NEW BRIGHTON
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An Energy Action Plan for
the City of New Brighton

2023

Xcel Energy®

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 and gas utility serving New Brighton. 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 C: Xcel Energy's Partners in Energy Planning Process.

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This Energy Action Plan was funded by and developed in collaboration with Xcel Energy's Partners in Energy. Partners in Energy shall not be responsible for any content, analysis, or results if New Brighton has made modifications to the plan.

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GLOSSARY OF TERMS

15 x 15: Xcel Energy's privacy rule, which requires 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, they are removed from the summary.

Beneficial Electrification: The transition from fossil fuels to electricity where benefits are achieved through reduced emissions and energy costs.

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.

Climate Action Plan (CAP) and Climate Action Team: The climate plan that was developed through the City of New Brighton is formally named the Climate Action Plan. The Climate Action Team is the team of volunteers who committed to develop the actions in that plan. The Energy Action Team is a subset of the Climate Action Team.

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

Energy 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 usage.

Energy Savings: Energy savings come 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 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 (MTCO2e or MTCO2e): A unit of measure for greenhouse gas emissions. The unit "CO2e" 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 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.

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.

NEW BRIGHTON
Energy Action Plan

As part of the Climate Action Plan, the City of New Brighton, community members, and Xcel Energy's Partners in Energy created this Energy Action Plan to measure trackable targets and implementation strategies for achieving the city's energy goals. The Energy Action Plan elaborates on the Building Energy section of the Climate Action Plan.

COMMUNITY VISION

New Brighton is a community that leads by example, promoting clean energy through education and action. By prioritizing energy efficiency, equity and renewable resources, we are creating a sustainable and resilient city that serves as a model for others. Together, we can build a healthier, more prosperous future for all.

FOCUS AREAS

- Energy Efficiency
- Renewable Energy
- Beneficial Electrification

GOAL

Reduce energy-related greenhouse gas emissions **34%** by 2030 from a 2021 baseline.

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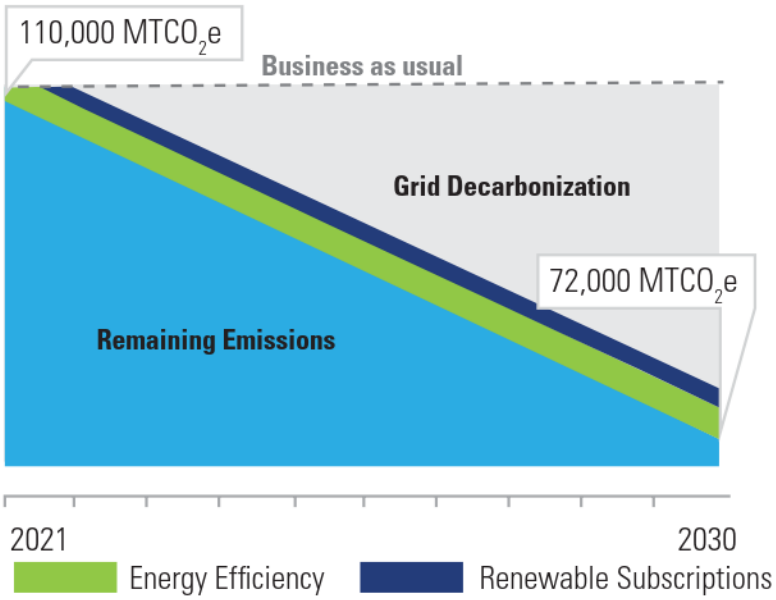
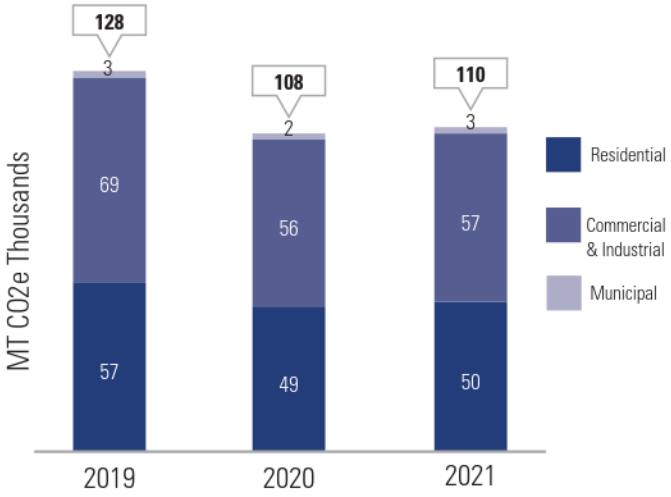
HIGH-LEVEL STRATEGIES

Through this plan's strategies, New Brighton will strive toward increasing energy efficiency in residential, commercial and industrial, and municipal buildings. We will continue to adopt renewable energy through on-site and subscription programs that may include solar, wind and geothermal technologies that help us reach our goals and targets. Through community outreach, businesses engagement and city policy development, this plan will save energy and money for residents and businesses of all income levels and reduce city-wide greenhouse gas emissions.

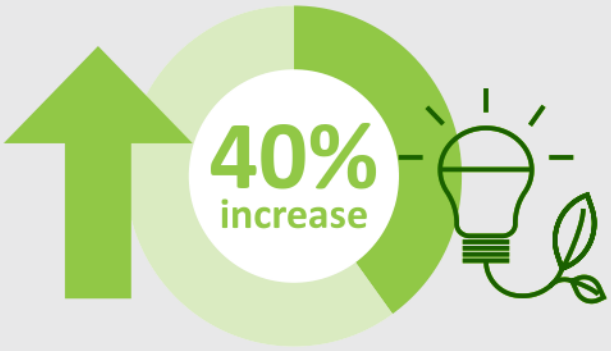
Greenhouse Gas Emission Reduction Scenario



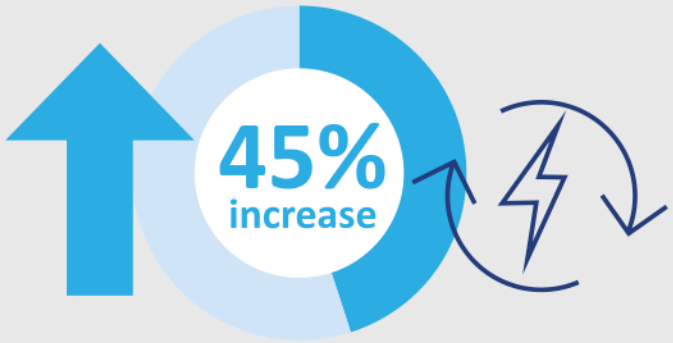
GHG Emissions from Energy



IMPACT AND RESULTS OF PLAN IMPLEMENTATION



Energy Efficiency Target
Increase energy savings by **40%** on community-wide electricity and natural gas energy by 2030.



Renewable Energy Target
Increase residential and commercial & industrial subscribers in Xcel Energy renewable energy subscription offerings by **45%** by 2030.

The content of this plan is derived from a series of planning workshops hosted by Xcel Energy's Partners in Energy. Thank you to the New Brighton Energy Action Team who contributed many hours of service to creating our vision, goals, and strategies for this plan.

INTRODUCTION

New Brighton has been making strides toward sustainability and clean energy in several ways, including city facility upgrades, establishing an environmental commission, and supporting renewable energy. Highlights of New Brighton's sustainability work include:

- The City of New Brighton is a Step 5, Green Step City achieved through benchmarking public buildings, upgrading the lighting in public buildings and outdoor spaces to efficient and timed LEDs, adopting efficient fleet vehicles and management software, updating zoning codes that encourage resilient residential and commercial/industrial growth, adopting sustainable purchasing policies, and engaging the public to ensure equity in the city's sustainability work.
- A citizen-led Parks, Recreation and Environmental Commission tasked with providing input to the City Council on environmental initiatives and practices. Through successful engagement on sustainability projects, the city has a contact list of residents who are interested in sustainability topics and projects.
- The City has installed a number of large solar arrays on municipal buildings and is working to install electric vehicle charging stations at more than ten City facilities.
- There is strong community support within New Brighton for sustainable and resilient climate efforts and the City's leadership is responsive to that momentum.

This Energy Action Plan was developed in tandem with a broader Climate Action Plan that will both guide the City's sustainability projects and make a case for acquiring available funding for those efforts.

Why We Want an Energy Action Plan

The City of New Brighton wanted to create a standalone Energy Action Plan in addition to the climate plan to take on one of the larger carbon-emitting sectors within the city with greater attention to the community's unique needs, greater access and attention to energy use and utility data, and to aid in accessing specific funding for energy projects by having documented strategies to guide their work. The City also wanted to build a stronger relationship with Xcel Energy and access Partners in Energy program resources, expertise and community connections that are provided through its offerings and partnerships. These planning and implementation resources and access to energy expertise can help the

City identify and incorporate the community's energy needs and develop new energy standards as other planning and development takes place.

Our Engagement & Outreach Process

The creation of this Energy Action Plan was a six-month process to help our community characterize its energy use, identify energy-related goals, and develop engaging strategies to guide change toward our energy future. Starting in February 2023, the Energy Action Plan was driven by a series of planning workshops both held with a larger climate planning team and as its own subgroup as an Energy Action Team. In addition to City staff, this team comprised community volunteers from New Brighton representing city commissions, homeowners, renters, and business owners. The planning meetings were held virtually as well as in the community where team members were asked to share their unique energy priorities in collaboration with City of New Brighton and Xcel Energy's Partners in Energy representatives. By the numbers, we engaged 12 Energy Action Team members, as well as the 24 members of the climate planning team working on the other components of the Climate Action Plan. The team attended five workshops where energy was a focus, and used the input related to energy from hundreds of surveys completed by a larger swath of the community. See Appendix C: Xcel Energy's Partners in Energy Planning Process for more information about the planning process and Xcel Energy Partners in Energy.

