City Council Memorandum

To: Mayor Fasbender & City Council Members

From: Megan White, Human Resources Technician

Date: June 17, 2019

Item: Energy Action Plan

Council Action Requested: Council is asked to support the Energy Action Plan as presented by staff, Xcel Energy and members of the Energy Action Team.

Background Information: The City of Hastings applied to be a part of Xcel Energy's Partners in Energy in November of 2017, we were accepted in February of 2018 and workshops began in June of 2018. The Energy Action Team members consisted of residents from Hastings, City Staff, and Councilmember Tina Folch. Along with representatives from Xcel Energy, Dakota Electric, Citizens Utility Board, Hastings Environmental Protectors, CenterPoint Energy, Chamber of Commerce, and local businesses.

The Energy Action Team and Partners in Energy held five workshops and one focus group to discuss energy focused areas, energy concerns, and what can be done to reduce energy use in the community. The team brainstormed goals they would like to see the community improve on & developed a plan to reach those goals. The three focus areas the team decided on were; Resident Energy Use, Business Energy Use, and Electric Vehicles. The Energy Action Plan outlines actions the team thought would have the greatest impact on their respected focus areas.

Over the next 18 months, the Energy Action Plan will be put into implementation. The City's main role and objective in the implementation process is to share energy saving information and programs with residents and with the partners the city has gained through this process. Information will be shared through our website, social media, newsletters, and other outreach materials. Marketing materials are provided by the Partners in Energy team. A portion of the plan will require the community to be engaged, these will be called Community Calls to Action. These are events or actions the community will need to take in order to reduce their energy costs and assist in improving the community of Hastings.

Financial Impact: Xcel Energy will provide support toward financial impacts, such as reimbursement for printing and marketing costs.

Advisory Commission Discussion: N/A

Council Committee Discussion: N/A

Attachments:

Xcel Energy®

PARTNERS IN ENERGY
An Xcel Energy Community Collaboration

An Energy Action Plan for

Hastings, Minnesota

Since 1857
Hastings
MINNESOTA

Draft: June 10, 2019

Acknowledgements

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

Hastings Energy Action Planning Team

City of Hastings

- **Bryce LeBrun,** staff engineer
- **John Hinzman,** community development director
- **Lee Stoffel**, communications coordinator
- **Megan White**, deputy city clerk and human resources technician
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- **Sarah Hodder**, former deputy city clerk/HR tech
- **Tina Folch,** councilmember, ward 1

Hastings Residents

- **Daniel Saunders,** former resident
- **Eric Peterson,** resident
- **Joe Hunt,** resident and member of the Hastings Environmental Protectors (HEP)
- **Mike Nelson,** resident and member of the Hastings Environmental Protectors (HEP)
- **Patrick McCauley,** resident
- **Rick Shuster,** resident

Business Representatives

- **Mark Gelhar**, assembly supervisor, Quality One Woodwork
- **Mary Scheide**, former manager, Pleasant Hill branch of the Dakota County Library
- **Sulman Hafiz,** operations manager, ABM Machining

External Partners

- **Ben Bratrud**, Citizens Utility Board

Partners in Energy Community Facilitators

- **Emma Struss,** Partners in Energy facilitator
- **Jamie Johnson,** Partners in Energy facilitator
- **Marisa Bayer,** Partners in Energy lead facilitator

Energy Utility Representatives

- **Emma Schoppe**, local energy policy manager, CenterPoint Energy
- **Jake Sedlacek,** community relations manager, Xcel Energy
- **Patrick Mathwig**, energy services representative, Dakota Electric Association
- **Steph Pederson,** energy services representative, Dakota Electric Association
- **Tami Gunderzik,** Partners in Energy program manager, Xcel Energy
- **Tim Doherty**, business account executive, Dakota Electric Association
- **Yvonne Pfeifer,** community energy efficiency manager, Xcel Energy

Table of Contents

Executive Summary

This action plan, developed by and for the Hastings community, creates ownership and accountability to address problems, such as rising energy costs and older, inefficient buildings, as well as leverages opportunities and resources available to ensure benefits to all residents and businesses. Successful implementation of this action plan will result in energy cost savings for both residents and business owners, and an increased quality of life through more comfortable and healthier homes and businesses.

Where Are We Now?

In 2017, our community consumed 1.5 million MMBTU of energy, spending a combined $14.5 million in all sectors. Residences represent the largest sector of Hastings energy users (91% of electric and 93% of natural gas premises) and consumed 54% of all energy used in 2017. Comparatively, Hastings commercial/industrial premises represent only 8% of electric premises and 7% of natural gas premises, having consumed 45% of all energy used in 2017.

Our Energy Vision

Through increased education and engagement, Hastings residents and businesses will adopt energy-saving behaviors and increase their home or facility's energy efficiency to enhance their quality of life and save energy and money.

How Will We Get There?

To achieve our vision, Hastings will prioritize three focus areas and promote specific actions for residents and businesses to take:

Focus Area A: Residential Energy Efficiency

- Complete a home energy audit
- Properly insulate and air seal your home
- Recycle inefficient refrigerators and freezers
- Install high-efficiency lighting

Focus Area B: Business Energy Efficiency

- Participate in a business blitz visit
- Pursue financing options to help with upfront costs
- Apply for equipment rebates

Focus Area C: Electric Vehicles

- Learn about rates and incentives to charge your electric vehicle
- Attend an electric vehicle showcase
- Attend a fleet electrification workshop

To measure success, near-term targets were set for each focus area. These targets are specific, measurable, and achievable, ensuring our community will hit the ground running towards achieving our energy vision.

Why an Energy Action Plan?

The City identified Xcel Energy's Partners in Energy offering as an opportunity to create a community-driven and data-driven action plan with direction and guidance on how to reduce overall energy consumption. Members of our community, including residents, local businesses, City staff, and energy utility representatives, participated in a series of planning workshops to ensure Hastings priorities and values were represented in the vision, goals, and strategies of this plan. With this plan, we have identified specific, actionable strategies to ensure all Hastings residents and businesses take advantage of opportunities to increase energy efficiency to save money and improve their quality of life. Partners in Energy will provide marketing and communications support, data tracking and measurement, program expertise, and project management to ensure Hastings hits the ground running with implementation.

Introduction

Hastings, known for its historic downtown, riverfront green space, and small-town charm, has created a vision for its community to ensure all residents and businesses take advantage of opportunities to increase energy efficiency to save money and improve their quality of life.

Hastings City Hall

Because we are focusing our efforts on residents, businesses, and electric vehicles, everyone in our community will benefit. We have set a clear course of action to save energy and money. In the near term, this plan will increase the comfort and health of Hastings homes and businesses. Longer term, these actions will make Hastings more desirable for future residents, workers, and businesses.

