slsc/low-income-energy-affordability-data-lead-tool>)

Residential Strategies

Strategy 1: Conduct a residential energy efficiency campaign.

Residents make up most of the premises in Richfield, which means each resident taking environmental action could lead to a great collective impact. Removing gaps in walls, windows and door frames, especially in older properties, can reduce energy loss and waste. Adding efficient lighting, appliances, and equipment can aid in efficiency and cost savings for households.

Actions for this strategy include:

- Promote the Home Energy Squad® and citing incentives for participation.
- Share stories via the City newsletter and social media of homeowners who have had a Home Energy Squad visit.
- Share do-it-yourself tips for homeowners and renters to reduce energy use at home.

Strategy 2: Develop energy efficiency recommendations and improvements to include in point-of-sale inspections and new homeowner materials.

The City of Richfield has an opportunity to share resources and best practices for energy efficiency during point-of-sale inspections and materials that are sent to new homeowners. Having those touchpoints means that we can share cost-saving measures and keep people in their homes longer.

Actions for this strategy include:

- Create new materials and distribute printed and electronic copies to relevant stakeholders in these areas.

Strategy 3: Create an energy efficiency kit for community leaders (faith and social organizations, teachers, etc.) to help share information and opportunities with networks.

Our teachers and community leaders have strong networks and relationships and often can hold educational opportunities that overlap with existing events or curriculum. Providing an easy energy kit for use with these various audiences can be a great way to interact with parts of the community that we wouldn't otherwise reach.

Actions for this strategy include:

- Create instructional materials and resources for teachers and student sustainability clubs that explain how to use the kits for outreach and challenges.
- Create materials and resources for faith organizations to use with congregants.
- Create materials and resources for residents to engage personal networks.

Strategy 4: Develop and launch a neighborhood or block energy efficiency challenge.

Richfield's strong neighborhood networks and participation in neighborhood-led events provides opportunities to both continue to develop relationships with neighborhood residents and to draw on the networks of those neighborhood leaders.

Actions for this strategy include:

- Create engagement materials to explain the structure of the challenge and share a success story of a community member who saved energy.
- Engage Night to Unite, other organized block captains, or neighborhood leaders and organizations to lead the challenges and report successes.
- Publicize the outcome of the event in local media and assess potential for continuing as an annual event.

Strategy 5: Create and conduct community education programs around energy efficiency topics with Wood Lake Nature Center.

Richfield residents already participate in community education opportunities. Providing a relevant energy education program could feed this interest while educating them about actions to take at home.

Actions for this strategy include:

- Develop a list of potential energy topics based on interest gauged through a community survey or suggestions from community members.
- Leverage nature center educational event dates — scheduling energy topics and securing speakers as appropriate.
- Create a contact list of interested community members and attendees for communication on future opportunities.

Strategy 6: Include energy topics in existing community events with schools, businesses, residents, or students to ask people to take action around energy at home.

We can engage a wide audience during Richfield events that attract residents, businesses, and organizations to participate. Events provide a great opportunity to ask people to commit to taking action and to be able to provide relevant resources to those individuals and answer questions on the spot.

Actions for this strategy include:

- Develop a list of community events in Richfield with organizer contact information and dates.
- Identify and secure three community events that an Energy Action Team member, an energy expert, or City staff can participate in.
- Create or acquire existing materials relevant to current Energy Action Plan strategies.

Business and Organization Strategies

Strategy 7: Encourage commercial and large building owners to reduce energy use and increase energy efficiency through an outreach campaign.

Large businesses and buildings in Richfield can equate to large energy savings ability for even one project and have greater potential to have the capital to undergo an energy project. Reaching these building owners can be crucial in reaching our energy and climate goals.

Actions for this strategy include:

- Create email campaign and mailers to promote utility rebates for energy efficient product upgrades.
- Partner with the Chamber of Commerce to distribute materials.

Strategy 8: Reach out to multi-family buildings (5+ units) to complete a free audit.

Multi-family buildings are the second largest type of housing in Richfield according to the Metropolitan Council data. The building owners and managers are typically the decisions makers for the building's audits and projects. Reaching this audience is key to addressing energy efficiency in multi-family buildings.

Actions for this strategy include:

- Create a list of multi-family buildings and an owner/manager contact list.
- Create talking points and a packet of materials to be mailed or emailed.
- Follow up with a phone call ask to participate in Xcel Energy's Multi-Family Building Efficiency program (with largest buildings prioritized).

Strategy 9: Create and conduct a business lighting outreach campaign to use grants (City and other), rebates, and low-interest loans.

Richfield has a strong business community that is vital to the city's success. Lighting can be an easy and low-cost opportunity for businesses to save on energy costs.

Actions for this strategy include:

- Create materials for the contractor audience to help guide lighting installations as a part of upgrades to businesses.
- Create outreach materials aimed at saving businesses costs on lighting.
- Conduct outreach to contractors and targeted mailing or outreach.

Focus Area: Renewable Energy

Richfield already has momentum in the renewable energy space, so it was important for the Energy Action Team to support and continue that momentum by including renewable energy education and projects in this plan.



Residential Strategies

Strategy 1: Conduct an outreach campaign to residents that highlights participation options, newest technologies, and installation costs and benefits over time.

Current participation in renewable energy programs have an up-front cost associated. Demonstrating the potential for long-term savings may help overcome hesitancy in participation. Once a home is efficient, the next step to green up the remainder of that energy use would be to use renewable energy. There are several ways to use renewable energy, including subscription and installation programs.

Actions for this strategy include:

- Create a step-by-step guide for residents to understand and access renewable options.
- Launch a Windsource® sign-up campaign focused on residents who don't qualify for solar.
- Develop and distribute an educational brochure outlining current financing incentives and the benefits of installing solar.

Strategy 2: Create and conduct community education programs about renewable energy topics with Wood Lake Nature Center.

There are many nuances to participating in renewable energy programs. Offering a chance for residents to speak directly with a renewable energy expert who can answer their individual questions is important to overcoming participation barriers. This strategy provides that connection.

Actions for this strategy include:

- Develop a list of potential renewable energy topics based on interest gauged through a community survey or suggestions from community members.
- Leverage nature center educational event date(s) — scheduling energy topics and securing speakers as appropriate.
- Create a contact list of interested community members and attendees for communication on future opportunities.

Business and Organization Strategies

Strategy 3: Conduct an outreach campaign to businesses, nonprofits, and other organizations that highlights participation options, newest technologies, and installation costs and benefits over time.

Just like residents, businesses and organizations can be hesitant about the up-front costs of renewable energy participation. Communicating the environmental and economic benefits, as well as the potential to generate goodwill from patrons, may help these organizations see beyond the cost barrier.

Actions for this strategy include:

- Create a step-by-step guide for businesses and organizations to understand and access renewable options.
- Create materials highlighting renewable energy grants and loans as a way to reduce operating costs for small businesses and organizations with no utility account manager.
- Conduct outreach to business owners through Xcel Energy communications, Chamber of Commerce, and other cooperative organizations.

Strategy 4: Support Richfield Public Works in their effort to upgrade park trail lighting to be solar powered

This strategy is included in Richfield's Climate Action Plan. As an energy strategy, the Energy Action Plan can support this effort with Partners in Energy resources.

Actions for this strategy include:

- Create a working relationship with Richfield's park lighting project lead and build support where needed with Partners in Energy resources.

Strategy 5: Recommend options for adding renewable infrastructure in new construction during development process review.

Richfield currently recommends that developers consider renewable energy upon construction. Developing updated materials and messaging that showcase benefits to developers could help achieve more participation from this audience.

Actions for this strategy include:

- Create new materials for developers to use as reference for renewable best practices and readiness.
- Work alongside local developers to increase current renewable energy development recommendations and explore the potential of incentives.

Strategy 6: Conduct business outreach for renewable energy grants and loans to reduce operating costs for small businesses with no utility account manager.

Richfield's small businesses are experiencing economic hardship following a 2020 pandemic and economic downturn. This plan focuses on smaller businesses that don't have access to utility account managers to help them reduce costs so they can remain open and thrive.

Actions for this strategy include:

- Create a step-by-step guide for businesses to understand and access renewable options.
- Conduct outreach to business owners through Xcel Energy communications, Chamber of Commerce, and other collective organizations.

Strategy 7: Create a renewable energy kit for community leaders (churches, social organizations, teachers, etc.) to help them share information and opportunities with their communities.

Coordinating with the energy efficiency kit mentioned in a previous strategy, this renewable energy kit will also reach teachers and community leaders who have strong networks, relationships, and opportunities to connect this outreach to their networks.

Actions for this strategy include:

- Create instructional materials and resources for teachers and student sustainability clubs that explain how to use the kits for outreach and challenges.
- Create materials and resources for faith organizations to use with congregants.
- Create materials and resource for residents to engage personal networks.

Strategy 8: Conduct a solar feasibility study; identify buildings in the city with the most potential and do targeted outreach for solar installations.

This is a strategy from Richfield's Climate Action Plan that the Energy Action Team decided to highlight in this plan as well, since the activities overlap in nature.

Actions for this strategy include:

- Use solar maps and large business locations to create a list of potential solar projects and do one-on-one outreach with solar option resources.

Strategy Implementation

The Energy Action Team identified some overall approaches and best practices for reaching Richfield residents that are relevant to all the strategies above:

- Meet audiences where they are and make education and materials relevant to audience interest.
- Show examples of the action being promoted and ask for commitment from audiences.
- Make outreach messaging clear, simple, and visual.
- Use networks efficiently and effectively.
- Include a method of follow-up in all of the strategies where people have been asked to take an action.