Figure 1. Energy Action Team at the Partners in Energy Workshop 4b

WHERE WE ARE NOW

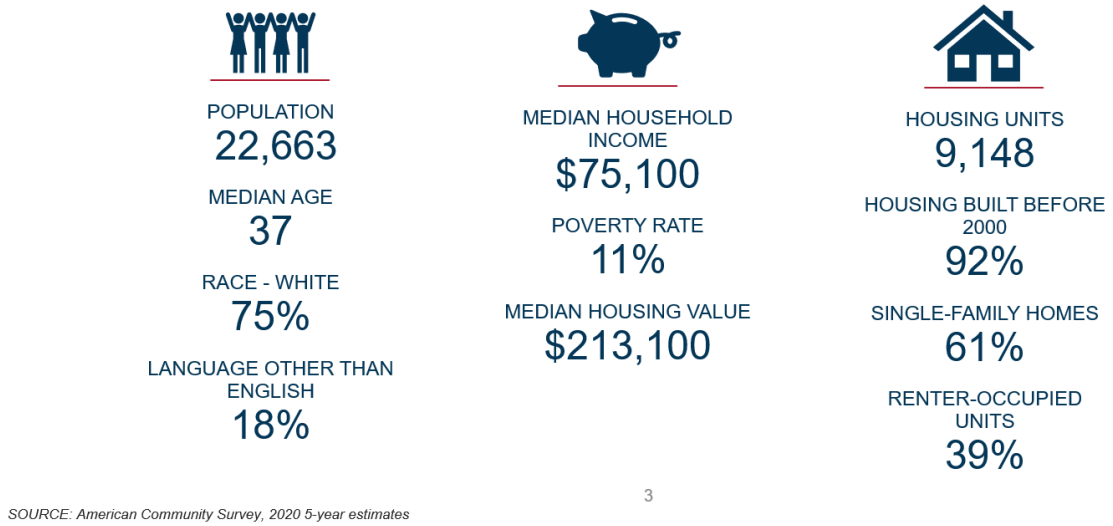
An integral part of the Partners in Energy planning process is reviewing historic energy data that informs our community's energy baseline. Xcel Energy provided data on energy use, energy conservation program participation and savings, and renewable energy program participation and generation for New Brighton as detailed in the following sections. See Appendix A: Baseline Energy Analysis for a comprehensive picture of New Brighton's baseline energy data.

Community Demographics[1]

As of 2020, New Brighton's population of just over 22,500 lived in approximately 9,000 housing units. Eighteen percent of residents speak a language other than English and 75% of residents identify as white. New Brighton's poverty rate of 11% falls squarely in the range of some peer cities. With 92% of its housing built before 2000, most New Brighton residents live in housing stock with significant opportunity for energy efficiency improvements because of age and older building codes. Additionally, 39% of units in New Brighton are renter-occupied, a higher proportion than New Brighton's peer cities. This presents unique opportunities for energy efficiency measures targeted at renter-occupied units.

[1] Demographic data sourced from US Census Bureau American Community Survey, 2020 5-year estimates

Figure 2. An overview of New Brighton's community demographics. (Source: American Community Survey)



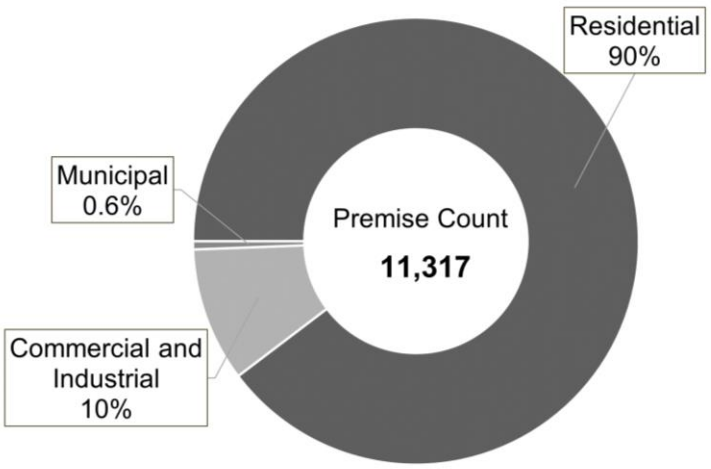
Energy Use and Savings

Premises

Xcel Energy provides electricity and natural gas to New Brighton residents and businesses. In 2021, New Brighton consisted of 11,317 distinct utility premises, which are 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' load at that address.[2]

Most New Brighton premises are residential, with a small number of commercial and industrial premises and a smaller portion of municipal premises rounding out the total (Figure 3).

Figure 3. Total premises by sector, 2021.



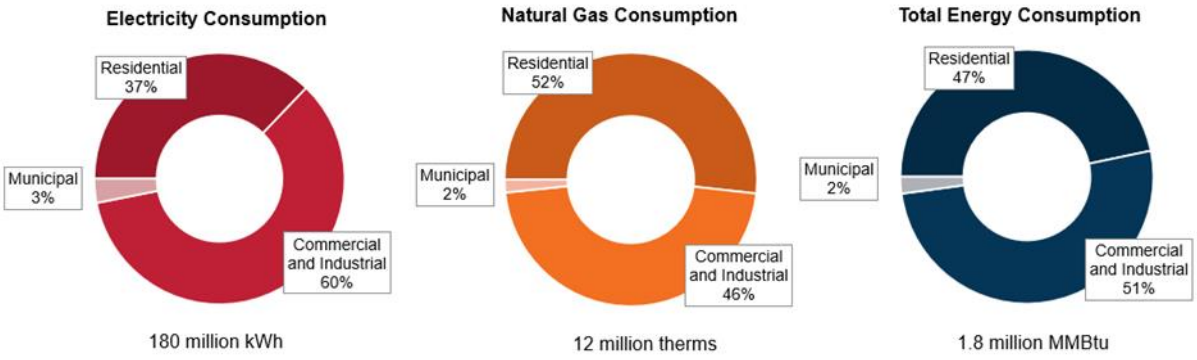
Grid Energy Use

On average, the New Brighton community consumes 180 million kWh of electricity and 12 million therms of natural gas across all sectors per year. Although the commercial and industrial sector only makes up 10% of

[2] Please refer to *Glossary of Terms* for more detail on energy terms used in this plan.

premises, it accounts for over half of total energy consumption (Appendix A: Baseline Energy Analysis). Commercial and industrial premises use significantly more energy on average per premise than residential ones, a pattern typical of cities like New Brighton.

Figure 4. Average annual energy consumption by sector, 2019–2021.



Total energy consumption was calculated using both electricity and natural gas consumption converted into British thermal units, a unit of measure that allows electricity and natural gas to be compared based on a common measure of energy potential.

During the three-year baseline period, New Brighton's overall electricity consumption decreased slightly by 1.5%. Electricity consumption in the residential sector increased by 8.2% during the three-year baseline while commercial consumption decreased by 6.5%, leading to the small overall change. The growth in residential electricity consumption could be due to progressively hotter summers over the three-year baseline, driving higher use of air conditioning. New Brighton's natural gas consumption decreased across all sectors during the baseline period, with a total decrease from 2019 of 12.4% (**Figure 6**). This correlates with the decrease in heating degree days each successive year, indicating milder winters and a decreased demand for natural gas for space heating. This data crossed pandemic years, which had little impact on the overall usage data.

Figure 5. Electricity consumption by sector, 2019–2021

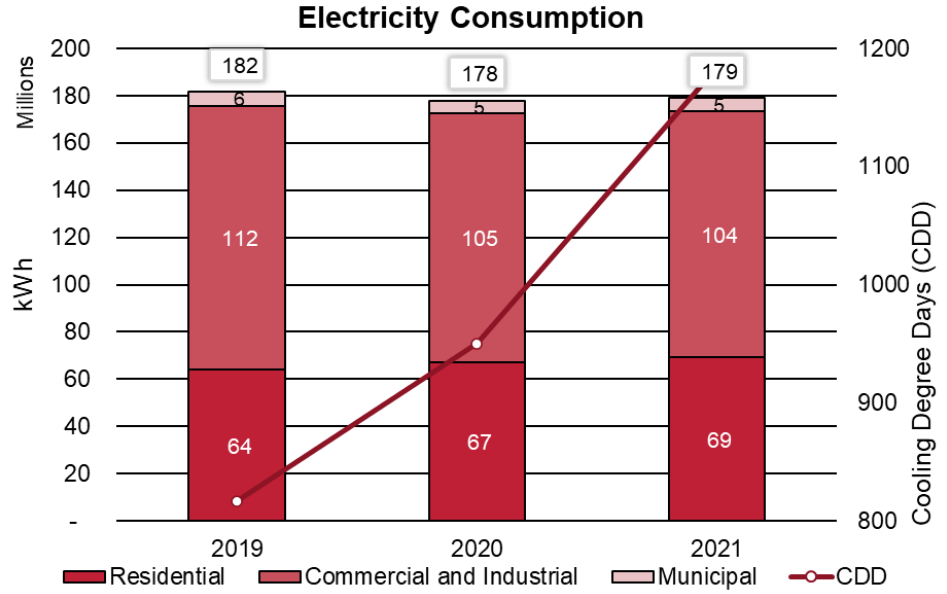
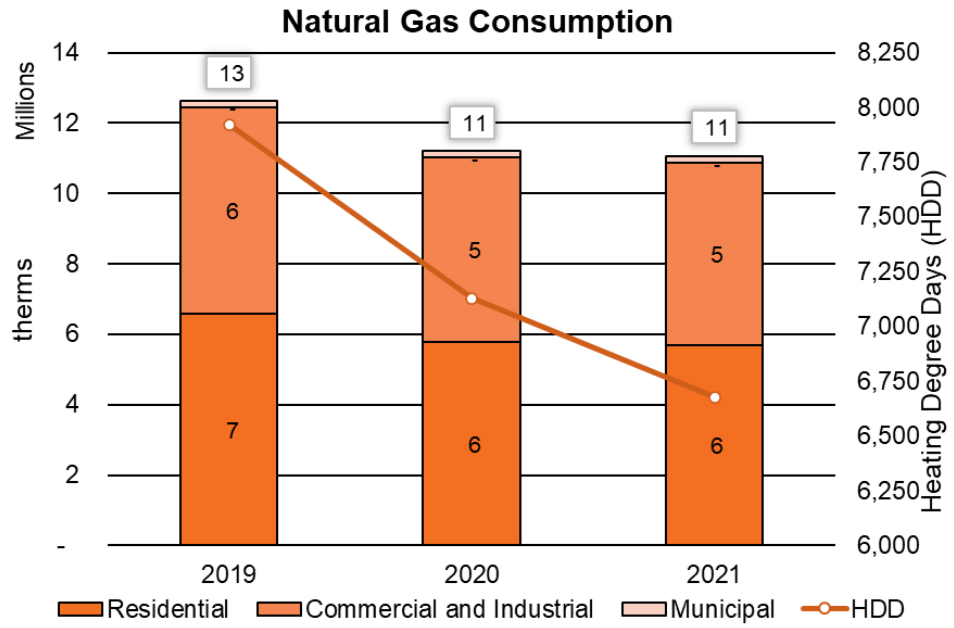


Figure 6. Natural gas consumption by sector, 2019–2021.