Where Are We Now?

Hastings Sustainability Initiatives

The City of Hastings has demonstrated a commitment to being a steward of our community's environment and natural resources. In 2017, the City achieved Step 3 in GreenSteps Cities, a statewide voluntary challenge, assistance, and recognition program to help cities achieve their sustainability goals. Energy-related best practices include benchmarking city energy data, installing LED lighting in buildings, and informing employees about energy-saving behaviors. The City continues to pursue additional best practices and technical assistance.

The City is also exploring electric vehicles, completing a fleet analysis with Xcel Energy and FleetCarma,[1] and participating in Cities Charging Ahead![2] to understand ways to integrate electric vehicles (EV) into the City fleet and become EV ready. The findings of the fleet analysis will give the City a better picture of how their fleet is used, ways to optimize operations, and how electrification of vehicles can impact operation and maintenance costs.

[1] Fleet analysis assesses electric vehicle suitability in City-owned fleet and charging infrastructure needed based on deployment of electric vehicles.
[2] Cities Charging Ahead! is sponsored by Clean Energy Resource Teams (CERTs) and Great Plains Institute. Participating cities receive technical assistance focused on actions and best practices local governments can implement to accelerate electric vehicle adoption.

Table 1: Hastings Energy-Related Initiatives

Hastings' Energy Initiatives	
Recognition Programs	• GreenSteps Cities
Policies & Plans	• Draft 2040 Comprehensive Plan ○ Resiliency in Development Goal 3: Encourage Energy Efficiency in Buildings, Lighting, and Infrastructure • Recycling Program and Organics Pilot Program • Environmentally Preferable Purchasing (EPP) Policy
Community Initiatives	• Hastings Environmental Protectors (HEP)

City-owned Properties & Fleet	• Completed fleet analysis through Xcel Energy and FleetCarma
	• Participated in Cities Charging Ahead!
	• Plan to convert all lighting at all City buildings to LED bulbs
	• Planned energy efficient equipment upgrades
	  ○ Boiler replacement at City Hall and Police Station
	  ○ Chiller replacement at Police Station
	  ○ HVAC and Energy Management System upgrades at City Hall
	• Solar light installations at dog park

Transportation	• LOOP Bus Service • Red Rock Corridor

Why an Energy Action Plan?

As noted in Table 1, the City of Hastings has made initial progress toward increasing efficiency in their buildings, and has identified Comprehensive Plan strategies to encourage energy efficiency in buildings, lighting, and infrastructure. The City identified energy action planning as a way to create a shared energy vision, identify focus areas, and develop actionable strategies to engage our community in energy saving initiatives.

Created by the Hastings community, this Energy Action Plan creates intention, addresses problems, leverages opportunities, and enhances our values (Table 2).

Table 2: Hastings Energy Action Team Answers to "Why an energy action plan?"

Address Problems	Create Intention
• Rising energy costs • Climate Change • Older, inefficient buildings & homes	• Prioritizing goals and creating focus • Coordinating stakeholders • Creates ownership and accountability • Call to action
Leverage Opportunities	**Enhance Our Values**
• Save money • Renewable energy • Electric vehicles • Gateway to other sustainability initiatives	• Forward-thinking, progressive • Engage all community members • Maintain small-town feel

Hastings Energy Action Team at Workshop 5, Photo Credit: City of Hastings

Our efforts will be implemented over an 18-month period, aligning with phase 2 of our Partners in Energy experience. Xcel Energy Partners in Energy will provide marketing and communications support, data tracking and measurement, program expertise, and project management. Partners in Energy will also provide the City and partners access to webinars, best practices from other community energy action plans, and other resources to support our implementation. See Appendix 2 for more information about Partners in Energy and the planning process.

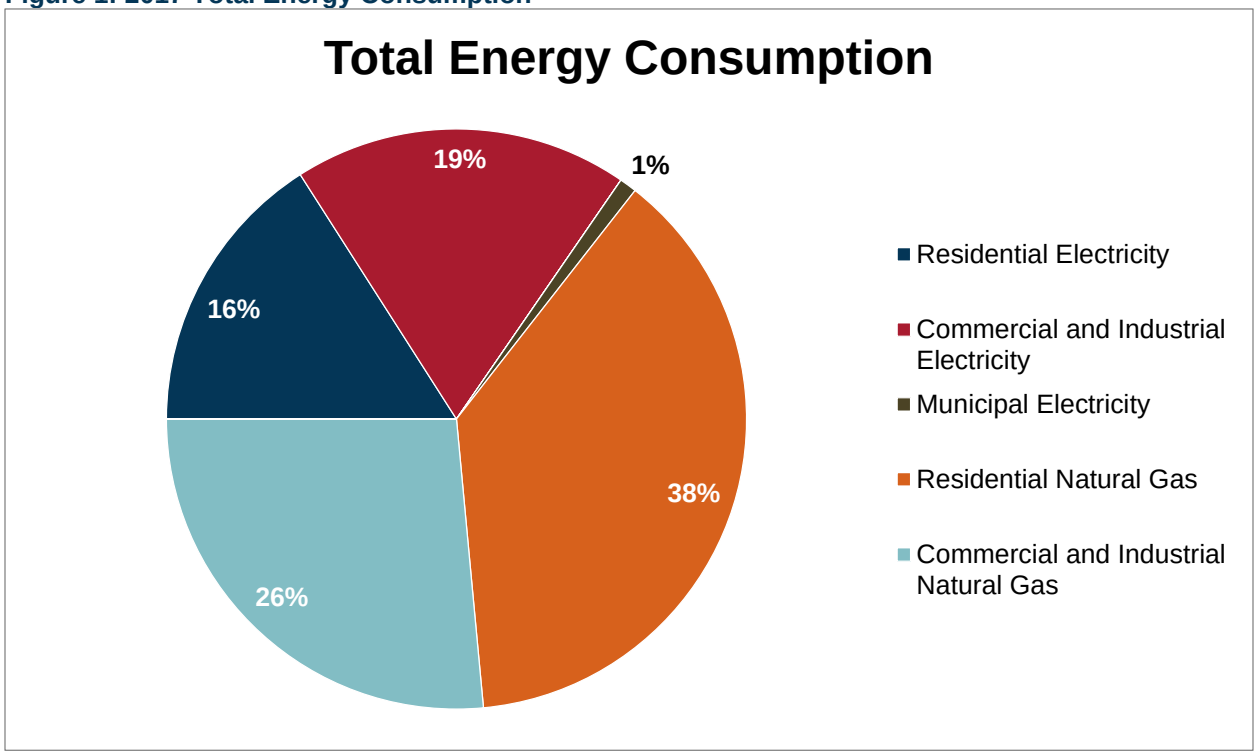
How Does Hastings Use Energy?