Overcoming Barriers and Promoting Benefits:

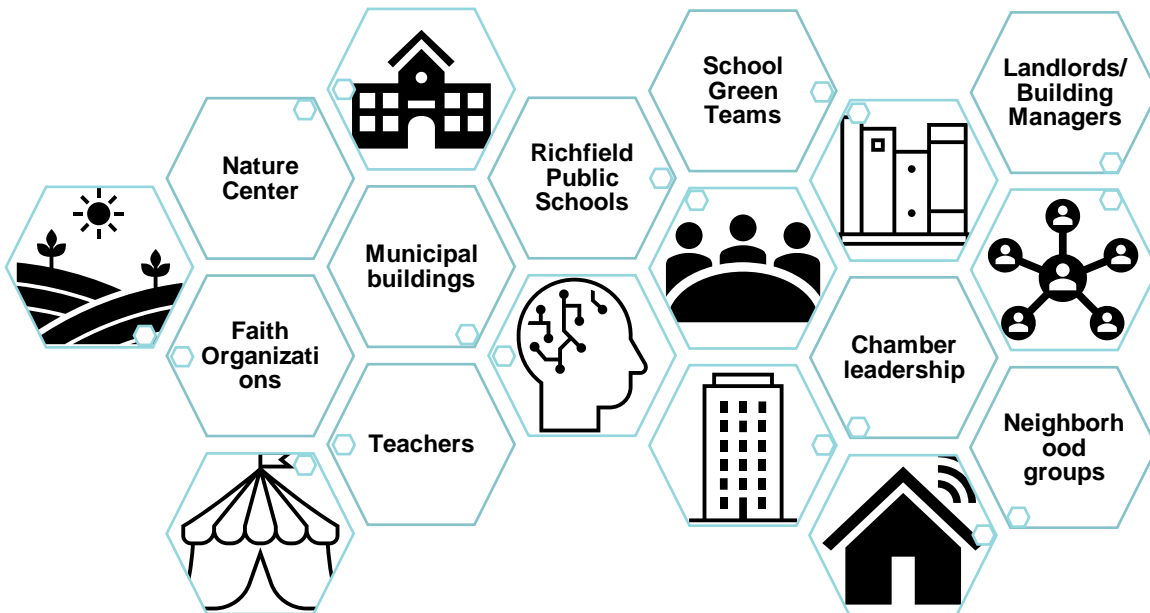
When thinking through the strategies the team thought through some of the barriers and benefits residents and organizations might have to acting on energy efficiency or renewable energy strategies. Recognizing barriers helps create strategies that can overcome them and understanding benefits can help motivate action that reaches beyond barriers.

Barriers	Benefits
<ul style="list-style-type: none"> • Lack of access, affordability, equity • Lack of existing program knowledge don't know where to start • Language barriers • Hard to access renewable energy • Understanding the benefits • Very future oriented • Renewables are politicized • Low priority • Energy Burden • No disposable income • Time and access • Ability to follow through with projects or get to the next step • Fear of the unknown • Excuse/ too difficult 	<ul style="list-style-type: none"> • Sense of participation pride • Alternatives are harmful to health • Renewables never run out! • Jobs in green energy • Financial advantage • Brand reputation • Renewables are more accessible and less expensive than ever • It feels good to know you're participating • You're part of the change • Energy efficiency benefits everyone • Richfield is a leader! • Businesses can save money and have big impact

Partnerships and Community Connections:

During plan development there were a number of potential partnerships and community connections recognized that could be assets to the strategies as leaders, connectors or audiences:

Figure 14: Energy Action Team Identified Partnerships



Outreach and Communication Resources:

Communication Channels	Other Opportunities for Outreach
<ul style="list-style-type: none"> • Next-door • Neighborhood groups • Mayor/Council newsletters • Facebook community (city and resident) • MIRA Facebook 	<ul style="list-style-type: none"> • Night to Unite • PennFest • Community education • MIRA events • Red, White and Blue Days • Unity in the Community (May)

Timeline:

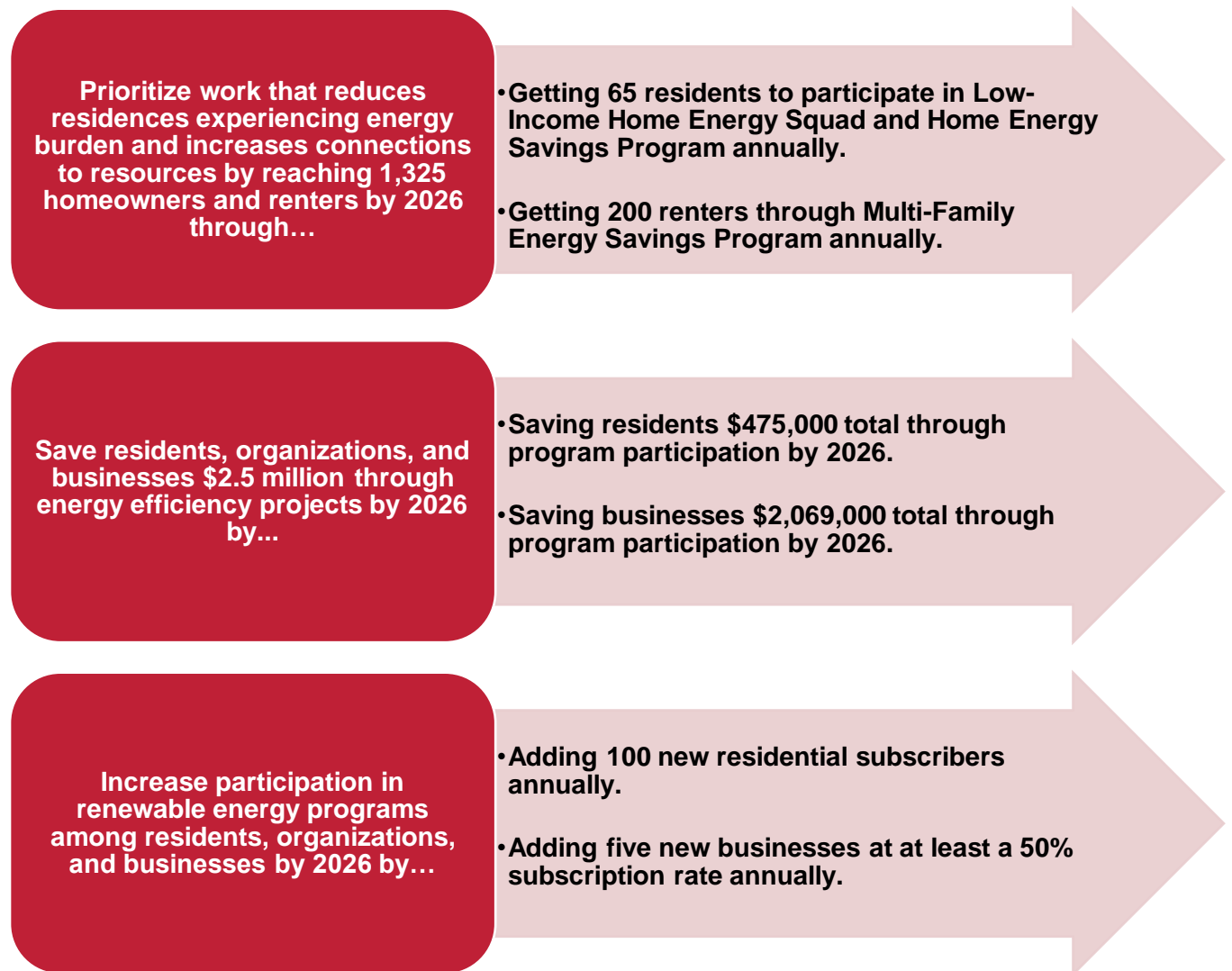
All the strategies identified in this plan are intended to be completed or begun between July 2021 and December 2022 during the implementation phase of the Partners in Energy process. During this period the City will have Partners in Energy support in energy expertise, data tracking, marketing, and project management. Once that phase is complete, the city will continue the work of this plan by continuing the actions identified or pivot to react to the current needs or opportunities of and for our residents and organizations. Some of the Energy Action Team members will participate in various actions depending on their interest or expertise.



Energy Action Plan Impact

The combined targets and strategies outlined in this plan will give our community a greater understanding of the energy resources that are available and why energy efficiency and renewable energy are so important to our community's short- and long-term future.

Overall, achieving near-term targets laid out in this plan will engage and gain participation in programs that save money for the community and reduce our greenhouse gasses. Some of the participation goals are laid out below and will help reach our community-wide energy goal:



By achieving these targets, we will reach the following long-term goals:

Figure 15: Cumulative Annual Projected Avoided Costs from 2021 through 2026 (Savings from program participation from Energy Action Plan)