Energy Costs

During an average year, New Brighton spends an estimated $27 million on energy for both electricity and natural gas (Figure 7). Close to half of these costs are being paid by the residential sector, with total annual average energy costs at $12.3 million. A residential premise spends an average of $1,225 annually on electricity and natural gas. The commercial and industrial sector spends the most on energy, averaging $13.7 million annually on energy costs. While costs fluctuate greatly for commercial and industrial premises based on size and industry, on average these premises spend $12,500 annually (Table 1).

Figure 7. Average total energy costs by sector, 2019–2021.

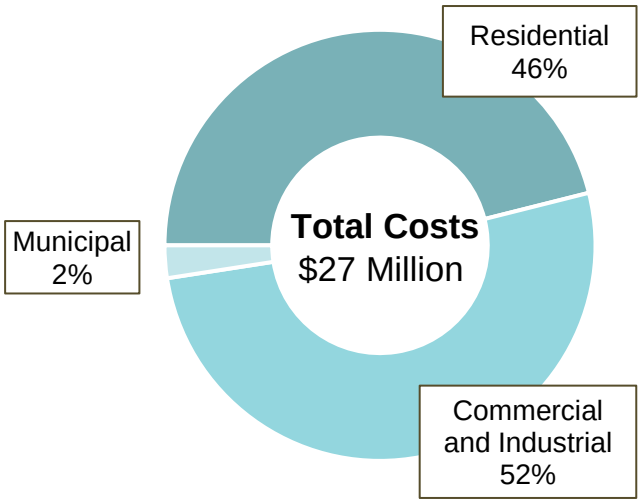


Table 1. Average annual energy costs by sector, 2019–2021.

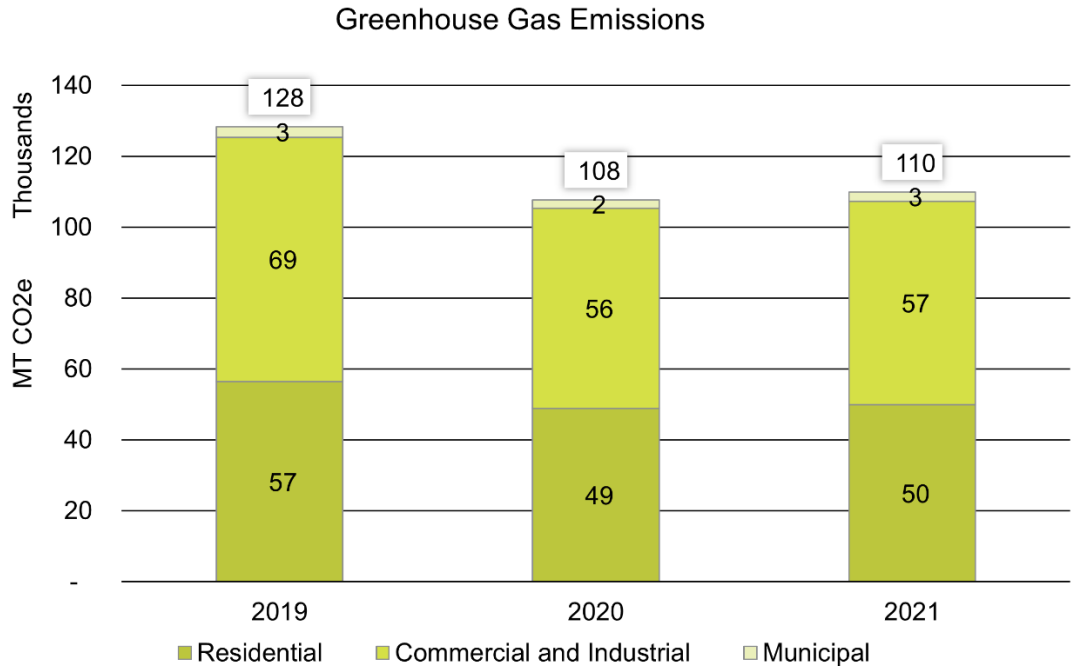
Sector	Electricity Costs	Natural Gas Costs	Costs per Premise
Residential	$8.5 million	$3.7 million	$1,225
Commercial & Industrial	$11 million	$2.8 million	$12,500
Municipal	$550 thousand	$100 thousand	$10,000

Greenhouse Gas Emissions

Greenhouse gas emissions are calculated for both electricity and natural gas consumption for all sectors in New Brighton.[3] New Brighton's energy-related greenhouse gas emissions in 2019 amount to 128,000 metric tons of carbon dioxide equivalent ($MTCO_2e$). Like total energy consumption, New Brighton's commercial sector accounts for just over half of energy-related greenhouse gas emissions. Emissions dropped from 2019 to 2020 in all sectors, then increased slightly from 2020 to 2021.

[3] Electricity emissions are calculated using Xcel Energy's preliminary and certified emissions factors for their Upper Midwest Fuel Mix for 2019, 2020 and 2021. Emissions factors used during the planning process to calculate electricity consumption greenhouse gas emissions may change as Xcel Energy completes third-party verification for its emissions intensities. See Table 144Table 13 for the emissions factors used to calculate New Brighton's energy-related emissions.

Figure 8. Energy-related greenhouse gas emissions, 2019–2021.



Renewable Energy

New Brighton residents and businesses use subscription programs and on-site options to support renewable energy. In New Brighton, most renewable energy support is in the residential sector, where 581 residents support renewable energy through subscription programs and 112 residents have on-site solar installations. Fewer commercial/industrial customers participate in renewable energy offerings with 11 renewable energy program subscribers and 36 on-site installations. However, commercial/industrial customers have larger subscriptions and installations per premise. As a result, residential and commercial/industrial customers source roughly the same amount of electricity from renewable energy offerings.

Table 2. Xcel Energy renewable energy program support, 2021.

	Residential	Commercial & Industrial
Subscription Programs - Windsource® & Renewable*Connect®		
Subscriber Count	539	8
Total Annual Electricity Subscribed (kWh)	1,940,000	770,000
Percent of Sector Xcel Energy Electricity Use	2.8%	0.7%
Community Solar Gardens - Solar*Rewards® Community		
Subscriber Count	42	3
Total Annual Electricity Subscribed (kWh)	306,300	1,509,300
Percent of Sector Xcel Energy Electricity Use	0.4%	1.5%
On-site Solar - Solar*Rewards® and Net-Metering		
Participant Count	112	36
Total Electricity Capacity (kW)	866	1,412
Total Xcel Energy Renewable Energy Support[4]		
Subscriber Count	581	11
Total Annual Electricity Subscribed (kWh)	2,246,300	2,279,300

Energy Efficiency Program Participation & Savings

Both residents and commercial/industrial premises participate in Xcel Energy's efficiency programs where they can receive rebates for upgrading equipment, receive a building audit to understand their efficiency opportunities or manage their demand through rate savings programs. Participation in these programs result in energy savings for participants. New Brighton's residents and commercial/industrial premises saved an annual average of 1.7 million kWh and 82,700 therms during the baseline period (Table 3) by participating in Xcel Energy's efficiency programs.

Table 3. Average annual program participation and energy savings, 2019–2021.

Program Sector	Average Annual Participation	Average Electricity Savings (kWh)	Average Natural Gas Savings (therms)
Residential	824	267,119	45,028
Commercial & Industrial	90	1,399,368	37,634
Total	**914**	**1,666,487**	**82,662**

New Brighton residents and businesses rely on a few key programs from Xcel Energy to help them improve efficiency (Table 4). The Residential Heating and Cooling rebate program, where residents receive rebates for upgrading to more efficient equipment, had the most participants and results in the most savings, but programs like Home Energy Squad, a home energy audit program, and the Refrigerator Recycling, a recycling rebate program, also resulted in significant savings. In the commercial and industrial sector, the Lighting Efficiency and Small Business Lighting programs that offer audits and rebates for businesses to upgrade to more energy efficient lighting had the most participants and

[4] Excludes on-site solar due to behind the meter electricity generation.

highest savings. Other programs like Xcel Energy's new construction program Energy Design Assistance had lower participation but still resulted in meaningful energy savings (Table 5).

Table 4. Average annual participation in top residential programs, 2019–2021.

Residential Program	Average Annual Participation	Average Electricity Savings (kWh)	Average Natural Gas Savings (therms)
Home Energy Squad	23	27,229	997
Insulation Rebate	22	3,472	6,712
Low-Income Home Energy Squad	6	5,344	279
Refrigerator Recycling	54	41,645	-
Residential Heating and Cooling	279	121,118	31,965
Smart Thermostat	57	2,805	1,483

Table 5. Average annual participation in top commercial and industrial programs, 2019–2021.

Commercial Program	Average Annual Participation	Average Electricity Savings (kWh)	Average Natural Gas Savings (therms)
Energy Design Assistance	1	249,811	18,283
Fluid System Optimization	2	97,465	-
Heating Efficiency	15	-	12,144
HVAC+R Efficiency	8	22,774	2,690
Lighting Efficiency	27	403,210	-
Multi-Family Building Efficiency	7	32,377	1,252
Small Business Lighting	18	536,719	567

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 reflects the planning team members' thoughts on what successful implementation of this plan will bring to the community and helped guide the planning process.

New Brighton is a community that leads by example, promoting clean energy through education and action. By prioritizing energy efficiency, equity, and renewable resources, we're creating a sustainable and resilient city that serves as a model for others. Together, we can build a healthier, more prosperous future for all.

Focus Areas

To achieve a community-wide commitment to energy stewardship, the Energy Action Team identified the following focus areas to categorize and prioritize strategies and resources.

- **Energy Efficiency:** Saving energy through weatherization, efficient appliances, and other efficient technologies. This focus area was identified as the first step toward a clean energy transition and will focus on reducing energy spending and energy burden for consumers in New Brighton.

- **Renewable Energy**: This focus area was chosen as the means to reduce greenhouse gas emissions and improve the health of the community. This focus area's intent is to include all renewable energy options as they are available and feasible, including solar, wind and geothermal.
- **Beneficial Electrification**: Beneficial electrification was identified as a key focus area to reduce greenhouse gas emissions and improve the indoor air quality of our homes and buildings. Beneficial electrification also describes the transition to electric appliances and heating and cooling as an equitable transition that does not raise utility costs for or put more burden on community members.

These focus areas were chosen to parallel to the City's Climate Action Plan focus recommendations.

Goals and Energy Action Impact

The Building Energy Section of the Climate Action Plan projected that the energy sector would contribute to a 34% reduction of the total greenhouse gas emissions from a 2013 baseline year. To align the Energy Action Plan efforts with the climate plan, this plan's goal reflects that goal but with a more recent baseline of 2021. This results in a slightly more ambitious reduction scenario than the climate plan's goal.