An integral part of the Partners in Energy planning process is reviewing historic energy data for Hastings. Xcel Energy, Dakota Electric Association, and CenterPoint Energy provided data on energy use, and participation counts and savings for utility energy conservation programs. See Appendix 3 for a complete picture of Hastings' baseline energy data.

Grid Energy Use

In 2017, our community consumed 1.5 million MMBTU of energy[3] (see Figure 1), spending a combined $14.5 million in all sectors. Residents represent the largest sector of Hastings energy users (91% of electric and 93% of natural gas premises) and consumed 54% of all energy used in 2017. Comparatively, Hastings commercial/industrial premises represent only 8% of electric premises and 7% of natural gas premises, consuming 45% of all energy used in 2017.

Figure 1: 2017 Total Energy Consumption[4]



Renewable Energy

Renewable energy opportunities exist in two forms: subscription programs and on-site installations. In 2017, 334 total Hastings residents and businesses subscribed to support renewable energy through Xcel Energy's Windsource®,[5] Dakota Electric's Wellspring Renewable Energy®,[6] and community solar gardens (Table 3). On-site

[3] Includes both electricity and natural gas consumption.
[4] Includes electric consumption data from Xcel Energy and Dakota Electric Association, and natural gas consumption data from CenterPoint Energy. Natural gas consumption for municipal premises not available at this time and included in commercial and industrial natural gas use.
[5] Xcel Energy's Windsource is a voluntary subscription program that allows Xcel Energy customers to source some or all of their electricity from wind energy.
[6] Dakota Electric Association's Wellspring Renewable Energy is a voluntary subscription program. Those who participate in the Wellspring program are purchasing renewable energy credits (RECs). Dakota Electric provides Wellspring energy to members through Great River Energy, their wholesale power supplier.

installations were less popular, with only two residential and four business premises participating in Solar*Rewards[7] and no customers participating in Dakota Electric Solar.[8]

Table 3: 2017 Renewable Energy Support Summary by Sector

	Residential	Commercial & Industrial
Windsource®		
Subscribers	210	2
Subscription Amount (kWh)	463,321	17,466
Community Solar Gardens		
Subscribers	103	1
Subscribed Amount (kWh)	277,107	2,988
Solar*Rewards		
Installations	2	4
Total Capacity (kW)	17	107
Wellspring Renewable Energy		
Subscribers	18	-
Subscribed Amount (kWh)	59,100	-
Dakota Electric Solar		
Installations	-	-
Total Capacity (kW)	-	-

Energy Conservation Program Participation

Hastings residents and businesses have actively participated in energy conservation programs.[9] In 2017, 883 total premises participated in such programs, saving almost 13,500 MMBTU (0.9% of community energy use). The most popular energy-saving programs for residents include home energy audits and efficiency rebates for heating and cooling equipment. For commercial and industrial premises, lighting efficiency programs, and heating and water-heating rebates have the highest participation rates.

[7] Xcel Energy's Solar*Rewards is an incentivized program, so monthly payments are made to the owner of the solar system in exchange for Renewable Energy Credits (RECs) for the energy produced by the solar system.
[8] Dakota Electric Solar is a performance-based solar rebate program to assist members in recovering the costs associated with installing a solar system. Members can also receive bill credits for the excess energy produced by the solar system.
[9] Utilities offer a portfolio of state-approved energy efficiency and demand management programs through the state's Conservation Improvement Program.

Table 4: 2017 Energy Conservation Program Participation Summary

Xcel Energy	Residential	Commercial & Industrial
Participants	423	40
Savings (kWh)	181,427	1,421,766
Dakota Electric Association		
Participants	77	1
Savings (kWh)	52,213	219,000
CenterPoint Energy		
Participants	310	32
Savings (therms)	29,783	41,150

Where Do We Want To Go?

Our Energy Vision

During the first planning workshop, the Hastings Energy Action Team worked together to create a shared vision for Hastings' energy future:

> Through increased education and engagement, Hastings residents and businesses will adopt energy-saving behaviors and increase their home or facility's energy efficiency to enhance their quality of life and save energy and money.

Our vision represents the priorities of the Energy Action Team and the community throughout the energy planning process.

Focus Areas

To achieve our shared energy vision, the Hastings Energy Action Team identified three focus areas to prioritize strategies and resources over the next two years:

- **Focus Area A:** Residential Energy Efficiency, targeting Hastings homeowners.
- **Focus Area B:** Business Energy Efficiency, including all businesses with specific outreach in Hastings historic downtown and industrial park areas.

Photo Credit: City of Hastings

- **Focus Area C:** Electric Vehicles, focusing on education, rate options, and fleet electrification.

These focus areas were chosen after analyzing baseline energy use, historical program participation, and community demographics. By focusing our efforts in these three areas, the Energy Action Team believes we can achieve near-term, measurable results through the strategies outlined in this plan.

Goals

Working together, the team set near-term goals for each focus area to measure success of implementing our Energy Action Plan.

Residential Energy Efficiency Focus Area Goals

- 100 Home Energy Squad® visits completed annually.
- 20 home insulation projects completed.
- 70 refrigerator or freezer recycling rebates annually.
- Distribute 200 LED bulbs at community events.

Business Energy Efficiency Focus Area Goals

- Conduct two business blitzes.
- 100 commercial and industrial energy conservation program participants annually.