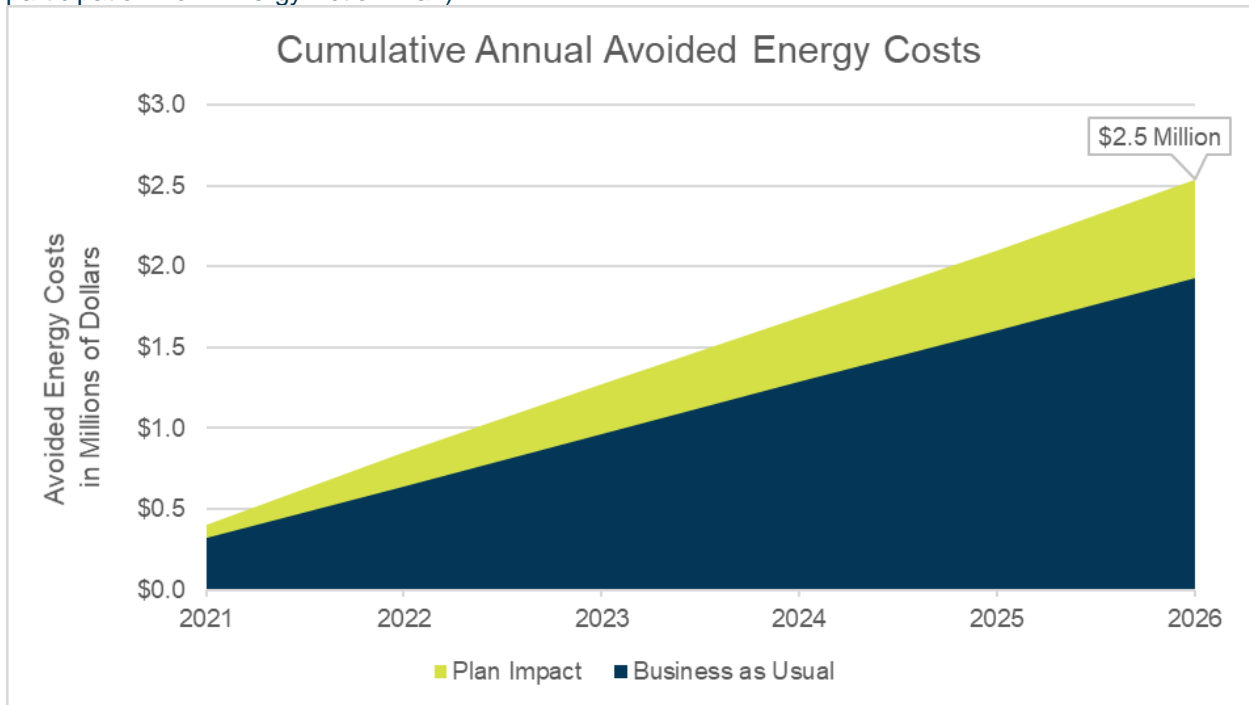
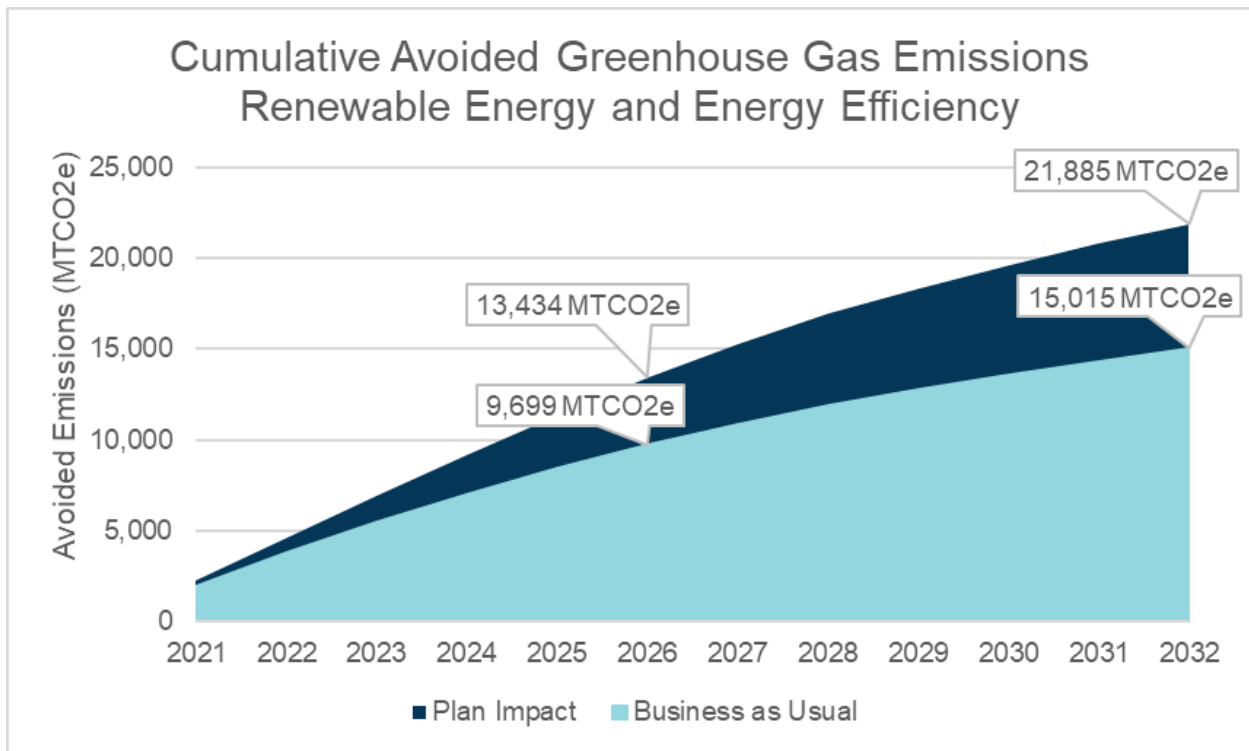


Figure 16: Cumulative Annual Projected Avoided GHG Emissions from 2021-2032 (Based on Program Participation from Energy Action Plan)



Beyond Energy Action Planning

The Energy Action Team wanted to set some next steps in motion around reducing Richfield's greenhouse gas emissions by adding one more strategy to be pursued at the end of this plan's implementation. The team identified electric vehicles as the right next step.

Electric Vehicles

Strategy: Create an Electric Vehicle Plan for the City of Richfield

This plan would likely be created with the support of Xcel Energy and would begin sometime following implementation of the Energy Action Plan.



Figure 17: Richfield Electric Vehicle

HOW WE STAY ON COURSE



This Energy Action Plan is a living document. Goals 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 both the community 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 to determine if we need to change course.

Project Management and Tracking

Partners in Energy will host regular project management check-in calls with staff to ensure we stay on course to achieve our strategies.

If necessary, an implementation check-in meeting with the Energy Action Team can be convened to assess progress toward goals and discuss strategy refinement.

Energy Action Team Commitment

The Energy Action Team formed to create this plan will support implementation by sharing in the education and outreach for the strategies that are meaningful to them as well as sharing plan efforts with their personal or professional networks. They will also keep up to date with the data reports and reconvene if needed to pivot strategies or update the plan.

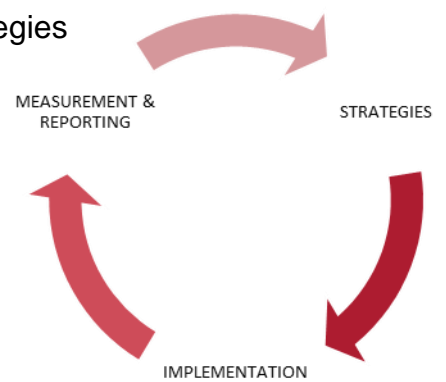


Figure 18: Actions and Tracking

APPENDIX A: IMPLEMENTATION WORK PLAN



This appendix gives additional detail for each strategy, including the implementation team and tasks, timeline, and goals. This appendix will serve as a work plan for the Energy Action Team and Partners in Energy.

Focus Area		Strategy	Tactics	Lead	Co-lead	03	04	Q1	Q2	Q3	Q4	
Resource Hub	Richfield will create and promote an online resource hub for energy related information and resources available to Richfield residents	Create short videos for each topic area in multiple languages to share on the Resource Hub and social platforms	PIE	City								
		Share local, statewide and federal financial incentives for energy projects for businesses and homes	PIE	City								
		Update resources as state, federal, and utility programs and incentives evolve	City	PIE								
		Provide a way for residents and businesses to ask questions or add resources to the Hub	City	Comm								
Energy Efficiency	Residential	Conduct a residential energy efficiency campaign	Promote Home Energy Squad, citing incentives for participation	City/Housing/Comms	PIE							
			Share stories via city newsletter and social media of homeowners who have had a Home Energy Squad visit	City/Comms	PIE							
			Share DIY tips for homeowners and renters to reduce energy use in homes	PIE	City							
	Develop energy efficiency recommendations and improvements to include in point-of-sale inspections and new homeowner materials	Create new materials and distribute printed and electronic copies to relevant stakeholders in these areas	PIE	City								
		Create an energy efficiency kit for community leaders (faith and social organizations, teachers, etc.) to help share information and opportunities with audiences	Create materials and resources for school teachers and student sustainability clubs to use energy kit for outreach and challenges	PIE	City							
			Create materials and resources for faith organizations to use with congregants as the audience	PIE	City							
	Create materials and resources for residents to engage personal networks		PIE	City								
	Develop and launch a neighborhood or block energy efficiency challenge	Create engagement materials, structure of challenge, and a success story of a community member who has saved energy	City/Comms	PIE								
		Reach out to National Night Out, other organized block captains, or neighborhood leaders and organizations to lead the challenges and report successes	City/Comms Public Safety/Sust. Commission	PIE								
		Publicize the outcome of the event in local media and assess potential for continuing as an annual event	City/Comms	PIE								
	Create and conduct community education programs around energy efficiency topics	Develop an energy efficiency topic of interest list based on community survey or suggestions from community members	PIE	City								
		Overlap nature center educational event dates and schedule energy topics and secure speakers as appropriate	City/WLNC	PIE								
		Create a contact list of interested community members and attendees for communication on future opportunities	City	PIE								
	Include energy topics in existing community events with schools, businesses, residents, students. Purpose: ask people to take action	Develop a list of community events in Richfield with organizer contact information and dates	City/Comms	PIE								
		Choose and secure three community events that an Energy Action Team member, energy expert, or city staff can participate in	City	EAT								
		Create or acquire existing materials relevant to current Energy Action Plan strategies	PIE	City								
	Business/Non-profit	Encourage commercial and large building owners to reduce energy use and increase energy efficiency through an outreach campaign	Create email campaign and/or mailers to promote utility rebates for energy efficient product upgrades	PIE	City							
			Work with Chamber of Commerce to aid in distributing materials	City	Chamber							
		Conduct outreach to Multi-Family Buildings to complete a free audit - MFBE outreach for 5+ Units	Create a list of multi-family buildings and owner/manager contact list	City/Housing	Housing							
			Create talking points and a packet of materials to be sent and/or emailed	Partners in Energy	City							
		Create and conduct a business lighting outreach campaign to use grants (city and other), rebates, and low-interest loans	Follow up (with largest buildings prioritized) with a phone call ask to participate in MFBE	City/Housing	Partners in Energy							
			Create materials for the contractor audience to help guide lighting installations as a part of upgrades to businesses	Partners in Energy	City							
	Create outreach materials aimed at saving businesses costs on lighting	Create outreach materials aimed at saving businesses costs on lighting	Partners in Energy	City								
		Conduct outreach to contractors and targeted mailing or outreach	City/CD	Partners in Energy								
Renewable Energy	Residential	Conduct an outreach campaign to residents that highlights participation options, newest technologies, and installation costs and benefits over time	Create a step by step guide for residents to understand and access renewable options	Partners in Energy	City							
			Launch a Windsource signup campaign focused on residents who would not qualify for solar	Partners in Energy	City							
			Develop and distribute an educational brochure outlining current financing incentives and the benefits of installing solar	City	Partners in Energy							
	Create and conduct community education programs about renewable energy topics with Wood Lake Nature Center	Develop a renewable energy topic of interest list based on community survey or suggestions from community members	City	Partners in Energy								
		Overlap nature center educational event date(s) and schedule energy topics and secure speakers as appropriate	City/WLNC	Partners in Energy								
		Create a contact list of interested community members and attendees for communication on future opportunities	City	Partners in Energy								
	Conduct an outreach campaign to businesses, non-profits, and other organizations that highlights participation options, newest technologies, and installation costs and benefits over time	Create a step by step guide for businesses and organizations to understand and access renewable options	Partners in Energy	City								
		Create materials highlighting renewable energy grants, and loans as a way to reduce operating costs for small businesses and organizations with no utility account manager	Partners in Energy	City								
		Conduct outreach to business owners through Xcel Energy communications, Chamber of Commerce, and other collective organizations	City	Partners in Energy								