The community-wide Energy Action Plan Goal is to **reduce greenhouse gas emissions 34% by 2030 from a 2021 baseline**.

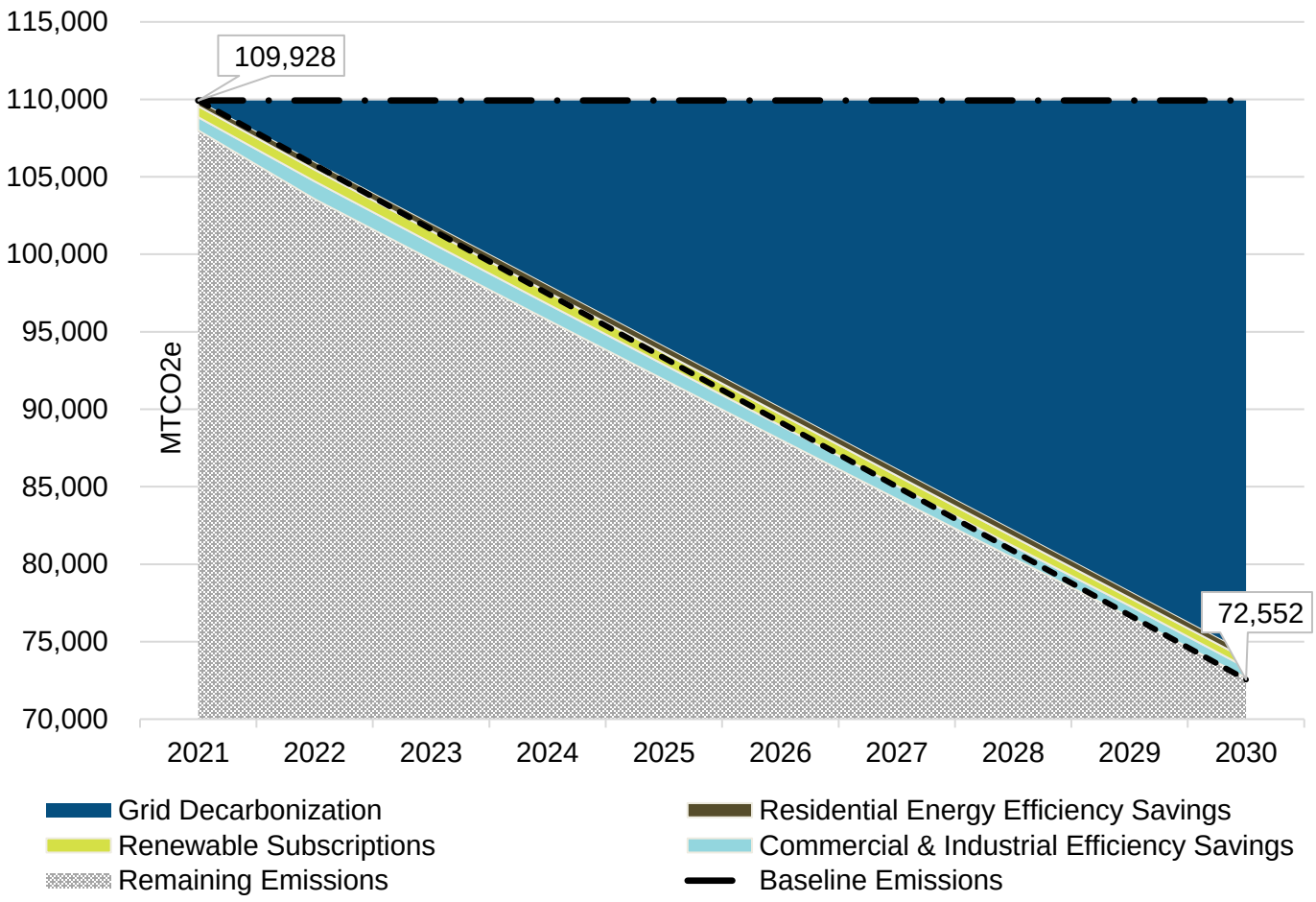
This goal, assuming annual electricity and natural consumption remains stable, will result in decreased and avoided greenhouse gas emissions, adding up to 34% through the following methods:

- Energy Grid Decarbonization
- Commercial and Industrial Energy Efficiency
- Residential Energy Efficiency
- Renewable Energy Subscription Programs

Although the following methods will contribute to the greenhouse gas reductions in New Brighton, there is no readily available data to confidently include a measurement of them in the goal.

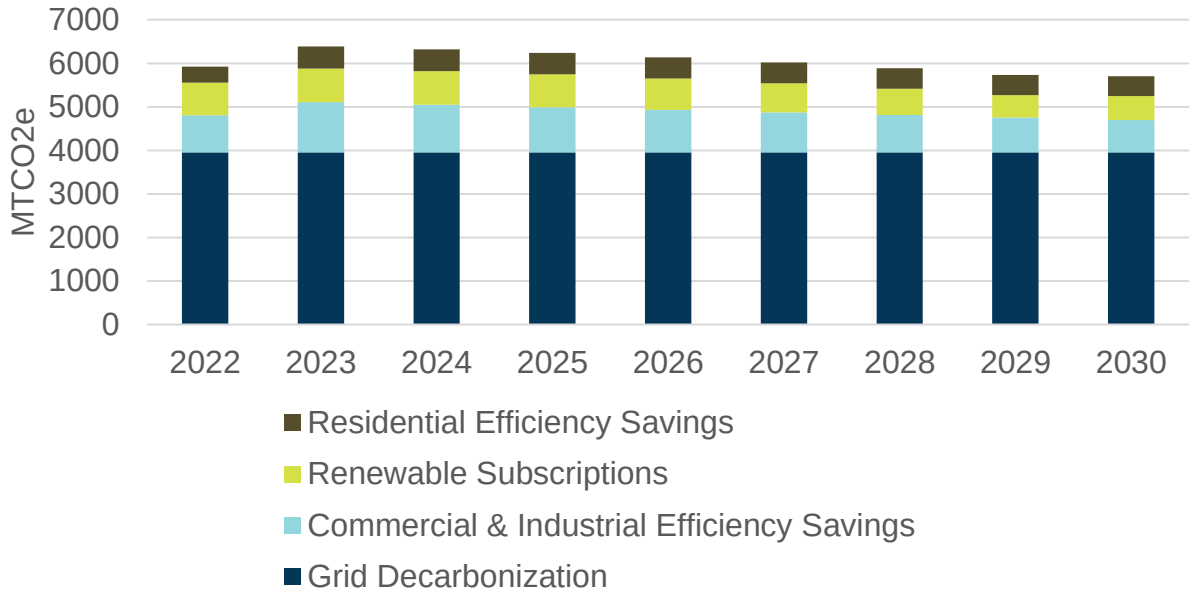
- On-site Renewable Energy Generation
- Building Electrification

Figure 9. Greenhouse gas reduction scenario projection (modeled by Partners in Energy).



Another way to visualize this goal is to examine what emissions reductions New Brighton will have to achieve on an annual basis. Figure 10 shows that the largest contributor to the greenhouse gas reductions will be grid decarbonization, followed by the commercial/industrial sector energy savings, renewable energy subscriptions and then residential energy sector savings. Savings are highest in 2023 and 2024, which be the first phase of implementation and when the most resources are dedicated to working toward the strategies included in this plan.

Figure 10. Annual greenhouse gas savings targets by contributing sectors (modeled by Partners in Energy).



Focus Area Targets

To stay on track to meeting our community-wide goal, we established specific focus area targets.

Energy Efficiency Target
Increase energy savings by 40% on community-wide electricity and natural gas energy by 2030.

Renewable Energy Target
Increase residential and commercial & industrial subscribers in Xcel Energy renewable subscription offerings by 45% by 2030.

The energy efficiency target results from an increase in annual participation in utility energy efficiency programs in both the residential and commercial/industrial sectors (see Table 19 and Table 20). The renewable energy target would also increase participation in Xcel Energy's renewable energy subscription programs like Windsource® and Renewable*Connect where customers retain the renewable energy credit.

Table 6. Annual residential energy efficiency targets against baseline.

Residential Energy Efficiency Offering	Annual Participants: 2021 Baseline	Annual Participants: 40% Goal Scenario
New Construction	38	50
Home Energy Audits	19	30
HVAC	448	630
Income-Qualified	11	15
Other Equipment Rebates	423	594

Table 7. Annual commercial/industrial energy efficiency targets against baseline.

Commercial/Industrial Energy Efficiency Offering	Annual Participants: 2021 Baseline	Annual Participants: 40% Goal Scenario
New Construction & Renovation	4	4
HVAC +R	25	40
Lighting	46	95
Multifamily	4	15
Other Equipment Rebates	1	5

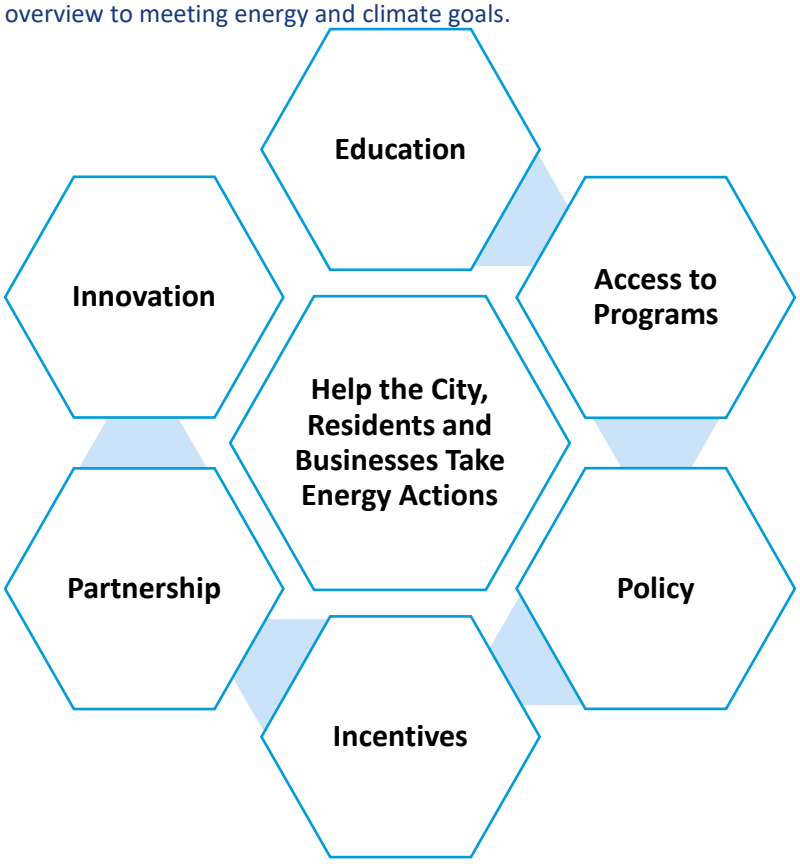
Table 8. Annual renewable energy subscription targets against baseline.