Electric Vehicles Focus Area Goals

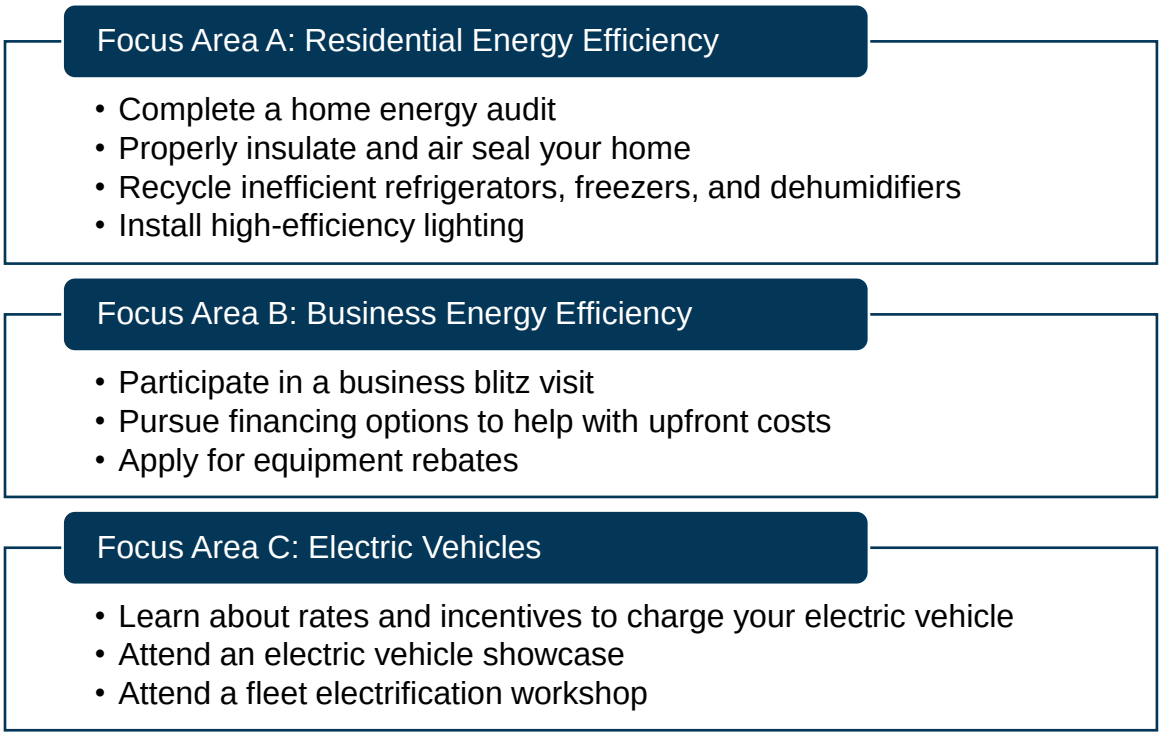
- Host three electric vehicle showcase events.
- Deliver one fleet electrification workshop.

All goals will be achieved by the end of 2020 and measured against a three-year baseline. Achieving these goals will result in energy and cost savings, increased quality of life and comfort, and increased engagement with residents and businesses.

How Are We Going To Get There?

The Energy Action Team developed near-term actionable strategies for each focus area, including implementation resources, outreach strategy, and timeline.

Figure 2: Near-term Energy Saving Actions by Focus Area



Three long-term energy actions were identified for each focus area:

- **Focus Area A:** Residential Energy Efficiency: Engage tenants.
- **Focus Area B:** Business Energy Efficiency: Serve as an energy coach.
- **Focus Area C:** Electric Vehicles: Increase public charging infrastructure.

The human, financial, and policy resources needed to achieve success and see measurable results determined that these actions are best suited for long-term implementation.

Community Call to Action

This Energy Action Plan was developed by and for the Hastings community. Successful implementation of this plan will depend on community volunteers, local stakeholders, and the City of Hastings working together. Residents, businesses, civic organizations, and nonprofit organizations play a role in supporting this Energy Action Plan and achieving our energy vision. Each focus area includes a “call to action” and implementation tasks to help outline how the Hastings community can support implementation.

Focus Area A: Residential Energy Efficiency

Why is this sector a priority?

The two primary reasons that Hastings residents are a priority are as follows:

Sector Size & Energy Use

Hastings residents are the largest sector of energy users in the city (91% of electric and 93% of natural gas premises), consuming 54% of all energy used in 2017. Using existing communication channels and events, a large number of residents can be reached through education and outreach.

Aging Housing Stock

Our housing stock is aging — 59% of all Hastings housing units were built before 1990.[10] Older homes typically have many opportunities to improve efficiency through equipment replacement and building envelope upgrades.

Who is the target audience for residential outreach?

The primary target audience is homeowners, who represent 72% of the households in our community.[11] Homeowners can reap all the benefits of energy-related upgrades, and there are fewer barriers to engaging homeowners as opposed to tenants.

Low-income homeowners, who can benefit from free or low-cost opportunities, are also included in this outreach.

A Hastings Home

What near-term actions will the City promote to help residents save energy?

- Complete a home energy audit.
- Properly insulate and air seal your home.
- Recycle inefficient refrigerators or freezers.
- Install high-efficiency lighting.

Goals

- 100 Home Energy Squad® visits completed annually.
- 20 home insulation projects completed.
- 70 refrigerator or freezer recycling rebates annually.
- Distribute 200 LED bulbs at community events.

[10] 2013–2017 American Community Survey 5-Year Estimates, Year Structure Built.
[11] 2013–2017 American Community Survey 5-Year Estimates, Tenure.

Community call to action: what can you do as a community member to support residential energy efficiency?

- Connect with community event organizers about tabling opportunities.
- Volunteer to table at events to distribute information materials.
- Share a testimonial about your experience getting a home energy audit or upgrading your insulation to be part of a testimonial.
- Support the Energy Action Plan goals and participate in an energy conservation program; and encourage your neighbors to do the same.
- Like and share City social media posts and newsletter articles with your own network.
- Engage local service providers, civic organizations, and other partners to share energy conservation resources.

Near-term Residential Energy Efficiency Action Summary Tables

Residential Energy Efficiency Action A) Complete a home energy audit	
Why is this action a priority?	Home energy audits are an easy first step for homeowners to learn how their home uses energy and identify energy saving improvements. There are different service levels available to meet a resident's needs, and free visits are available to income-qualified households.
Timeline	• Q3 2019–Q4 2020 • Q3 2019–Q4 2019 - Informational materials on City website
Goal(s)	• Complete 100 Home Energy Squad® visits annually
Implementation Team & Tasks	**City of Hastings** • Identify messaging that will resonate with Hastings residents • Assist with creating marketing plan for outreach strategy • Post informational materials on City website and social media platforms • Distribute information to community partners • Share testimonials from Hastings residents who have completed Home Energy Squad visits on City communication channels • Identify city events for tabling • Call on volunteers to help with tabling **Partners in Energy** • Create marketing plan for outreach strategy • Collect messaging from Dakota Electric Association about walk-through audits • Create informational materials and webpage content • Create social media posts to promote energy audits • Write article about home energy audits for Rivertown News and Hastings Star Gazette • Collect testimonials from previous Home Energy Squad participants • Coordinate Home Energy Squad tabling, if available • Train tabling volunteers **Dakota Electric Association** • Provide information about walk-through audit program **Home Energy Squad®** • Deliver visits • Assist with tabling at city events, if available **Volunteers, including Energy Action Team and Hastings Environmental Protectors** • Assist with identifying events for tabling • Table at events to distribute informational materials **Community partners, such Hastings Area Chamber of Commerce, Carpenter Nature Center, Hastings Family Services, and Hastings Senior Center** • Disseminate information in their networks
Resources	• Home Energy Squad program information • Informational materials promoting Home Energy Squad and Dakota Electric Association's walk-through audit program