APPENDIX B: BASELINE ENERGY ANALYSIS

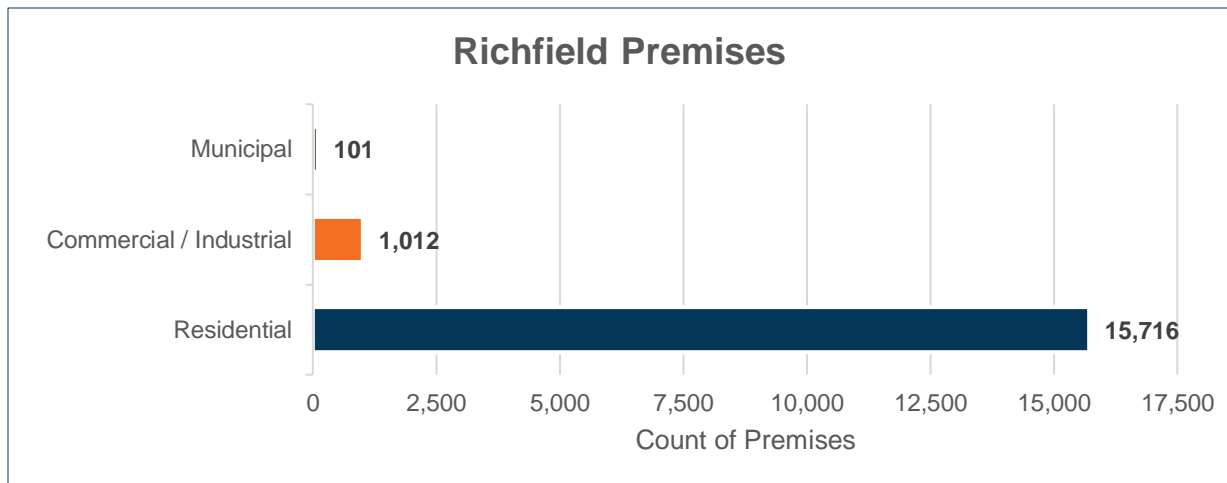


Data was provided by Xcel Energy and CenterPoint Energy for all Richfield premises for 2017–2019. Xcel Energy provides electric, and CenterPoint Energy provides natural gas service to the community. The data helped the Energy Action Team understand Richfield’s energy use and opportunities for energy conservation and renewable energy. Data included in this section establishes a baseline against which progress toward goals will be compared in the future.

Electricity and Natural Gas Premises

Of the 16,829 distinct premises in Richfield, 93% (15,716) are residential. Commercial/industrial buildings account for 6% (1,012), and the remaining 1% (101) are municipal buildings.

Figure 19: Richfield Premises by Sector



Electricity and Natural Gas Consumption and Trends by Sector

Most of Richfield’s premises are residential, but commercial/industrial premises use far more energy per premise. Residential premises are 93% of the premises in Richfield but use just 36% of the energy. Conversely, commercial/industrial premises are 6% of the premises, but account for 63% of all energy consumed.

Figure 20: Percentage of Richfield Premises by Sector

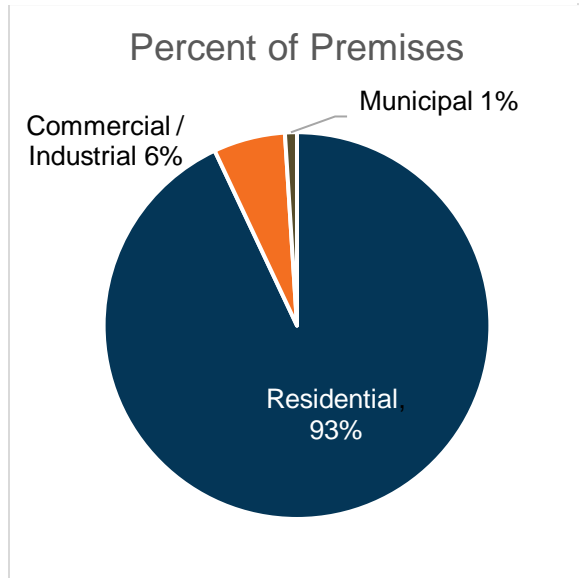
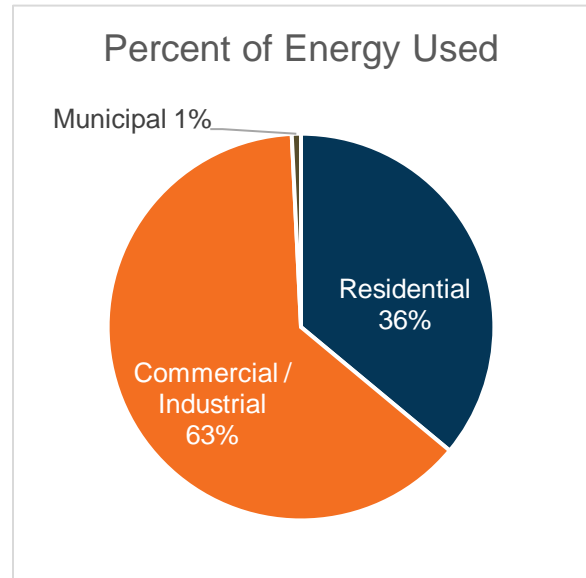
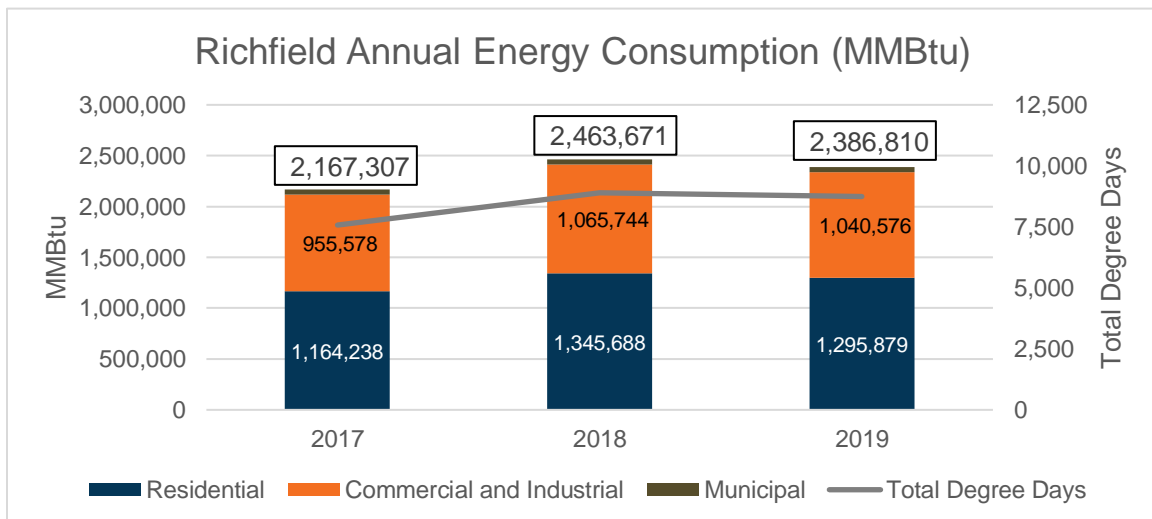


Figure 21: Percentage of Richfield Energy Usage by Sector



Annual energy consumption during the baseline period shows variation between 2.1 million MMBtu and 2.4 million MMBtu. Variation year to year in established communities is driven mostly by changes in weather. Hot summers tend to correlate with more electricity usage, and cold winters tend to correlate with more natural gas usage.