Renewable Subscription Program	Participants: 2021 Baseline	Participants: 2030 Goal Scenario
Renewable*Connect (fully subscribed)	23	23
Windsource - Residential	516	750
Windsource – C&I	8	35

HOW WE ARE GOING TO GET THERE

The work within this plan that will ultimately get us to these goals will include the following strategies and actions that were identified by the Energy Action Team and Climate Action Team.

Figure 11. Strategic overview to meeting energy and climate goals.



Strategy Considerations

The Energy Action Team identified certain considerations that applied to all the strategies to ensure their success. These considerations were:

- A full-time sustainability City staff position will be considered as part of implementing this plan and other efforts for the City's long-term resilience.
- Successes in this work will be celebrated and communicated publicly.
- Policies and ordinances created and changed by this plan should remain business friendly as standard practice.
- The creation of a commission or other team of volunteers focused on sustainability to guide these strategies will be considered to ensure success.
- An accessible City webpage with energy and climate information will be created to ensure that the information developed in these strategies can be widely shared.
- Collaboration with other cities and public entities will be considered in this work whenever possible.
- This plan will ensure these strategies reach diverse audiences including school districts, business councils, faith organizations, building owners, and industry.
- All outreach in this plan will incorporate information on financing and grants for projects, include all levels of support from federal to local opportunities.
- The City of New Brighton will lead by example and will build partnerships intentionally.

Timeline and Priorities

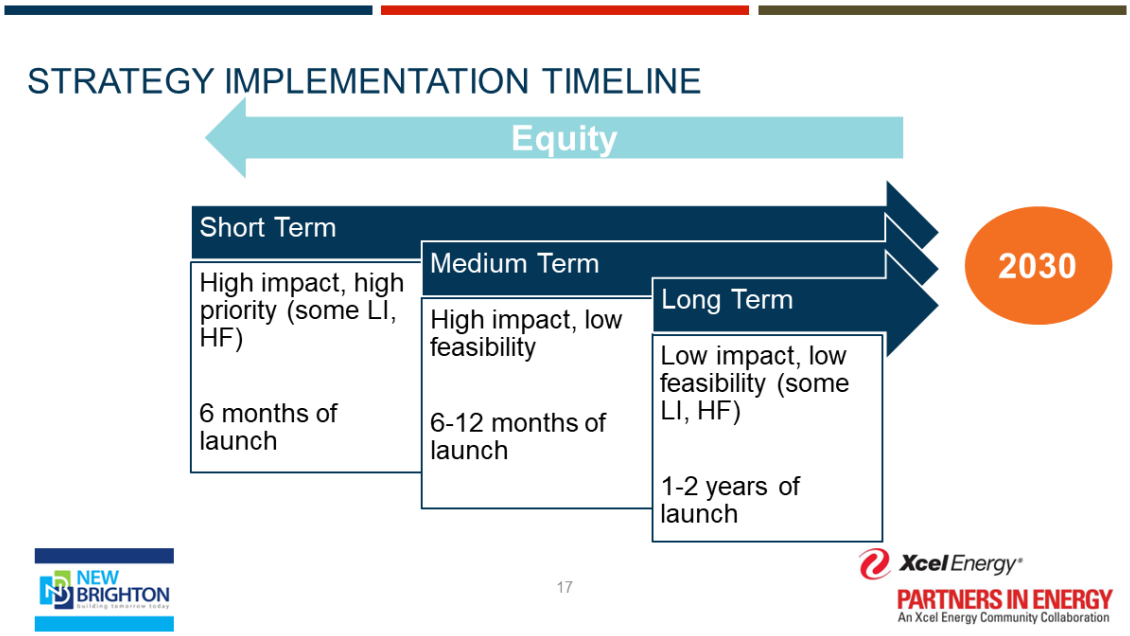
The Energy Action Team developed the strategies and actions in this plan by brainstorming all possible strategies and prioritizing them based on impact and feasibility. The words "impact" and "feasibility" had different meanings to each of the team members depending on their perspective. For example, "feasibility" for City staff and City Council might mean a dollar figure or budget consideration. To community members, it may mean availability of community resources and support. Similarly, "impact" might mean greenhouse gas impacts to some, while to others it might mean community mobilization or visibility. Each perspective was carefully considered in ranking the strategies.

Depending on where the strategy fell in the impact-feasibility matrix during the workshop exercise, that strategy could then be put into a short-, medium- or long-term category. Those timelines were described as follows.

- Short-Term: Begin implementing within six months of plan launch.
- Medium-Term: Begin implementing within one year of plan launch.
- Long-Term: Begin implementation within two years of plan launch.

These timelines were set to take advantage of the Partners in Energy program's implementation period to maximize resources for each strategy. The timeline for the strategies will continue throughout the plan as the strategies are refined and repeated.

Figure 12. Timeline visual of strategy priorities from planning workshops.



LI stands for low-impact and HF stands for high-feasibility.

The following strategies, organized by focus area, are placed in order of priority within each focus area as the team considered the impact and feasibility of these actions. Included for each strategy is a section identifying other considerations, partnerships and funding opportunities. The Energy Action Team identified specific communication tools, financing options and community partners as a part of this plan. These potential partners and communication organizations have not yet agreed to be a part of this work but are mentioned in each strategy to be considered.

Funding for Strategies

Each strategy that may require funding through grants, subsidies or city funding is noted by the plant icon to symbolize the need to seek, develop or grow those funds as a part of this work.

Focus Area: Energy Efficiency

Strategy 1: Create a long-term energy efficiency campaign to help residents save energy and money

Public education and outreach to New Brighton residents will help them understand the programs and resources available to make energy efficiency improvements in their homes and behaviors.

Desired Outcomes:
Increased understanding of energy efficiency opportunities among audiences and achieved energy savings.

Actions:

1a	**Work with local social service organizations to communicate opportunities to save energy and money to their networks**	The City and Partners in Energy will lead this effort in tandem with local organizations recognized by the planning team including youth, food, multi-family, faith and community organizations
1b	**Partner with school sustainability teams or interested educators to connect with students and share energy saving opportunities and challenges**	The City and Partners in Energy will guide partnerships with the school district, student climate teams and community education to help those partners continue the effort and take leadership of ongoing efforts
1c	**Spread information on multi-family low-income efficiency programs through local agencies and partners**	Partners in Energy will create multi-lingual marketing materials for the Multi-family Licensing, City inspections and DEI coordination teams to lead these efforts

Timeline: Near-term (1–6 months)

Other considerations/partnerships/funding opportunities for this strategy:
Potential partners include Northeast Youth and Family Services, Mounds View School District, New Brighton Farmers Market and the Multi-family Housing Coalition. Existing programs and communication channels to use could be the Home Energy Squad, Xcel Energy School Efficiency Kits and School District communication/newsletters.

Strategy 2: Promote home energy assessments and energy advisor services to connect residents with programs suited to their household needs

Supporting New Brighton's residents in receiving home energy assessments helps them understand their household's unique energy needs and identify potential ways to save energy. Energy advisor services can help residents prioritize and complete efficiency projects and take advantage of financial resources.

Desired Outcomes:

Increased understanding of energy use among audiences and a list of energy savings opportunities to use in recommended projects. Connecting residents to federal and state funding and utility rebates.

Actions:

2a	**Explore implementing a full cost buy-down for Home Energy Squad visits for residents**	The City and Partners in Energy will lead this effort by leveraging available City resources and federal and state funding options with ultimate council approval
2b	**Focus outreach efforts on energy burdened households, older homes and manufactured home parks**	The City and Partners in Energy will guide partnerships with school district, student climate teams and community education to help those partners continue the effort and lead ongoing efforts

Timeline: Near-term (1–6 Months)

Other considerations/partnerships/funding opportunities for this strategy:

Potential partners include the Minnesota Housing and Finance Agency, Home Energy Squad and Senior Family Housing. Possible outreach channels include the Active Life Newsletter and tabling at farmers markets.

Strategy 3: Engage businesses to enroll in energy efficiency programs

Commercial and industrial businesses are the largest energy users by premise. Engaging businesses with energy efficiency opportunities has a high potential impact to help businesses save energy and money and help New Brighton reach its Energy Action Plan goals.

Desired Outcomes:

One or more businesses make energy efficiency improvements. Awareness of energy efficiency grows in the business community.

Actions:

3a	**Encourage high commercial energy users to enroll in energy efficiency programs**	The City, Economic Development Commission and City Council will lead this effort and leverage city relationships and the Chamber of Commerce to develop business partnerships
3b	**Work with a leading business to provide a case study on commercial energy efficiency projects**	The City and Partners in Energy will look for existing projects to highlight and promote

Timeline: Near-term (1–6 Months)

Other considerations/partnerships/funding opportunities for this strategy:

Potential communication channels include the North TV Channel and the local and state Chamber of Commerce networks.

Strategy 4: Update city code, building policies and ordinances to ensure energy efficiency in existing buildings, new construction and retrofits/renovations

City policy can boost energy efficiency actions by making them easier to complete and requiring standards when projects are funded through taxpayer dollars. Reviewing existing policies for barriers and creating new policies where needed can help achieve energy efficiency goals.

Desired Outcomes:

Form new relationships between City departments and policy decision makers and increase energy efficiency education for City staff and elected officials. Create new energy efficiency policies in housing and building areas.

Actions:

4a	**Create a new construction efficiency program information packet to share before code and permitting processes**	Partners in Energy and the City will lead this effort alongside the permitting team
4b	**Create a building benchmarking program for large commercial and municipal buildings**	The City will look to other benchmarking programs and benchmarking experts to develop a program for New Brighton
4c	**Create a sustainable building policy that requires City-funded construction to meet energy efficiency standards**	The City will look to other existing city policies and best practices to adapt and adopt by Council approval

Timeline: Near-term (1–6 Months)

Other considerations/partnerships/funding opportunities for this strategy:

Potential partners for guidance and templates for ordinances include Ramsey County, Center for Energy and Environment, and the Cities of Edina, St. Louis Park and Bloomington who have existing policies.