	• City webpage(s) • Community events • Volunteers to help with outreach • Funding to help with printing information materials

Residential Energy Efficiency Action B) Properly insulate and air seal your home	
Why is this action a priority?	Sufficient insulation and air sealing increases a home's energy efficiency and protects your home against cold air in the winter and excess heat in the summer. By increasing efficiency through insulation and air sealing, you can save money on your energy bills.
Timeline	• Q3 2019-Q4 2020 • Q3 2019-Q4 2019 - Informational materials on City website
Goal(s)	• 20 insulation projects completed by 2020
Implementation Team & Tasks	**City of Hastings** • Identify messaging that will resonate with Hastings residents • Assist with creating marketing plan for outreach strategy • Post informational materials on City website and social media platforms • Distribute information to community partners • Identify city events for tabling • Call on volunteers to help with tabling **Partners in Energy** • Create marketing plan for outreach strategy • Collect messaging from CenterPoint Energy on insulation rebates • Create informational materials and webpage content • Create social media posts to promote insulation and air sealing in conjunction with season changes • Write about benefits of air sealing and insulation for Rivertown News and Hastings Star Gazette • Train tabling volunteers **CenterPoint Energy** • Provide insulation rebate information and marketing materials • Share goal and rebate information with local trade partners **Volunteers, including Energy Action Team and Hastings Environmental Protectors** • Assist with identifying events for tabling • Table at events to distribute informational materials **Community partners, such Hastings Area Chamber of Commerce, Carpenter Nature Center, and Hastings Senior Center** • Disseminate information in their networks
Resources	• Informational materials promoting insulation and air sealing • City webpage(s) • Community events • Volunteers to help with outreach • Funding to help with printing information materials

Residential Energy Efficiency Action C) Recycle inefficient refrigerators and freezers	
Why is this action a priority?	Old, inefficient refrigerators and freezers use more energy than you might think. Residents have the option to recycle their second refrigerator or freezer to get a rebate from their electric utility.
Timeline	• Q3 2019-Q4 2020 • Q3 2019-Q4 2019 - Informational materials on City website
Goal(s)	• 70 refrigerator or freezer recycling rebates annually
Implementation Team & Tasks	**City of Hastings** • Identify messaging that will resonate with Hastings residents • Assist with creating marketing plan for outreach strategy • Post informational materials on City website and social media platforms • Distribute information to community partners • Coordinate outreach with annual waste drop off day • Identify city events for tabling • Call on volunteers to help with tabling **Partners in Energy** • Create marketing plan for outreach strategy • Create informational materials and webpage content • Create social media posts to promote refrigerator/freezer recycling • Write article about refrigerator/freezer recycling rebates in Rivertown News • Create insert for one City utility bill cycle • Train tabling volunteers **Dakota Electric Association** • Provide recycling rebate information and marketing materials **Volunteers, including Energy Action Team and Hastings Environmental Protectors** • Assist with identifying events for tabling • Table at events to distribute informational materials **Community partners, such Hastings Area Chamber of Commerce, Carpenter Nature Center, and Hastings Senior Center** • Disseminate information in their networks
Resources	• Informational materials promoting both Xcel Energy and Dakota Electric recycling rebates • City communication channels • Community events • Volunteers to help with outreach • Funding to help with printing information materials

Residential Energy Efficiency Action D) Install high-efficiency lighting	
Why is this action a priority?	High-efficiency lighting is a quick-win for home efficiency. As bulbs burn out, residents can replace bulbs with discounted LED bulbs purchased at participating retailers.
Timeline	• Q2 2019 — Distribution at 2019 clean-up day • Q2 2020 — Distribution at 2020 clean-up day
Goal(s)	• Distribute 200 LED bulbs at community events
Implementation Team & Tasks	**City of Hastings** • Add information to communication channels • Call on staff volunteers to handout bulbs • Distribute bulbs to staff volunteers • Volunteer City staff and Dakota County staff to distribute bulbs at clean-up day • Distribute informational materials and LED bulbs **Partners in Energy** • Create LED bulb stickers • Coordinate LED bulb delivery • Creating marketing plan for social media posts • Create social media posts to promote high-efficiency lighting **Xcel Energy** • Provide LED bulbs for distribution • Print and deliver LED bulb stickers **Dakota Electric Association** • Provide LED bulbs for distribution
Resources	• City communication channels • Community events • LED bulbs to distribute at tabling events • Staff volunteers to help with outreach

Impact of Residential Energy Efficiency Near-term Actions

Successful implementation of these near-term actions will result in:

- 200 Home Energy Squad visits;[12]
- 20 homes with new, sufficient insulation;
- 140 inefficient refrigerators and or freezers safely recycled; and
- 200 LED bulbs distributed to Hastings residents.

[12] Participation counts included for Xcel Energy's Home Energy Squad, Low Income Home Energy Squad, and Home Energy Audit.

Achieving these targets will result in an additional 152,000 kWh saved and 12,300 therms saved total for these programs.[13] These actions will also improve the quality of life for Hastings residents by improving health and comfort of their homes, and lowering their energy bills.

Through increased education and engagement, it is estimated energy conservation program participation and associated savings will increase across the board for all utility programs (Table 5).

Table 5: 2019–2020 Projected Residential Program Participation and Estimated Savings

	3-year Baseline Participants	Projected Participants 2019–2020	Estimated Savings 2019–2020
Xcel Energy	335	981	429,526 kWh
Dakota Electric Association	70	175	66,858 kWh
CenterPoint Energy	370	935	103,510 therms

[13] Compared to three-year baseline participation and savings continuing through 2019–2020 for Xcel Energy's Home Energy Squad, Low Income Home Energy Squad, Home Energy Audit, and Refrigerator Recycling; CenterPoint Energy's Home Insulation Rebates; and Dakota Electric Association's Refrigerator and Freezer Recycling. Baseline savings for these programs are 131,950 kWh and 3,004 therms.

Focus Area B: Business Energy Efficiency

Downtown Hastings, Photo Credit: City of Hastings

Why is this sector a priority?

The Energy Action Team identified three primary reasons why businesses should be engaged in energy efficiency:

Sector Use and Impact

The commercial/industrial sector represents only 8% of electric premises and 7% of natural gas premises, but consumes 45% of all energy used in Hastings.[14] When a few businesses take action, it will have a significant impact on reducing energy use and greenhouse gas emissions.

Energy and Dollar Savings

When a business makes an energy efficient improvement, they save energy, and save money on energy bills. In some cases, they will also see savings in maintenance and operation. Separate from energy savings, there are real financial benefits to businesses' bottom line.