Figure 22: Richfield Baseline Annual Energy Consumption (MMBtu)



Greenhouse Gas Emissions and Trends

Greenhouse gasses created from the production of the energy consumed in Richfield during an average baseline year amounted to 163,683 MTCO₂e. The U.S. Environmental Protection Agency greenhouse gas equivalency calculator shows that Richfield's total greenhouse gas emissions from energy production is equivalent to 35,598 passenger vehicles driven for a year.⁷

Table 4: Baseline annual greenhouse gas emissions attributable to Richfield energy consumption

Customer Type	2017	2018	2019	Greenhouse Gas Emissions
Residential	79,573	89,641	84,055	84,423
Commercial / Industrial	73,254	78,398	73,668	75,107
Municipal	4,120	4,337	4,004	4,154
Total	156,948	172,375	161,727	163,683

Energy Costs

Richfield residents and businesses spent an average of \$36.9 million on energy during the baseline period. *Figure 23*, below, illustrates that more money is spent in the residential sector than in commercial/industrial. It's important to recall that per premise spending analysis shows a very different perspective. As seen in *Figure 24*, below, the average Richfield residential premise spent \$1,239 for energy in 2019. Conversely, energy expenses for the average commercial/industrial premise were over \$15,000.

⁷ <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>.

Figure 23: Richfield baseline annual energy spending by sector

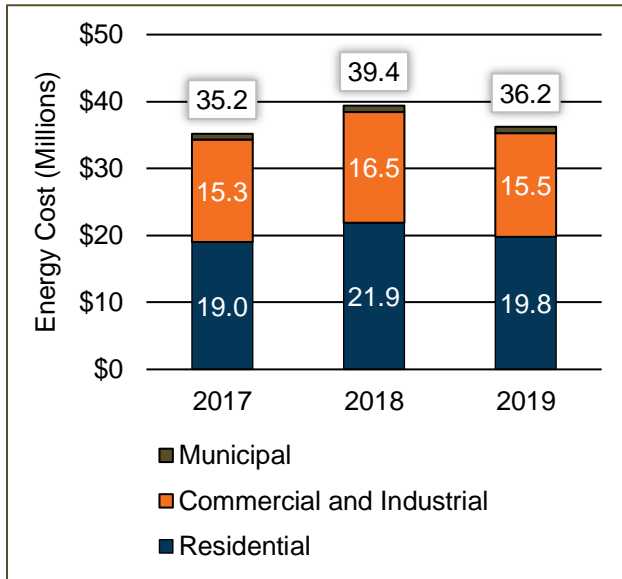
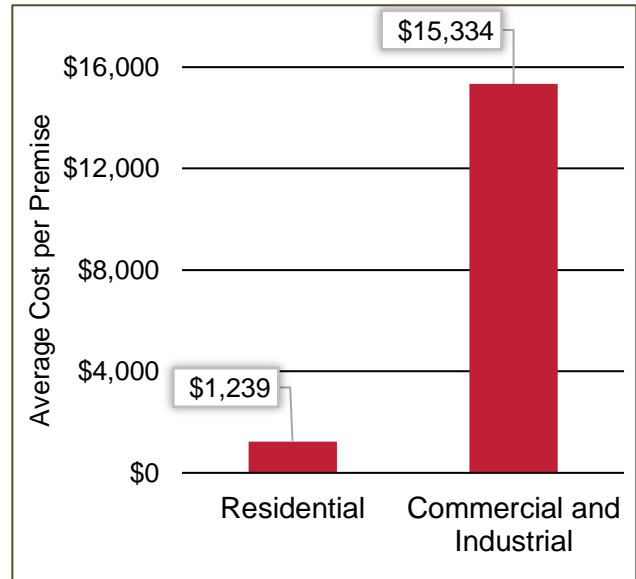


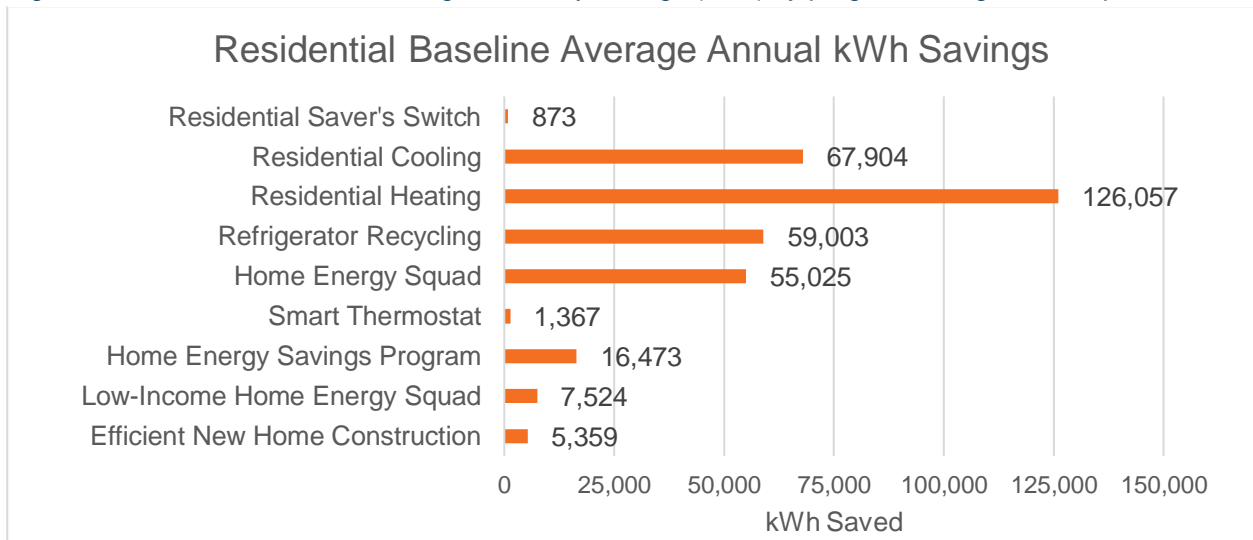
Figure 24: 2019 Richfield average energy spending by premise



Program Participation and Savings

Richfield’s residents have consistently turned to just a few of Xcel Energy’s available efficiency programs each year to help them save energy. As shown in *Figure 25*, below, the greatest energy savings generated in Richfield have come from just four programs: Residential Heating, Residential Cooling, Refrigerator Recycling, and Home Energy Squad. These four programs are responsible for over 90% of what Richfield residents have saved.

Figure 25: Richfield residential average electricity savings (kWh) by program during baseline period



Residential Xcel Energy DSM Program	2017		2018		2019	
	Count	Savings (kWh)	Count	Savings (kWh)	Count	Savings (kWh)
Efficient New Home Construction	1	1,412	6	6,653	6	8,011
Home Energy Audit	4	-	1	-	10	-
Home Energy Savings Program	7	4,240	36	28,385	28	16,794
Home Energy Squad	61	55,790	64	67,533	49	41,753
Low-Income Home Energy Squad	8	5,231	9	9,340	10	8,002
Residential Cooling	229	67,743	277	70,453	259	65,516
Residential Heating	164	111,664	211	140,380	189	126,126
Refrigerator Recycling	43	40,760	99	83,498	67	52,752
Residential Saver's Switch	657	1,320	548	1,096	102	204
Smart Thermostat	63	259	52	1,812	32	2,029
Total	1,237	288,419	1,303	409,150	752	321,187

Residential CenterPoint Energy Service	2017		2018		2019	
	Count	Savings (therms)	Count	Savings (therms)	Count	Savings (therms)
Air Sealing & Insulation Projects	18	3,950	31	6,110	51	9,430
DIY Home Efficiency Kits	185	4,290	273	6,290	219	5,000
Heating System Tune-Ups	34	715	9	190	26	570
Home Energy Report Mailers	2,266	32,381	2,331	33,310	2,211	31,595
Home Energy Squad (Audit & Direct Install)	61	2,310	70	2,600	62	2,060
Natural Gas Efficiency Measures	14	5,110	28	6,960	30	4,190
Natural Gas Efficiency Rebates	391	41,330	896	60,960	815	60,980
New Home Natural Gas Efficiency Projects	7	470	8	1,550	15	2,075
Total	2,976	90,556	3,646	117,970	3,429	115,900

Figure 26: Energy efficiency programs with more than 10 average annual participants in Richfield during baseline period