Strategy 5: Create or update policy, ordinances and incentives to help save energy for under-resourced residents

New federal, state, utility and city funding resources for energy efficiency work will be available soon. The City can align policies, ordinances and incentives with other funding sources to make energy efficiency improvements feasible for more residents.

Desired Outcomes:
Create city policies and incentive programs that leverage outside funding. More low-income families are able to make efficiency improvements to their homes.

Actions:

5a	**Create a residential energy disclosure policy for 1) rentals and 2) home sales**	The City will lead this effort alongside the Department of Community Assets and Development and look to other existing city policies and best practices to adapt and adopt
5b	**Develop city incentives to support energy efficiency improvements for low- and middle-income residents**	The City will look to other city policies and resources to imitate and improve upon
5c	**Develop a city incentive for landlords to make energy efficiency upgrades to affordable multi-family or buildings or 1-4 unit households, where residents will benefit from savings**	The City will look to other city policies and resources to imitate and improve upon

Timeline: Mid-term (6–12 Months)

Other considerations/partnerships/funding opportunities for this strategy:
Possible channels for spreading this information include utility bills, realtor group communications, and the Ramsey County Housing and Redevelopment Authority. Possible funding sources include the Inflation Reduction Act tax incentives and rebates, State of Minnesota rebates, utility rebates, and on-bill financing.

Focus Area: Renewable Energy

Strategy 1: Execute a long-term residential renewable energy education campaign

Renewable energy subscription programs are a low-cost way for residents to source more of their energy from renewables, while there are other on-site options available with rebate or other incentive opportunities.

Desired Outcomes:
Increasing awareness of available programs for residents and businesses to access renewable energy and take the first step. Participate in subscriptions and on-site renewable energy options.

Actions:

1a	**Table at local events to drive awareness of residential renewable energy programs**	The City and Partners in Energy will lead this effort alongside other partners and local renewable energy organizations

Timeline: Mid-term (6–12 Months)

Other considerations/partnerships/funding opportunities for this strategy:
Xcel Energy Renewable Energy Programs, Farmers Market, Veterans groups, Lions Eagles, Rotary, and Arcadia.

Strategy 2: Engage businesses to enroll in renewable energy programs

Business renewable energy systems can help reach the energy goals of this plan but also help businesses save on utility costs and promote their contributions to greenhouse gas reductions.

Desired Outcomes:
Five or more additional businesses participate in renewable energy programs in the next two years.

Actions:

2a	**Encourage the top commercial energy users to enroll in renewable energy programs**	The Economic Development Council, Department of Community Assets and Development, and City Council will lead on these actions with support from Partners in Energy and City communications staff
2b	**Work with a leading business to provide a case study on renewable energy adoption**	
2c	**Conduct a small business renewable energy campaign promoting renewable subscription programs**	

Timeline: Near-term (1–6 Months)

Strategy 3: Create and/or promote incentives for businesses to switch to renewable energy

There are incentives currently available for the installation or participation in subscription renewable energy programs. Providing additional incentives and promoting available incentives will lead to greater participation.

Desired Outcomes:
Five or more additional businesses participate in renewable energy programs in the next two years.

Actions:

3a	**Develop an outline (including budget) of incentives for testing and refinement where needed**	The City and Partners in Energy will lead these efforts with the appropriate departmental input, communications, and funding help, and approval
3b	**Incorporate incentives into regular business communications**	
3c	**Develop a recognition program for businesses to be praised for their participation in renewable energy programs**	

Timeline: Near-term (1–6 Months)

Other considerations/partnerships/funding opportunities for this strategy:
Minnesota Housing Finance Agency

Strategy 4: Create a sustainable building policy that requires City-funded construction to meet renewable energy standards

For new construction and large renovations, the City can incentivize businesses and develop relationships through renewable energy standards.

Desired Outcomes:
Develop relationships with building owners and developers and update policies.

Actions:

4a	**Develop an outline (including budget) of incentives for testing and refinement where needed**	The City and Partners in Energy will lead these efforts alongside policy partners, Parks, Recreation and Environment Commission, and City Council.

Timeline: Mid-term (6–12 Months)

Other considerations/partnerships/funding opportunities for this strategy:
Partner with experts on energy policy with Center for Energy and Environment and the Cities of Edina, St. Louis Park and Saint Paul who have existing policies.

Focus Area: Beneficial Electrification

Strategy 1: Conduct a residential electrification education campaign

Education campaigns are essential for a changing home and building landscape. Electric appliances are a change from the normal considerations but can help residents have a safer, healthier and greener home.

Desired Outcomes:
Help inform residents on their options for electric appliances as they are replacing older or inefficient appliances.

Actions:

1a	**Address misconceptions and promote new technologies through educational materials and City communications**	The City and Partners in Energy will lead this effort alongside other partners and local renewable energy organizations

Timeline: Long-term (12–18 Months)

Strategy 2: Conduct a campaign to replace cooling system installations with heat pumps

Heat pumps are currently incentivized and adopted more frequently. New federal, state and utility incentives will become available in 2024 for heat pumps. Contractors and organizations are partnering to bring the technologies to the market. Education is needed as part of the market efforts and for residents making decisions about their homes.

Desired Outcomes:
Adoption of heat pumps as cooling or heating appliances are replaced in homes.

Actions:

2a	**Create and distribute communications to local distributers, contractors and residents about cooling system replacement options and available incentives**	The City and Partners in Energy will lead this effort alongside other partners and local renewable energy organizations

Timeline: Mid-term (6–12 Months)

Other considerations/partnerships/funding opportunities for this strategy:
Air Source Heal Pump Collaborative, contractor networks, and ground-source heat pump organizations.

Strategy 3: Communicate electrification opportunities to businesses

Businesses can participate in upgrading to electric appliances in several ways. Depending on what appliances or equipment is replaced, it could save on utility costs, interior air quality and maintenance.

Desired Outcomes:

Adoption of a policy standard for new construction, participation from businesses across a broad spectrum of business types, and a geothermal/ground-source heat pump pilot which can determine city-wide benefit and community interconnectivity potential as streets are redone.

Actions:

3a	**Create a sustainable building policy that requires City-funded construction to meet electrification standards**	The Department of Community Assets and Development, City Council, and finance department will lead this effort
3b	**Explore and implement a City-led building electrification pilot project (i.e., net-zero building and/or geothermal)**	The City Parks and Recreation Department will work with City Council and design firms on this effort as park buildings are upcoming
3c	**Conduct a geothermal geological assessment of the city of New Brighton or in a specified area where a geothermal or ground-source heat pump project might be piloted** (ideally in an area or building benefitting under resourced households)	The City and Partners in Energy will lead this effort alongside housing departments, development and finance departments

Timeline: Medium-term (6–12 Months)

Other considerations/partnerships/funding opportunities for this strategy:

Minnesota Geothermal Heat Pump Association, federal grants and incentives, and Xcel Energy.

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.

Implementation Support from Partners in Energy

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.

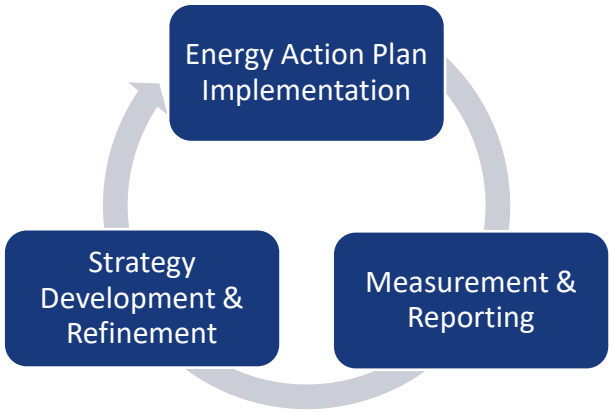


Figure 13. Actions and Tracking

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 for the first 18 months of implementation. If necessary, an implementation check-in meeting with the Energy Action Team can be convened to assess progress towards goals and discuss strategy refinement.

Energy Action Team Commitment

The Energy Action Team formed to create this plan is a passionate team committed to supporting implementation of the pieces of this plan that reflect their interest and the work they put into planning. As the planning process concluded, the team reflected on their excitement about the equity pieces of this plan and honoring the best interests of the community through this work. They also were excited

about the biggest projects with large energy users as a way to make a dent in the goals. The group stressed the importance of education through this process and the partnerships that will make this a success.

Community Assets and Partners

Throughout the planning process the Energy Action Team identified community assets and potential partners to help connect strategies to community and make them a success (Figure 14).

City of New Brighton Commitment

The City of New Brighton will provide a primary point of contact for implementation and will assign staff members to attend regular project management check-ins. The City commits to leveraging existing communication channels and community connections for outreach and engagement strategies. In addition, City staff will lead strategies specific to City-owned buildings and policies.

The City of New Brighton is committed to helping residents access energy related opportunities to help implement projects in households. The city is also committed to City projects that would enhance the City's energy savings and use of clean energy.

Figure 14. Community assets and partners to make implementation successful (Green is potential partnerships and blue is community assets, some may be duplicate).

Students	Peer Cities	Utilities	Building Owners	Businesses	Industry
City Council	Event Planners	Chamber of Commerce	Business Council	Faith Based Groups	Industry Partners
Farmers Market	School Resource Officers	Manufactured Home Parks	ESL Residents	Charter School - Global Academy	Seminary
Youth Groups	CEE	National Night Out Organizers	NEYF	Food Shelf	Licenses and Inspections
Minnesota Housing and Finance Agency	County	Veterans	Lions, Eagles, Rotary Groups	EDC	Resident/Renter groups
Neighborhood Orgs.	City Safety Depts.	Community Assets and Development	Near MPLS & MSP	Investments in Parks	Student enthusiasm
Tree City for 40 Years	Buildings	Public Works	Charging Network	Green Steps 5	Progressive on Solar & re-use
Solar on Muni Bldgs.	Parks and Trails Commission	Sustainability Commission	5 EV Fleet Vehicles	Parks Gas Replacement	Peak Shaving
Supportive Council	Multi-family Building Housing	Water Treatment Engagement	Golf Course	Events	No-Mow Grasses
City Reputation on Sustainability	LEDs in Muni Bldgs.	Dimming Street Lights	Solar Community Interest	ESL Residents	Industry
Farmers Market	Manufactured Home Parks	ESL Residents	Community Center	Quarterly City Newsletter	Parks and Recs Events
Stockyard Days	Chalk Walk	Pumpkin Walk	Tree Planting	Billboard	Drive 25 Campaign
	Community Message Boards	Social Media Pages	Neighborhood Social Sites	Resident Response for Action Link	

APPENDIX A: BASELINE ENERGY ANALYSIS

Data was provided by Xcel Energy for all New Brighton premises for 2019–2021. Xcel Energy provides electric and natural gas service to the community. The data helped the Energy Action Team understand New Brighton'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

Most New Brighton premises are residential. Of the 11,317 distinct premises in New Brighton in 2021, 90% (10,150) are residential, 9% (1,100) are commercial and industrial, and the remaining 1% are municipal buildings (67).