Economic Development

Hastings has a strong local business community. Many businesses in the area are locally owned and operated. Investing in energy efficient improvements can help a business increase the safety and comfort of the facility for their employees, improving employee engagement and retention.

Who is the target audience for business outreach?

- Downtown businesses, including unique retail and restaurant businesses located in Hastings' historic downtown.
- Industrial businesses, located in the industrial park off Highway 316.

Downtown businesses and industrial park businesses were chosen because of their geographic concentration and their economic importance to our community. Assisting small businesses in the downtown area with efficiency upgrades will continue to preserve Hastings' small-town charm, and increase both worker and shopper comfort. Assisting industrial businesses will increase worker safety and comfort, and helps the bottom line.

[14] Includes data from Xcel Energy, CenterPoint Energy, and Dakota Electric. 2017.

What near-term actions will the City promote to help businesses save energy?

- Participate in a business blitz visit.
- Pursue financing options to help with upfront costs.
- Apply for equipment rebates.

Goals

- Conduct two business blitzes.
- 200 total commercial and industrial energy conservation program participants.

Community call to action: what can you do as a community member or business owners to support business energy efficiency?

- Advise the City of Hastings and Partners in Energy team on what information your business wants to learn about.
- Support businesses that make energy efficiency improvements.
- Volunteer to assist with door-to-door outreach during a business blitz or table at an event.
- Conduct follow-up to businesses to encourage follow-through on energy saving improvements.
- Share energy efficiency and energy financing opportunities with other business owners and business associations using your network.

Near-term Business Energy Efficiency Action Summary Tables

Business Energy Efficiency Action A) Participate in a business blitz visit	
Why is this action a priority?	A business blitz is an effective way to engage businesses one-on-one in energy action. Through quick, targeted engagement, businesses can learn about energy efficiency opportunities and sign up on the spot for more information.
Timeline	• Q3 2019–Q4 2019 — Business Blitz 1 • Q2 2020–Q3 2020 — Business Blitz 2
Goal(s)	• Conduct two business blitzes: one targeting downtown Hastings and one targeting the industrial park.
Implementation Team & Tasks	**City of Hastings** • Identify messaging that will resonate with businesses during outreach • Assist with identifying date and time for events • Assist with identifying partners to help organize and conduct business blitz • Promote business blitz on City communication channels • Distribute press release to local papers • Email to business organizations letting them know about event • Call on volunteers and staff to assist with day-of and follow-up tasks • Provide list and map of businesses in downtown and industrial park **Partners in Energy** • Coordinate messaging and call to action for business blitz • Create informational materials to distribute day-of • Create press release and flyers promoting blitz • Assist with identifying date and time for blitz • Identify partners to help organize and conduct business blitz • Coordinate partnership with energy nonprofits **Volunteers, including Energy Action Team and Hastings Environmental Protectors** • Assist with conducting blitz and follow-up **Local business organizations, such as Hastings Area Chamber of Commerce and Hastings Downtown Business Association** • Disseminate information in their networks • Support business blitz outreach **Energy nonprofits, such as Clean Energy Resource Teams (CERTs)** • Assist with conducting blitz
Resources	• Informational materials to distribute day-of • Communication channels to share outreach effort • Volunteers to help with outreach • Funding to help with printing information materials

Business Energy Efficiency Action B) Pursue financing options to help with upfront costs	
Why is this action a priority?	Financing options are important to a business owner's decision to make an energy efficiency improvement. Low-cost financing or gap financing can be the tool to help motivate a business to move forward with an improvement.
Timeline	• 2019–2021 • Q4 2019–Q1 2020 — Informational materials on City website
Goal(s)	• Make financing information easily accessible on City website
Implementation Team & Tasks	**City of Hastings** • Assist with identifying resources and financing options • Identify existing points of contact where the City interacts with businesses to share message • Post informational materials on City website and social media platforms • Integrate information into existing City points of contact with businesses • Distribute information to business organizations **Partners in Energy** • Identify resources and financing options to include in informational materials • Create informational materials and webpage content • Create social media posts promoting financing webpage(s) • Customize materials to fit with existing point of contact engagement • Collaborate with business organizations to create newsletter or email content to share **Volunteers, including Energy Action Team and Hastings Environmental Protectors** • Assist with sharing message to business organizations **Local business organizations, such as Hastings Area Chamber of Commerce and Hastings Downtown Business Association** • Disseminate information in their networks
Resources	• Informational materials with financing information • Designated webpage(s) on City website and space at City Hall for informational materials • Volunteers to help with outreach • Funding to help with printing information materials

Business Energy Efficiency Action C) Apply for equipment rebates	
Why is this action a priority?	Rebates are an easy way for businesses to cut costs when upgrading equipment. Almost all Hastings businesses can benefit because of the variety of rebates available.
Timeline	• 2019–2021 • Q4 2019–Q1 2020 — Informational materials on City website
Goal(s)	• Increase commercial/industrial sector utility program participation in prescriptive rebates
Implementation Team & Task	**City of Hastings** • Identify existing points of contact where the City interacts with businesses to share message • Post informational materials on City website and social media platforms • Integrate information into existing City points of contact with businesses • Distribute information to business organizations **Partners in Energy** • Identify equipment rebate options available • Create webpage content • Craft materials to target different types of business — small/medium size vs. large/industrial • Create social media posts promoting equipment rebate webpage(s) • Customize materials to fit with existing point of contact engagement • Collaborate with business organizations to create newsletter or email content to share **Volunteers, including Energy Action Team and Hastings Environmental Protectors** • Assist with sharing message to business organizations **Local business organizations, such as Hastings Area Chamber of Commerce and Hastings Downtown Business Association** • Disseminate information in their networks
Resources	• Informational materials with rebate information for all energy utilities • Designated webpage(s) on City website and space at City Hall for informational materials • Volunteers to help with outreach • Funding to help with printing information materials

Impact of Business Energy Efficiency Near-Term Actions

Successful implementation of business energy efficiency near-term actions will generate important benefits for business engagement and retention, as well as lower energy use. Achieving these near-term targets will result in 200 total commercial and industrial energy conservation program participants by 2020. Program participation is estimated

to primarily increase for lighting efficiency assessments and rebates. Table 6 illustrates the estimated increase across all utility energy conservation offerings.

Table 6: 2019-2020 Projected Commercial and Industrial Program Participation and Estimated Savings

	3-year Baseline Participants	Projected Participants 2019–2020	Estimated Savings 2019–2020
Xcel Energy	56	134	2,167,048 kWh
Dakota Electric Association	31	4	76,312 kWh
CenterPoint Energy	2	64	161,344 therms

Focus Area C: Electric Vehicles

Why is this sector a priority?