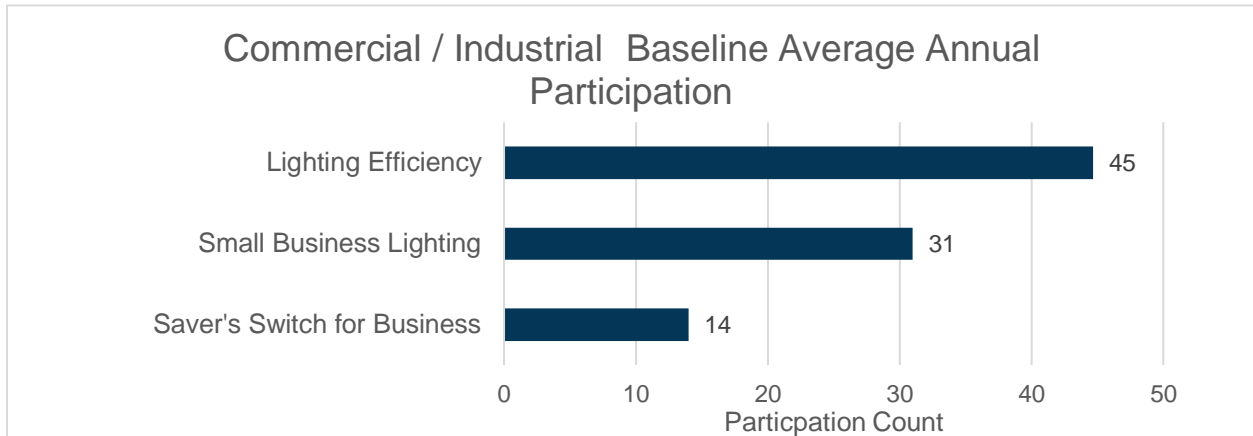


Figure 27: Richfield average annual program participation during baseline period

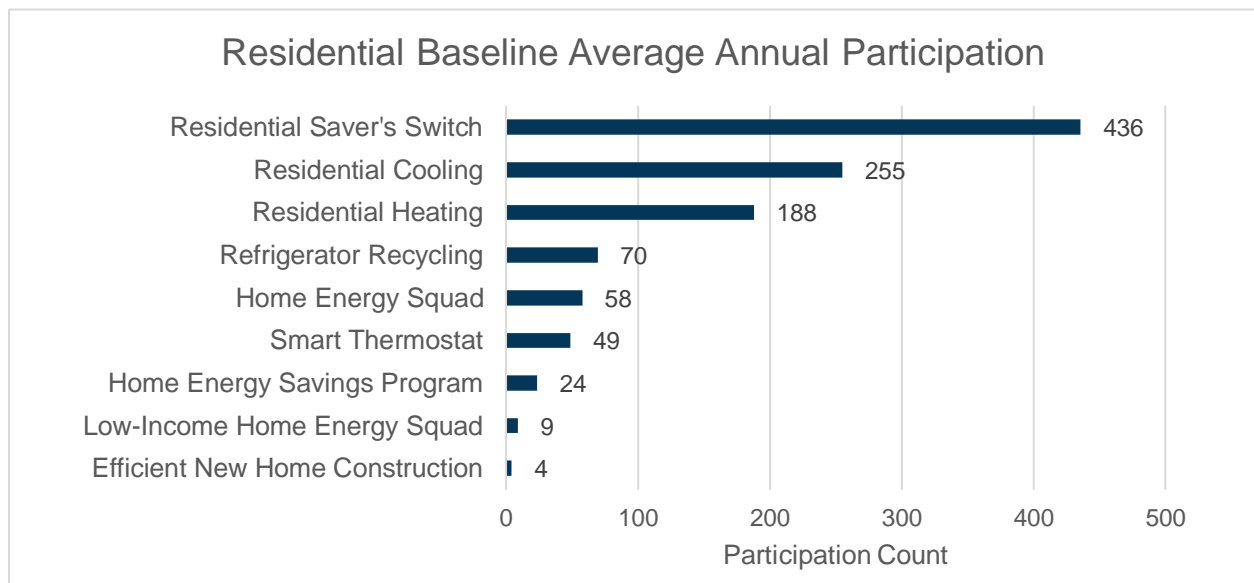
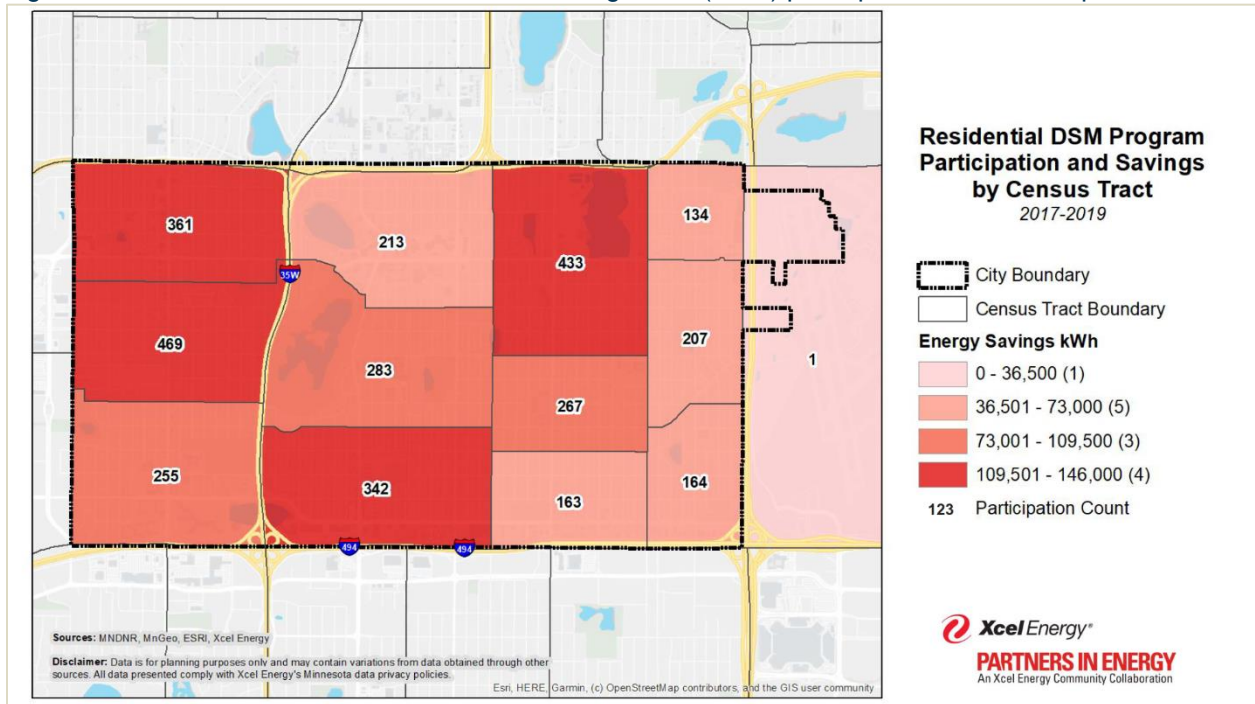
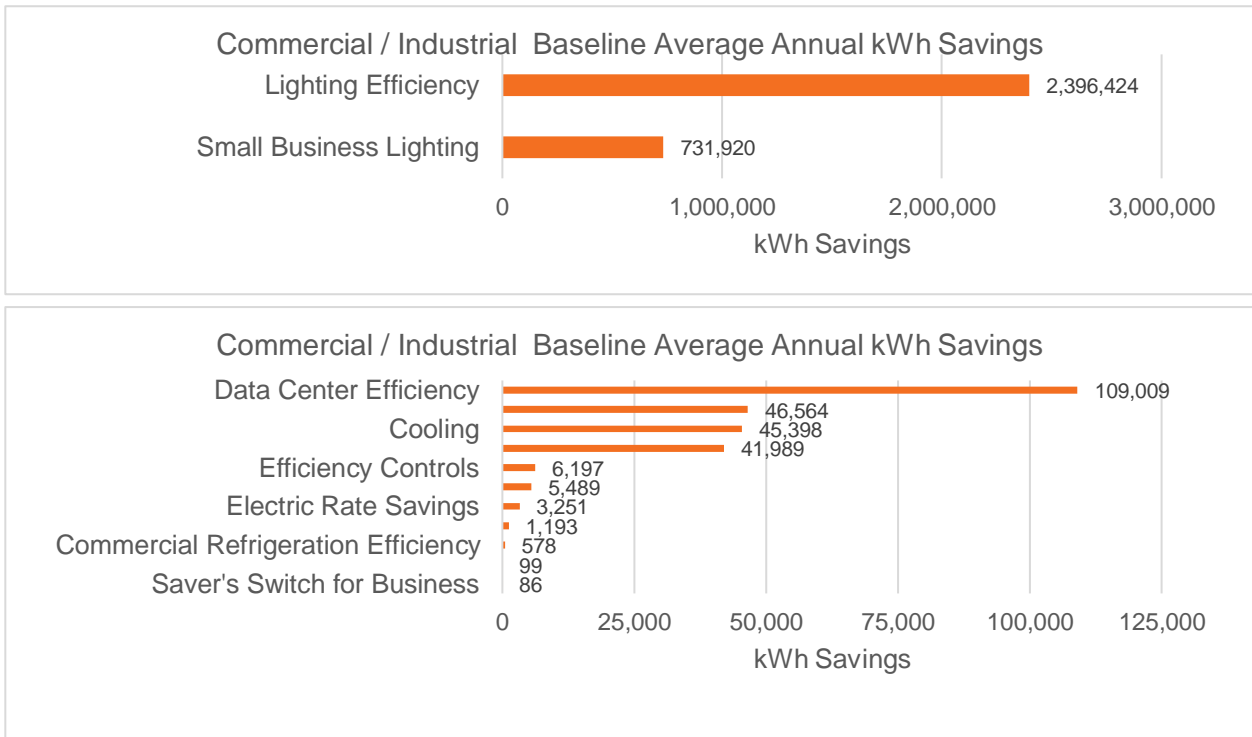


Figure 28: Richfield residential Demand Side Management (DSM) participation baseline map 2017–2019