Table 9. Premise counts by sector, 2021.

Sector	Premise Count	Percent of Premises
Residential	10,150	90%
Commercial & Industrial	1,100	9%
Municipal	67	1%
Total	**11,317**	**100%**

Electricity and Natural Gas Consumption and Trends by Sector

On average, the New Brighton community consumes 180 million kWh of electricity and 11.6 million therms of natural gas across all sectors per year. Total energy consumption decreased over the baseline period, which can be attributed to a large decrease in natural gas consumption and more modest decrease in electric consumption.

Table 10. Average annual energy consumption by sector by fuel type, 2019–2021.

Sector	Electricity Consumption (kWh)	Natural Gas Consumption (Therms)	Total Energy Consumption (MMBtu)	Percent of Total Energy Consumption
Residential	66,718,313	6,020,162	829,659	47%
Commercial & Industrial	107,238,546	5,420,782	907,976	51%
Municipal	5,550,267	190,683	38,006	2%
Total	**179,507,126**	**11,631,628**	**1,775,641**	**100%**

Table 11. Annual energy consumption by sector by fuel type, 2019–2021.

	Fuel Type	Residential	Commercial & Industrial	Municipal	Total
2019	Electric (kWh)	63,869,317	111,770,319	5,988,377	181,628,013
	Natural Gas (therm)	6,580,331	5,866,103	177,413	12,623,847
	Total (MMBtu)	875,955	967,971	38,174	1,882,099
2020	Electric (kWh)	67,163,234	105,490,278	5,257,692	177,911,204
	Natural Gas (therm)	5,790,927	5,225,789	193,717	11,210,433
	Total (MMBtu)	808,254	882,512	37,311	1,728,076
2021	Electric (kWh)	69,122,388	104,455,042	5,404,731	178,982,161
	Natural Gas (therm)	5,689,229	5,170,455	200,919	11,060,603
	Total (MMBtu)	804,768	873,446	38,533	1,716,747

Total energy consumption during the baseline period varied in each sector consistent with variation in weather. Hotter summers (those with more cooling degree days) and colder winters (those with more heating degree days) had higher energy consumption. New Brighton's natural gas consumption decreased during the baseline period by roughly 12%. This correlates with the decrease in heating degree days each successive year.

Table 12. Cooling degree and heating degree days, 2019–2021.

	2019	2020	2021
Cooling Degree Days	817	950	1,184
Heating Degree Days	7,921	7,128	6,678

Greenhouse Gas Emissions and Trends

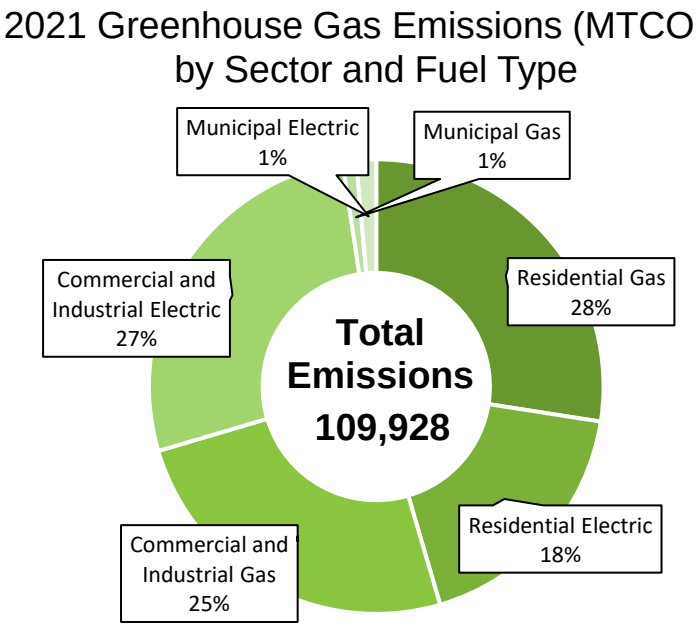
New Brighton's overall greenhouse gas (GREENHOUSE GAS) emissions decreased from 2019–2020 and grew slightly from 2020–2021.

Table 13. Energy-related greenhouse gas emissions in MTCO2e, 2019–2021.

Sector	2019	2020	2021
Residential	56,506	48,951	49,977
Commercial and Industrial	68,903	56,348	57,337
Municipal	2,965	2,454	2,613
Total	**128,374**	**107,753**	**109,928**

In 2021, the residential sector generated 46% of New Brighton's energy-related greenhouse emissions in 2021 and the commercial sector generated 52% of the emissions. Natural gas consumption made up the largest proportion of emissions for both the residential and commercial sectors, adding up to 53% of all energy-related emissions.

Figure 15. Energy-related greenhouse gas emissions by sector and fuel type, 2021.



To calculate New Brighton's energy-related emissions, preliminary and certified emissions factors from Xcel Energy's Upper Midwest Fuel Mix, and a standard emissions factor for natural gas emissions, were used. As Xcel Energy completes third-party verification, the emissions factors used during the planning process to estimate greenhouse gas emissions (Table 14) may change.

Table 14. Emissions factors used to calculate energy-related greenhouse gas emissions, 2019–2021.

Fuel Type	2019	2020	2021
Electricity Emissions Factor (lbs/MWh)	745	598	631
Natural Gas Emissions Factor (MTCO2e from natural gas))	0.053071	0.053071	0.053071

Energy Costs

In total, New Brighton premises spent an annual average of $26.6 million on energy during the baseline period. New Brighton commercial premises made up just over half of that spending, while residential premises made up most of the other half. A small fraction of the spending was from municipal premises. Residential premises spent an annual average of $1,225 per premise on energy. Commercial premises spent much more per premise on energy with an annual average of $12,476 per premise.

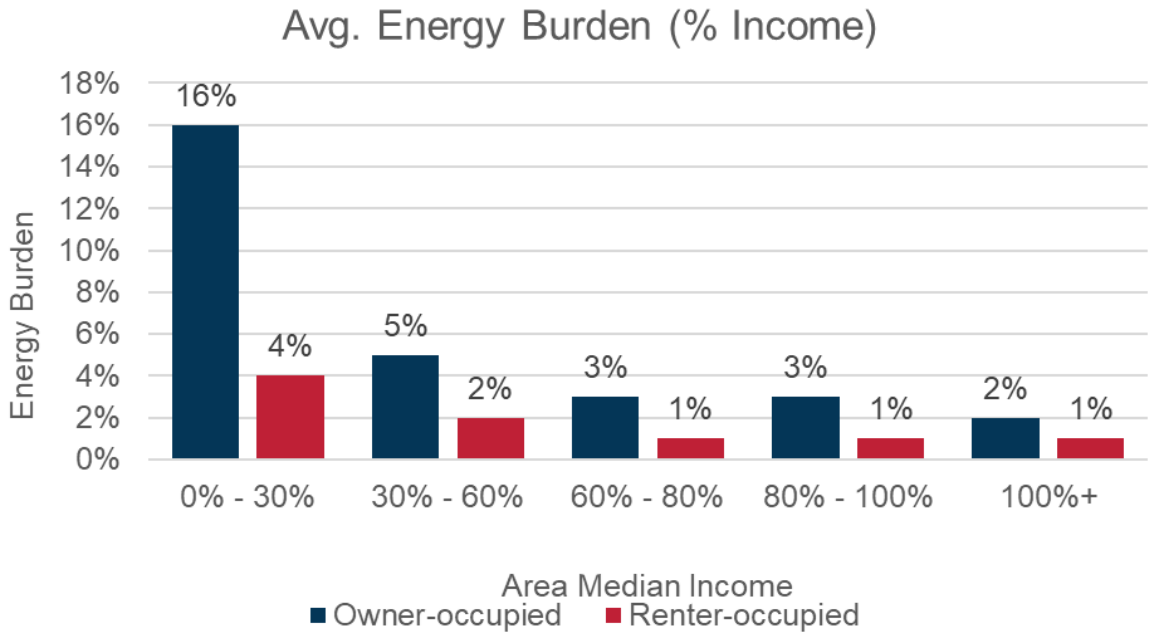
Table 15. Average annual energy costs by sector and fuel type, 2019–2021.

Sector	Electricity Costs	Natural Gas Costs	Total Costs	Average Annual Cost per Premise
Residential	$8,536,271	$3,721,529	$12,257,800	$1,225
Commercial and Industrial	$10,912,880	$2,781,301	$13,694,181	$12,476
Municipal	$546,648	$103,290	$649,939	$9,999
Total	**$19,995,799**	**$6,606,121**	**$26,601,920**	

Energy Burden

Energy burden is the percentage of income that residents spend on energy. New Brighton residents making 30% or less of the median area income spend up to 16% of their income on energy costs. Notably, energy burden is higher across every income group for homeowners rather than renters. This is unusual and may be due to New Brighton's slightly older single-family housing stock in comparison to its newer multi-family housing stock.

Figure 16. Energy burden by unit occupancy and median income.[5]



Program Participation and Savings

New Brighton already has a significant number of participants in energy efficiency programs from Xcel Energy, resulting in energy savings for residents and commercial customers. While fewer commercial

[5] Department of Energy Low-income Energy Affordability Data (LEAD) Tool.

premises participate, their participation results in larger savings per premise. In total, participation in these commercial programs saved an annual average of 1,399,368 kWh and 37,634 therms.

Table 16. Annual residential sector efficiency program participation and savings, 2019–2021.