Hastings' Energy Action Team identified four main reasons why electric vehicles (EV) and charging infrastructure are important:

Leveraging Efforts Underway

The City of Hastings is completing a fleet analysis with Xcel Energy and FleetCarma, and is participating in the Cities Charging Ahead! initiative to understand EV-readiness policies and charging infrastructure.

Becoming a Destination

Electric vehicles are emerging as a popular car choice for consumers. In October 2018, EV sales surpassed 1 million.[15] Hastings can help meet the demand for public charging infrastructure as a draw for new residents, businesses, and tourism.

Community Event, Photo Credit: City of Hastings

Overcoming Knowledge Gaps

Electric vehicles are relatively new technology. Not many people have driven an electric vehicle, and people often aren't sure how they work or what's needed to maintain them.

Reducing Tailpipe Emissions

Electric vehicles do not generate tailpipe — yielding benefits to both air quality and public health.

Who is the target audience for electric vehicle outreach?

- Potential EV owners, who will become informed buyers through increased education about EV ownership.
- Current EV owners, who will benefit from new public charging infrastructure.
- Local employers with fleet vehicles, who have the opportunity to electrify some or all of their fleet (including the City of Hastings).

[15] Inside EVs Plug-in Sales Scorecard, https://insideevs.com/monthly-plug-in-sales-scorecard.

What near-term actions will the City promote to engage the target audience?

- Learn about rates and incentives to charge your electric vehicle
- Attend an electric vehicle showcase
- Attend a fleet electrification workshop

Goals

- Host three electric vehicle showcase events.
- Deliver one fleet electrification workshop.

Community call to action: what can you do as a community member to support the electric vehicles focus area?

- Read the information available about rates and charging incentives
- Volunteer to share information materials at tabling events or with your own social network.
- Help coordinate an electric vehicle showcase with local event organizers or businesses.
- Attend an electrical vehicle showcase and test drive a vehicle.
- Encourage your employer to attend a fleet electrification workshop.

Near-term Action Summary Tables

Electric Vehicles Action A) Learn about rates and incentives to charge your vehicle	
Why is this action a priority?	Some consumers don't know about the different options they have for charging their electric vehicle at home. This action will educate consumers about the different rate structures available.
Timeline	• Q3 2019–Q4 2020 • Q3 2019–Q4 2019 — Informational materials on City website
Goal(s)	• Increase awareness of rate structure options
Implementation Team & Tasks	**City of Hastings** • Post informational materials on City website and social media platforms • Distribute information to volunteers and community partners • Call on volunteers to share information with their EV networks • Assist with having information available at electric vehicle showcase (Action B) and electrification workshop (Action C) **Partners in Energy** • Identify rate structures for both electric utilities • Create informational materials and webpage content for rate options for each electric utility • Create social media posts about EV rate structures **Dakota Electric Association** • Share rate structure information for electric vehicle charging **Volunteers, including Energy Action Team and Hastings Environmental Protectors** • Assist with sharing information to community partners and electric vehicle organizations **Community partners, such as local car dealerships** • Share information materials **Electric vehicle organizations, such as Drive Electric, Minnesota Tesla Owners Club, and Minnesota EV Owners** • Disseminate information in their networks
Resources	• Webpage(s) on City website • Electric utility EV-rate structure information • Funding to help with printing information materials

Action B) Attend an electric vehicle showcase	
Why is this action a priority?	Electric vehicle showcases help educate the public about the benefits of owning an electric vehicle. Some events, known as “ride and drives,” give community members an opportunity to test drive a vehicle or sit in a vehicle to see features up close.
Timeline	• Q3 2019–Q4 2020 • Q3 2019–Q4 2019 — Informational materials on City website
Goal(s)	• Host three electric vehicle showcase events
Implementation Team & Tasks	**City of Hastings** • Identify existing events to host showcases • Assist with outreach to local event organizers and car dealerships to assess interest in partnering to host ride and drive • Call on volunteers to help with tabling • Promote showcase to residents through City’s communication channels and on City website **Partners in Energy** • Support outreach to partners and co-hosts • Support volunteer and staff coordination **Dakota Electric Association** • Share rate structure information for electric vehicle charging **Volunteers, including Energy Action Team and Hastings Environmental Protectors** • Assist with identifying event and showcase opportunities • Assist with outreach to local event organizers and car dealerships to assess interest in partnering to host EV showcase • Assist with coordinating event logistics • Table at events to distribute informational materials **Community partners, such as Hastings Area Chamber of Commerce, local car dealerships, and weekly car show hosts** • Share information materials • Co-host showcase **Electric vehicle organizations, such as Drive Electric, Minnesota Tesla Owners Club, and Minnesota EV Owners** • Share event information in their networks
Resources	• Events to co-host showcase • Electric vehicles to feature at showcase • Volunteers to help with outreach and staff showcase events

Action C) Attend a fleet electrification workshop	
Why is this action a priority?	Businesses and organizations with fleet vehicles could benefit from fleet electrification by reducing maintenance and fuel costs. The City of Hastings is completing a fleet electrification analysis and can share what they learned to educate others.
Timeline	• Host after City's first EV purchase
Goal(s)	• Deliver one fleet electrification workshop
Implementation Team & Tasks	**City of Hastings** • Post event information on City's website and communication channels • Send invitations to businesses associations and their members • Identify date and time for event • Identify presenters • Reserve meeting space • Create and send invitation • Deliver workshop • Create presentation materials **Partners in Energy** • Assist with coordinating presenters from Xcel Energy • Support event logistics **Volunteers, including Energy Action Team and Hastings Environmental Protectors** • Assist with identifying organizations with fleet vehicles for potential attendance
Resources	• Space for hosting workshop • Invitation and RSVP platform • Presenters • Workshop refreshments • FleetCarma results and suitability assessment

Long-term Energy Actions

Four long-term energy actions were identified as important to achieving Hastings energy vision, but were determined to be best suited for long-term implementation because of limited financial and human resources.

Subscribe to Renewable Energy

Renewable energy subscriptions are an easy way for residents and businesses to support renewable energy without installing equipment on their home or facility. The Energy Action Team determined promoting renewable energy subscriptions was best suited as a long-term action after the Energy Action Plan's message of energy efficiency and increasing comfort resonated with the community. The team can use lessons learned from the first 18-months of implementation for the best ways to share this message.

Engage Tenants

The Energy Action Team identified tenants as a target audience during initial planning, but believed the landlord/tenant barrier was too difficult to overcome after evaluating different target audiences. Using lessons learned and increased capacity from engaging homeowners, the City of Hastings and its Energy Action Team will identify new strategies for engaging tenants.