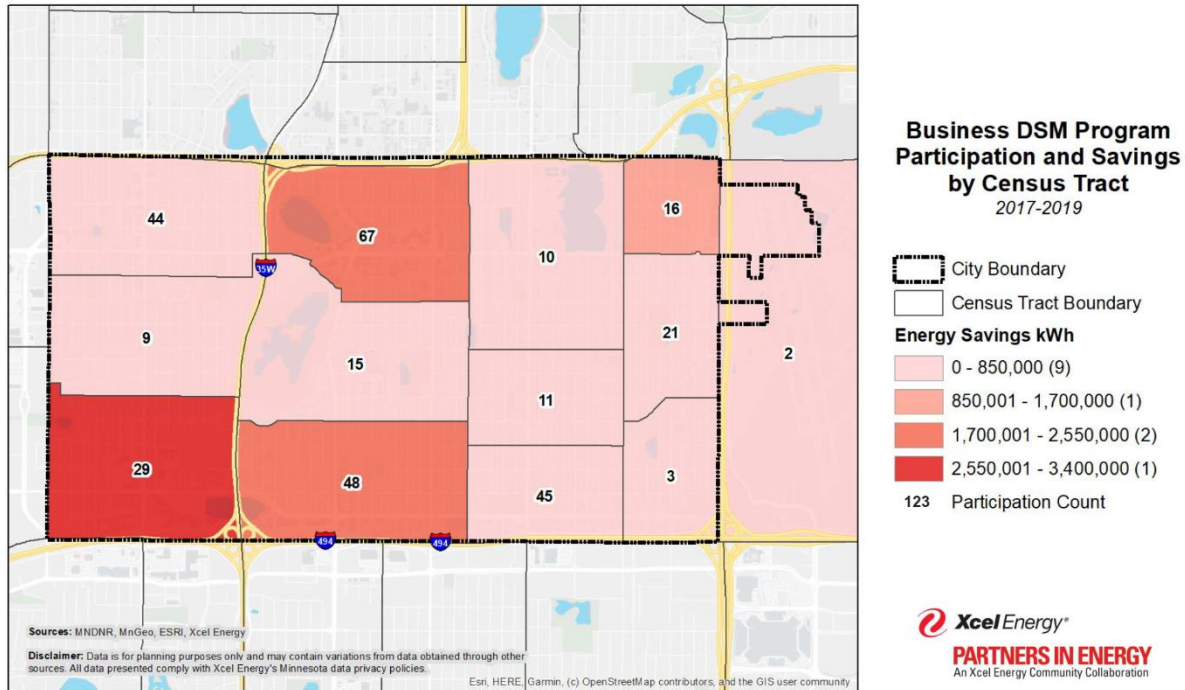
Turning to the commercial/industrial sector, those premises in Richfield save 3.4 million kWh per year, and just two programs account for 92% of those savings. There are just three programs which have annual participation rates higher than 10 in Richfield, again

Figure 29: Average annual commercial/industrial kWh savings during baseline period



demonstrating the strong performance of the Lighting Efficiency and Small Business Lighting programs.

Figure 30: Richfield's commercial/industrial DSM participation baseline map by kWh savings 2017–2019



Commercial / Industrial Xcel Energy DSM Program	2017		2018		2019	
	Count	Savings (kWh)	Count	Savings (kWh)	Count	Savings (kWh)
Commercial Refrigeration Efficiency	-	-	2	1,733	1	-
Cooling	5	94,735	5	27,859	9	13,599
Data Center Efficiency	-	-	1	327,028	-	-
Efficiency Controls	1	18,592	-	-	-	-
Electric Rate Savings	-	-	5	6,674	5	3,080
Foodservice Equipment	-	-	1	11,976	1	4,491
Heating Efficiency	-	-	1	1,687	1	1,892
Lighting Efficiency	52	1,214,367	45	4,361,167	37	1,613,739
Motor Efficiency	3	68,295	3	28,782	1	42,616
Multi-Family Building Efficiency	-	-	-	-	2	298
Recommissioning	1	-	1	31,828	3	94,138
Saver's Switch for Business	17	66	23	183	2	8
Small Business Lighting	55	1,598,252	21	324,561	17	272,948
Turn Key Services	1	-	-	-	1	-
Total	135	2,994,307	108	5,123,478	80	2,046,809

Commercial / Industrial CenterPoint Energy Service	2017		2018		2019	
	Count	Savings (therms)	Count	Savings (therms)	Count	Savings (therms)
Natural Gas Efficiency Rebates	70	30,520	41	49,630	111	46,340

Renewable Energy Support

Windsorce® and Renewable*Connect®, which are both subscription programs allowing participants to source some or all their energy from renewable sources, are popular among Richfield residential premises. There is one commercial/industrial premise subscribing. Solar*Rewards®, a program for on-site solar users, has relatively few participants in Richfield. Finally, there are some participants in Solar*Rewards Community®, which is geared to premises supporting off-site renewable energy generation.

Table 5: Renewable Energy Program Participation and Sector Percent 2019 (Source: Xcel Energy)

Renewable Energy Program	Residential	Commercial & Industrial
Windsorce®		
Subscriber Count	853	1
Total Annual Electricity Subscribed (kWh)	2,401,639	1,200
Percentage of Sector Electricity Use	3%	0%
Renewable*Connect®		
Subscriber Count	51	
Total Annual Electricity Subscribed (kWh)	340,459	
Percentage of Sector Electricity Use	0%	0%
Solar*Rewards®**		
Subscriber Count	24	12
Total Annual Electricity Subscribed (kWh)	68,091	67,490
Percentage of Sector Electricity Use	0%	0%
Solar*Rewards Community®**		
Subscriber Count	212	2
Total Annual Electricity Subscribed (kWh)	1,132,136	788,281
Percentage of Sector Electricity Use	1%	1%

APPENDIX A - METHODOLOGY FOR MEASURING SUCCESS



As part of implementation support, Partners in Energy will provide biannual progress reports for Xcel Energy participation and savings data for Richfield. CenterPoint Energy may provide program participation and savings data at the request of the City of Richfield. All goals will be measured against Richfield’s 3-year baseline of 2017–2019 data unless otherwise noted.

The following section outlines how to measure various aspects of the goals outlined in this Energy Action Plan, including details of what programs and activities may be included and any assumptions used to measure the goals.

Community-wide Goal

- By the end of 2026, accomplishing all of Richfield’s Focus Area goals will avoid an estimated \$2.5 million dollars in energy costs in the community. By the end of 2032, these goals will avoid an estimated 21,855 tons of MTCO_{2e} from consumption of electricity and natural gas.

Assumptions

This goal assumes that Xcel Energy’s and CenterPoint Energy’s demand side management program participation will continue business as usual (BAU) 2021 to 2032.

BAU annual program participation assumes 1,237 total participants in the programs available from Xcel Energy in 2019 and 843 participants in programs available from CenterPoint Energy in 2019 across all sectors. To avoid double counting jointly offered utility programs, only the participant counts from Xcel Energy reports are included for those programs. Cumulative participation for the BAU scenario between 2021 and 2032 will be 14,844 with a cumulative annual energy savings of 154,139 MMBtu.

The impact of the Energy Action Plan and additional resources from Xcel Energy, the City of Richfield, and the community will result in an increase in program participation. The community-wide goal assumes an annual participation increase in Xcel Energy programs, with cumulative

participation between 2021 and 2032 totaling 19,953, resulting in a cumulative annual energy savings of 199,463 MMBtu. An increase in program participation will result in increased annual energy savings, through which Richfield community members can avoid energy costs.

How to Measure

Energy Savings

The community-wide goal will be measured by comparing cumulative electricity and natural gas savings over 2021 to 2026 for all sectors against projected BAU savings over the same time period. This goal includes all Xcel Energy and CenterPoint Energy demand side management programs available to every sector and measures the first-year savings data provided by the utilities. The following table outlines the assumptions for energy savings in Richfield.

	2026 BAU Scenario	2026 Goal Scenario
DSM Program Participation	14,470	17,582
kWh Savings	21,031,203	27,462,756
Therm Savings	53,108	78,480
MMBtu Savings	77,069	101,551

Avoided Energy Costs

Avoided energy costs is estimated using per kWh and per therm rates that residential and commercial and industrial premises pay.

Energy Cost	Rate per kWh	Rate per therm
Residential Premise Rate	\$0.11	\$0.72
Commercial/Industrial Premise Rate	\$0.087	\$0.59

Using these residential and commercial/industrial energy rates, total cost avoidance is calculated from projected energy savings in Richfield.

Energy Cost Avoidance	2026 BAU Scenario	2026 Goal Scenario
Residential Cost Avoidance	\$296,117	\$472,514
Commercial/Industrial Cost Avoidance	\$1,631,170	\$2,069,048
Total Cost Avoidance	\$1,927,288	\$2,541,563

Greenhouse Gas Emissions Avoided

Projected greenhouse gas emissions avoided include cumulative emissions avoided from participation in Xcel Energy and CenterPoint Energy programs, as well as cumulative emissions avoided with renewable energy programs where the customers retain the Renewable Energy Credits. This includes Xcel Energy's Windsource® and Renewable*Connect®. The table below outlines the assumptions for greenhouse gas emission avoidance. To estimate avoided greenhouse gas emissions, projected emissions factors were applied to the electricity and

natural gas savings estimates for both the business as usual and goal scenarios. For the purposes of this Energy Action Plan, all assumptions are based on Xcel Energy’s 2019 Carbon Emissions Reporting.⁸

Estimated Emissions Avoided by Program (MTCO ₂ e)	2032 BAU Scenario	2032 Goal Scenario
DSM Programs	8,671	11,254
Renewable Energy	6,345	10,631
Total MTCO₂e avoided	15,015	21,885

Energy Burden Focus Area Goals

- Prioritize work that reduces the number of residences experiencing energy burden and increases connections to resources by reaching 1,325 homeowners and renters by 2026.

Assumptions

Business as usual scenario assumes 33 total participants a year in the following Xcel Energy income-qualified programs:

- Low-Income Home Energy Squad
- Home Energy Savings Program
- Multi-family Energy Savings Program

Business as usual would result in 33 annual participants in income-qualified programs.

Richfield’s goal is to achieve 1,325 total cumulative participants by 2026 by increasing annual participation by 221 participants across these programs.

How to Measure

Annual participation in the following programs will be included in measuring progress toward this goal:

- Low-Income Home Energy Squad
- Home Energy Savings Program
- Multi-family Energy Savings Program

In addition, any new programs created by Xcel Energy with income qualifications will be included.

Annual participation will be calculated from Partners in Energy implementation reports, summing participation from these programs from 2021 through 2026.

	2026 BAU Scenario	2026 Goal Scenario
Cumulative Participation	198	1,325

⁸ Energy and Carbon Emissions Reporting 2019 Summary by Xcel Energy. <https://www.xcelenergy.com/staticfiles/xe-responsive/Environment/Carbon/Xcel-Energy-Carbon-Dioxide-Emission-Intensities.pdf>

Renewable Energy Focus Area Goals

- Increase participation in renewable energy programs among residents, organizations, and businesses by 2026. Richfield will accomplish this goal by adding 100 new residential subscribers to renewable energy programs annually, and five new businesses with a 50% kWh subscription annually.