Residential Sector Programs	2019			2020			2021		
	Count	Savings (kWh)	Savings (therms)	Count	Savings (kWh)	Savings (therms)	Count	Savings (kWh)	Savings (therms)
Efficient New Home Construction	0[6]	0	0	13	17,117	2,279	38	47,821	4,504
Home Energy Audit	71	-	-	11	-	-	19	-	-
Home Energy Savings Program	20	5,276	1,112	12	6,997	418	7	5,213	149
Home Energy Squad	34	41,365	1,619	15	17,020	497	19	23,303	875
Insulation Rebate	23	4,286	8,004	21	3,502	6,754	21	2,627	5,377
Low-Income Home Energy Squad	9	8,214	479	5	4,355	233	4	3,464	125
Multi-Family Energy Savings Program	0	0	-	0	0	-	0	0	-
Residential Cooling	188	55,710	-	204	56,204	-	-	-	-
Residential Heating	0	0	0	0	0	0	-	-	-
Residential HVAC	181	105,325	26,219	229	143,355	27,227	427	114,674	42,449
Refrigerator Recycling	53	41,109	-	60	45,449	-	49	38,376	-
Residential Saver's Switch	139	280	-	162	328	-	237	252	-
Smart Thermostat	25	2,410	1,260	11	1,201	630	136	4,805	2,560
Water Heater Rebate	17	-	516	10	-	520	0	-	0
Whole Home Efficiency	2	1,236	1,057	0	0	0	1	83	221
Total	**762**	**265,211**	**40,266**	**753**	**295,528**	**38,558**	**958**	**240,618**	**56,260**

[6] In this table, "0" indicates no savings were achieved. "-" indicates no savings were possible for that fuel type with that program.

Table 17. Annual commercial/industrial sector efficiency program participation and savings, 2019–2021.

Commercial Sector Programs	2019			2020			2021		
	Count	Savings (kWh)	Savings (therms)	Count	Savings (kWh)	Savings (therms)	Count	Savings (kWh)	Savings (therms)
Business Energy Assessments	-[7]	-	-	-	-	-	0	0	0
Commercial Refrigeration Efficiency	0	0	0	2	1,901	0	0	0	0
Cooling	5	27,585	-	2	7,076	-	0	0	-
Custom Efficiency	0	0	0	0	0	0	0	0	0
Data Center Efficiency	0	0	0	0	0	0	0	0	0
Efficiency Controls	0	0	0	2	36,249	6,873	0	0	0
Electric Rate Savings	4	-1,097	0	3	-3,275	0	2	-266	0
Energy Design Assistance	0	0	0	0	0	0	4	749,434	54,850
Energy Efficient Buildings	0	0	0	0	0	0	0	0	0
Fluid System Optimization	4	134,941	-	2	157,455	-	0	0	-
Foodservice Equipment	1	0	274	0	0	0	1	0	946
Heating Efficiency	36	-	30,770	8	-	5,663	0	-	0
HVAC+R Efficiency	-	-	-	-	-	-	24	68,322	8,070
Lighting Efficiency	34	346,681	-	21	466,592	-	26	396,357	-
Motor Efficiency	3	102,792	-	0	0	-	-	-	-
Multi-Family Building Efficiency	10	55,049	2,696	7	1,290	64	4	40,791	996
Process Efficiency	0	-	-	0	-	-	0	-	-
Recommissioning	0	0	0	0	0	0	0	0	0
Saver's Switch for Business	3	57	-	1	0	-	2	14	-
Small Business Lighting	15	411,548	-	18	715,193	-	20	483,416	1,701
Turn Key Services	0	-	-	-	0	-	5	-	-
Total	115	1,077,556	33,740	66	1,382,481	12,600	88	1,738,068	66,563

[7] In this table, "0" indicates no savings were achieved. "-" indicates no savings were possible for that fuel type with that program.

Renewable Energy Support

There is support for renewable energy in New Brighton with more than 580 residential premises subscribing to Xcel Energy renewable programs. These premises receive a total of 2.25 million kWh of their electricity from renewable sources, the equivalent of taking 354 gas-powered cars off the road for a year.[8] The commercial/industrial sector has fewer subscribers to renewables programs (11), but these customers receive 2.28 million kWh of electricity from renewables, a higher total than the residential sector due to larger subscriptions per premise. Overall, there is potential to increase renewable energy use in New Brighton, with about 2.5% of New Brighton's electricity coming from renewable energy programs.

Table 18. Xcel Energy renewable energy subscriptions and program participation, 2021.

	Residential	Commercial & Industrial
Subscription Programs - Windsource® & Renewable*Connect®		
Subscriber Count	539	8
Total Annual Electricity Subscribed (kWh)	1,939,634	769,673
Percent of Sector Xcel Energy Electricity Use	2.8%	0.7%
Community Solar Gardens - Solar*Rewards® Community		
Subscriber Count	42	3
Total Annual Electricity Subscribed (kWh)	306,327	1,509,261
Percent of Sector Xcel Energy Electricity Use	0.4%	1.5%
On-site Solar - Solar*Rewards® and Net-Metering[9]		
Participant Count	112	36
Total Electricity Capacity (kW)	866	1,412
Total Xcel Energy Renewable Energy Support[10]		
Subscriber Count	581	11
Total Annual Electricity Subscribed (kWh)	2,246,300	2,279,300

[8] https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator
[9] On-site solar data from the Xcel Energy Community Energy Report, 2021. https://www.xcelenergy.com/community_energy_reports
[10] Excludes on-site solar due to behind the meter generation.

APPENDIX B: 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 New Brighton. All goals will be measured against New Brighton's 2021 baseline unless otherwise noted.

The following section defines the values against which progress is measured for the goals identified in the Energy Action Plan, and excludes goals set in New Brighton's Climate Action Plan. Data from the Energy Action Plan and progress reports provided by Partners in Energy may inform the community's progress toward Climate Action Plan goals.

Energy Efficiency Goal

- Increase energy savings by 40% on community-wide electricity and natural gas efficiency by 2030.

This goal measures cumulative energy savings for electricity and natural gas savings for all sectors between 2023 and 2030 against the 2021 baseline value for the same time period. First-year energy savings data provided by Xcel Energy for current and future energy efficiency programs will be used to calculate electricity and natural gas savings.

Table 16. Cumulative savings scenarios.

	Cumulative 2030 Baseline Scenario	Cumulative 2030 Goal Scenario
Electricity Savings (kWh) – Residential Sector	1,924,944	2,710,164
Electricity Savings (kWh) – Commercial/Industrial Sector	13,906,560	22,458,528
Natural Gas Savings (therms) – Residential Sector	450,080	631,309
Natural Gas Savings (therms) – Commercial/Industrial Sector	532,504	627,886
Total Energy Savings (MMBtu)	152,275	211,795

Annual Participation Targets

To meet New Brighton's 2030 goal, the community will need to increase Xcel Energy program participation, saving more electricity and natural gas annually than the baseline scenario. This section identifies the annual participation targets needed to stay on track to meet the 2030 goal by sector. Participation includes Xcel Energy's current energy efficiency programs for residential and commercial/industrial customers. As new programs are added to Xcel Energy's portfolio, they will be included in these targets as determined by the community and Partners in Energy facilitators.

Table 19. Annual residential program participation targets.

	Annual Baseline Scenario	Annual Goal Scenario
New Construction	38	50
Home Energy Audits	19	30
HVAC	448	630
Income Qualified	11	15
Other Equipment Rebates	423	594
Total	**939**	**1,319**

Table 20. Annual commercial/industrial program participation targets.

	Annual Baseline Scenario	Annual Goal Scenario
New Construction & Renovation	4	4
HVAC+R	25	40
Lighting	46	95
Multi-family	4	15
Other Equipment Rebates	1	5
Total	**80**	**159**

Renewable Energy Goal

- Increase residential and commercial & industrial subscribers in Xcel Energy renewable subscription offerings by 45% by 2030.

This goal measures renewable energy program participation for all sectors in Xcel Energy's renewable energy subscription programs against the 2021 baseline. Participation data provided by Xcel Energy for Renewable*Connect and Windsource will be used to calculate the increase from 2023 through 2030. As new renewable energy subscription programs are added to Xcel Energy's portfolio, they will be included in these targets as determined by the community and Partners in Energy facilitators.

Table 21. Renewable energy program participation targets.

	2021 Baseline	2030 Goal Scenario
Renewable*Connect – All Sectors	23	23
Windsource – Residential	516	750
Windsource – Commercial/Industrial	8	35
Total	**547**	**808**

Greenhouse Gas Emissions Reduction Goal

- Reduce energy-related greenhouse gas emissions 34% by 2030 compared to a 2021 baseline.

This goal measures cumulative greenhouse gas savings through energy efficiency and renewable energy subscriptions 2023 to 2030. Energy savings and renewable electricity data from Xcel Energy will be used to estimate total greenhouse gas emission savings. All Xcel Energy efficiency programs and Xcel Energy's renewable energy programs where the customer retains the Renewable Energy Credits will be included in this goal. To calculate greenhouse gas emissions, Partners in Energy facilitators will use preliminary and certified emissions factors from Xcel Energy's Upper Midwest Fuel Mix.

Table 22. Cumulative greenhouse gas emission savings targets.

	Annual 2030 Goal Target	Cumulative 2030 Goal Scenario
Energy Efficiency Greenhouse Gas Emissions (MTCO2e)	1,354	10,828
Renewable Electricity Greenhouse Gas Emissions (MTCO2e)	670	5,358
Total	**2,023**	**16,186**

APPENDIX C: 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.

Partners in Energy Process for Success

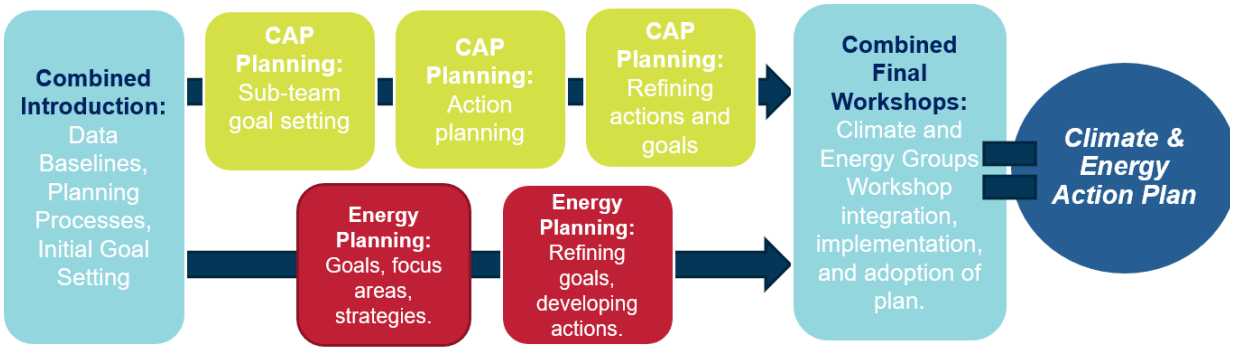
Resources from Xcel Energy for Implementation

Plan Development Process

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

The process coincided with the Climate Action Plan and therefore some of that planning was also combined with the climate action planning team. The process began in February and finished in August of 2023.

Figure 17. Climate and energy planning workshop overview.



APPENDIX D: IMPLEMENTATION MEMORANDUM OF UNDERSTANDING

[To be inserted upon plan approval]