Assumptions

The 2019 baseline participation in Xcel Energy’s renewable energy programs is 904 residential subscribers and 1 commercial and industrial subscriber. Programs included in this assumption are Xcel Energy’s Renewable*Connect® and Windsource® programs.

How to Measure

Richfield’s goal is to add 100 new residential subscribers to renewable energy programs annually and five new businesses with a 50% kWh subscription annually by 2026. Participation in the following programs by residential and commercial and industrial subscribers will be included in measuring progress toward this goal:

- Renewable*Connect®
- Windsource®

In addition, any new renewable energy subscription programs created by Xcel Energy where the customer retains the Renewable Energy Credit will be included.

Participation Totals	2019 Baseline	2026 Goal Scenario
Residential	904	1,404
Commercial and Industrial	1	26
Total Subscribers	905	1,530

2019 Xcel Energy Programs Included in Baseline

The following Xcel Energy programs were included in business as usual and baseline assumptions.

Program Name	Community-Wide Energy Savings Goal	Energy Burden Goal	Renewable Energy Goal
Low-Income Home Energy Squad		X	
Home Energy Savings Program		X	
Multi-family Energy Savings Program		X	
Residential Heating	X		
Residential Cooling	X		
Refrigerator Recycling	X		
Home Energy Squad	X		
Smart Thermostat	X		
Efficient New Home Construction	X		
Home Energy Audit	X		
Residential Saver's Switch	X		
Commercial Refrigeration Efficiency	X		
Cooling	X		
Electric Rate Savings	X		
Foodservice Equipment	X		
Heating Efficiency	X		
Home Insulation Rebates	X		
Lighting Efficiency	X		
Motor Efficiency	X		
Recommissioning	X		
Small Business Lighting	X		
Saver's Switch for Business	X		
Turn Key Services	X		
Multi-family Building Efficiency Program	X		
Windsource			X
Renewable*Connect			X

APPENDIX D: 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 help implement the plan and deliver results, and resources designed to help each community stay informed and achieve their outlined goals.

Plan Development Process

The content of this plan is derived from a series of planning workshops, held virtually, with a planning team committed to representing local energy priorities and implementing plan strategies. We

Figure 31: Partners in Energy planning steps



followed 11 action planning steps listed below and answered questions to establish the plan's framework.

Plan Framework:



Partners in Energy Process for Success



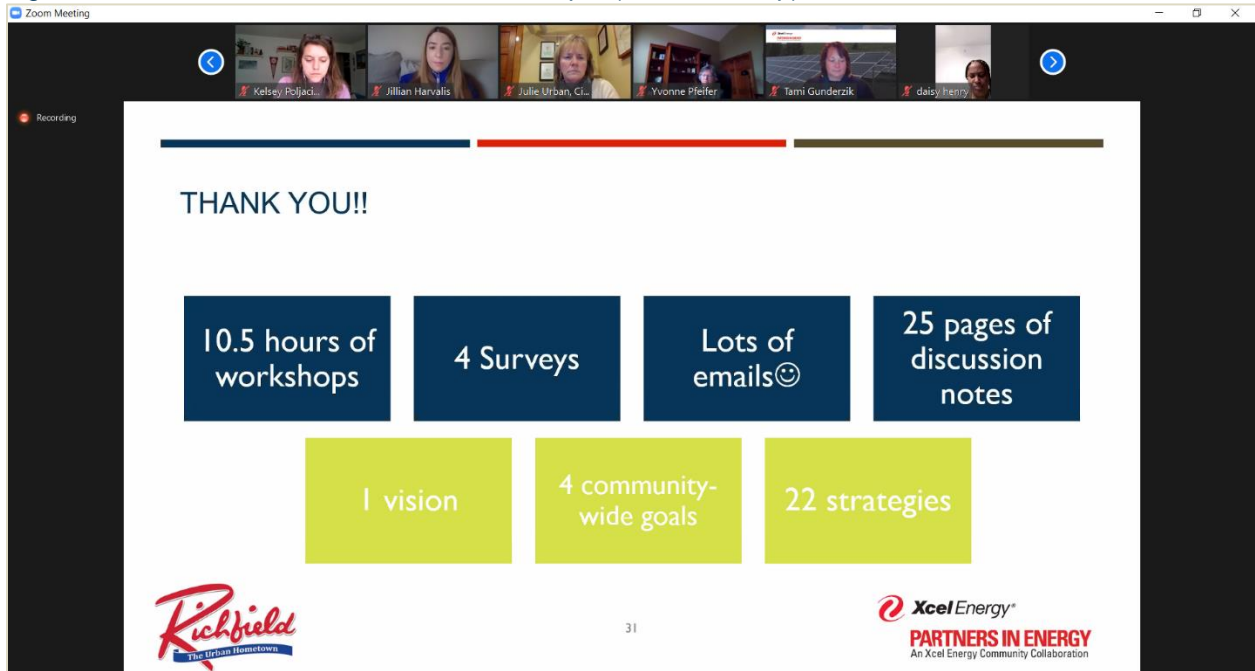
Resources from Xcel Energy for Implementation

The Energy Action Team met for five workshops to establish, discuss, and give feedback on the plan in large and small groups. In between workshops, the team completed surveys that facilitators refined into content for discussion at the next workshop meeting.

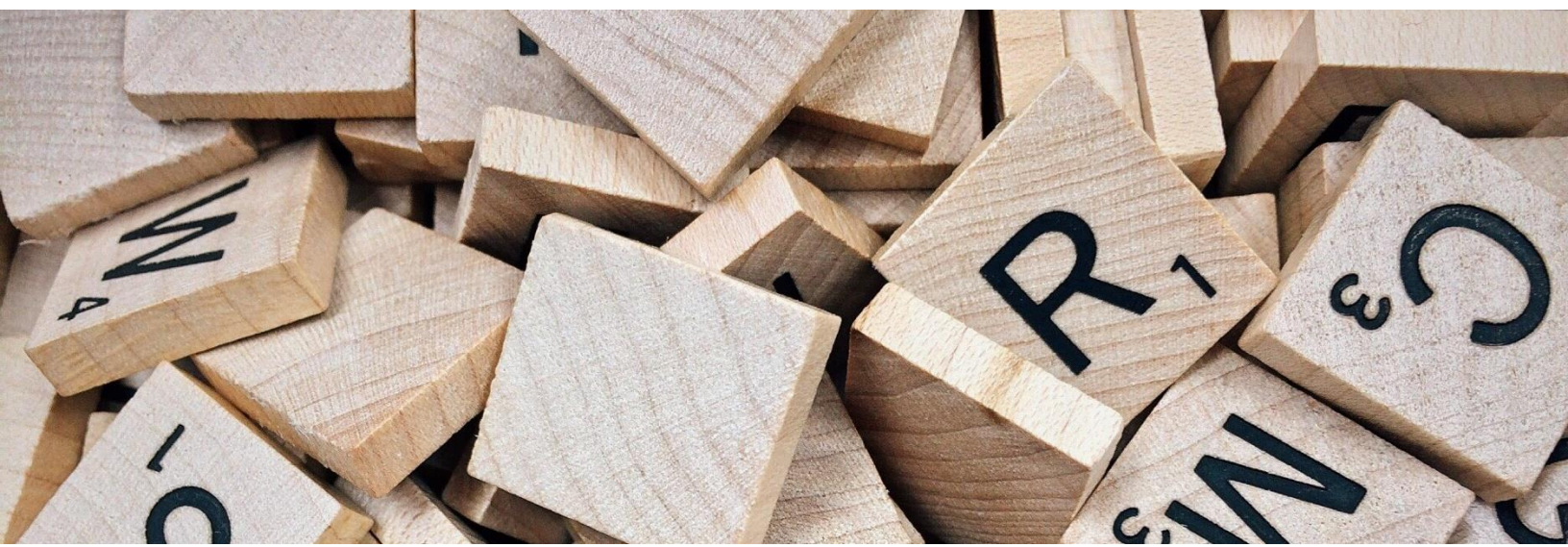
In addition to the team's input, a community energy survey was released to help guide the plan's strategies and work. The survey went out in English and Spanish and had more than 65 responses.

All of this work created the contents of this plan, which was crafted with the Energy Action Team's input.

Figure 32: Screenshot from Richfield's Workshop 5 (final workshop)



APPENDIX E: GLOSSARY OF TERMS



15 x 15: Xcel Energy’s privacy rule, which require all data summary statistics to contain at least 15 premises, with no single premise responsible for more than 15% of the total. Following these rules, if a premise is responsible for more than 15% of the total for that data set, it is are 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 from the electricity it draws from the grid when it is not producing renewable energy.

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

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 organization 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 lower *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 usage.

Energy Savings: Comes from a permanent change that results in using less energy to achieve the same results. A new furnace uses X% less 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 both electricity and natural gas consumption to be combined.

Metric Tons of Carbon Dioxide Equivalent (MTCO_{2e}): A unit of measure for greenhouse gas emissions. The unit "CO_{2e}" represents an amount of a greenhouse gas whose atmospheric impact has been standardized to that of one unit mass of carbon dioxide (CO₂), 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 identifier for the location of electricity or natural gas service. In most cases it is a facility location. There can be multiple premises per building, and multiple premises per individual debtor.

Renewable Energy Certificate (REC): For every megawatt-hour of clean, renewable electricity generation, a renewable energy certificate (REC) is created. A REC embodies

all of 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): 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 F: IMPLEMENTATION MEMORANDUM OF UNDERSTANDING

Pending