Serve as an Energy Coach

An energy coach would encourage a resident or business to participate in energy efficiency rebates and programs, and act as a single point of contact for questions and resource recommendations. The team decided to make this a long-term strategy because of the financial and human resources needed to train and staff energy coaches.

Increase Public Charging Infrastructure

Increasing public charging infrastructure is an important strategy for EV readiness and promoting Hastings as a destination for EV drivers. Current policy and financial resources needed to encourage new or existing developments to install a charging station are currently not available. The Energy Action Team thought this strategy was best suited for the long-term, but recommended the City encourage (but not require) charging infrastructure during development review.

Impact of Energy Action Plan

The combined targets and strategies outlined in this plan will decrease community energy use through increased efficiency, as well as increase community awareness of the benefits of energy efficiency through engagement and outreach.

Overall, achieving near-term targets laid out in this plan will result in a 29% increase in electricity savings and 18% increase in natural gas savings in 2019 and 2020 combined. Residents and businesses who participate in energy conservation programs will save an estimated $1.5 million combined.

Table 7: Estimated Energy Savings 2019–2020

	Business as Usual Savings 2019-2020	Energy Action Plan Impact Savings 2019-2020	Percent Change
Electricity (kWh)	2,160,366	2,779,197	29%
Natural Gas (Therms)	204,620	240,502	18%
Total Energy (MMBtu)	27,833	33,533	20%

In addition to energy and cost savings, this action plan will increase the comfort and health of Hastings homes and businesses, making Hastings more desirable for future residents, workers, and businesses.

How Are We Going to 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 Hastings staff capacity.

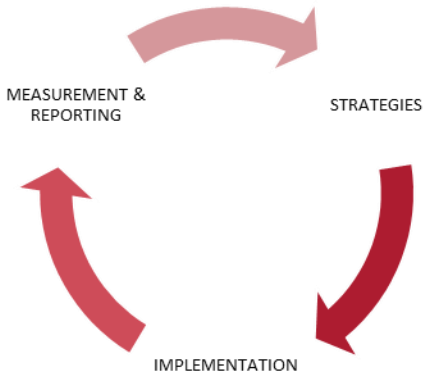


Figure 3. Actions and Tracking

Data & Reporting

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

If available, ad-hoc participation reports for specific Xcel Energy programs (e.g. Home Energy Squad) are available to measure success of campaigns and to determine if we need to change course.

Partners in Energy will request participation and savings data annually during implementation from Hastings other energy utilities — CenterPoint Energy and Dakota Electric Association — to assist with measuring progress towards goals.

Project Management & Tracking

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

Hastings Energy Action Team at Workshop 1

Appendix 1: Implementation Memorandum of Understanding

To be added.

Appendix 2: Xcel Energy's Partners in Energy Planning Process

Xcel Energy is one of two electric utilities serving Hastings. In the summer of 2014, Xcel Energy launched Partners in Energy to support communities like Hastings to develop and implement energy action plans that supplement existing sustainability plans, strategies, and tools. The content of this plan is derived from a series of planning workshops held in the community with a planning team committed to representing local energy priorities and implementing plan strategies.

Partners in Energy will work with the City of Hastings to coordinate support for implementing the plan and will develop a Memorandum of Understanding (Appendix 1) that outlines specific support Xcel Energy will provide to help Hastings deploy its strategies and achieve its goals.

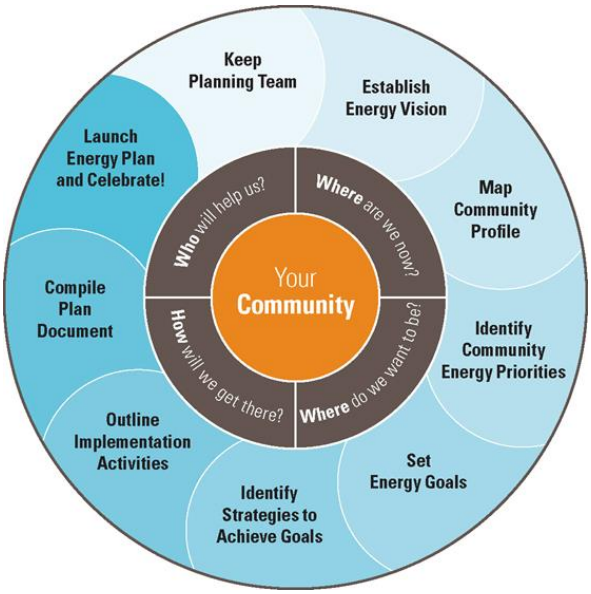


Figure 4. Partners in Energy Process for Success

Figure 5. Resources from Xcel Energy for Implementation

Plan Development Process

City staff actively recruited a diverse group of community representatives, including representatives from small businesses, community organization, residents, and the City to create Hastings Energy Action Plan. Please see the Acknowledgements at the beginning of this document for a complete list of participants.

The Energy Action Team met over the course of five planning workshops and one focus group meeting to review community energy-use data, identify energy priorities, and develop strategies. A summary of the planning process can be found in Table 8.

Table 8: Partners in Energy Planning Process

Partners in Energy Planning Process	
Workshop 1 June 6, 2018	• Team introductions and Partners in Energy process overview. • Reviewed baseline energy data and past city and community energy initiatives. • Discussed Energy Visions for Hastings' future.
Workshop 2 September 6, 2018	• Discussed background information, opportunities, and prioritization of the focus areas that emerged from Workshop 1 and the pre-Workshop 2 survey. • Voted on the prioritization of focus areas. • Introduced the group to the goal setting process and sample community goals.
Workshop 3 October 11, 2018	• Reviewed residential survey. • Identified target audience and opportunities for saving energy in residential focus area. • Developed strategies and preliminary goals for residents.
Workshop 4 December 20, 2018	• Identified target audience and opportunities for saving energy for electric vehicles focus area. • Identified actions and timeline for engaging Hastings community. • Brainstormed strategies and preliminary goals for electric vehicles.
Business Focus Group February 14, 2019	• Identified barriers and benefits to engage small- and medium-sized businesses in energy action • Brainstormed engagement strategies to best serve Hastings' business community
Workshop 5 March 27, 2019	• Reviewed progress in planning process and reasons for creating an Energy Action Plan. • Refined strategies for all three focus areas to identify implementation lead and resources. • Conducted an impact-feasibility analysis to understand what strategies to prioritize. • Identified strengths, weaknesses, opportunities, and threats (SWOT analysis) to Hastings Energy Action Plan.

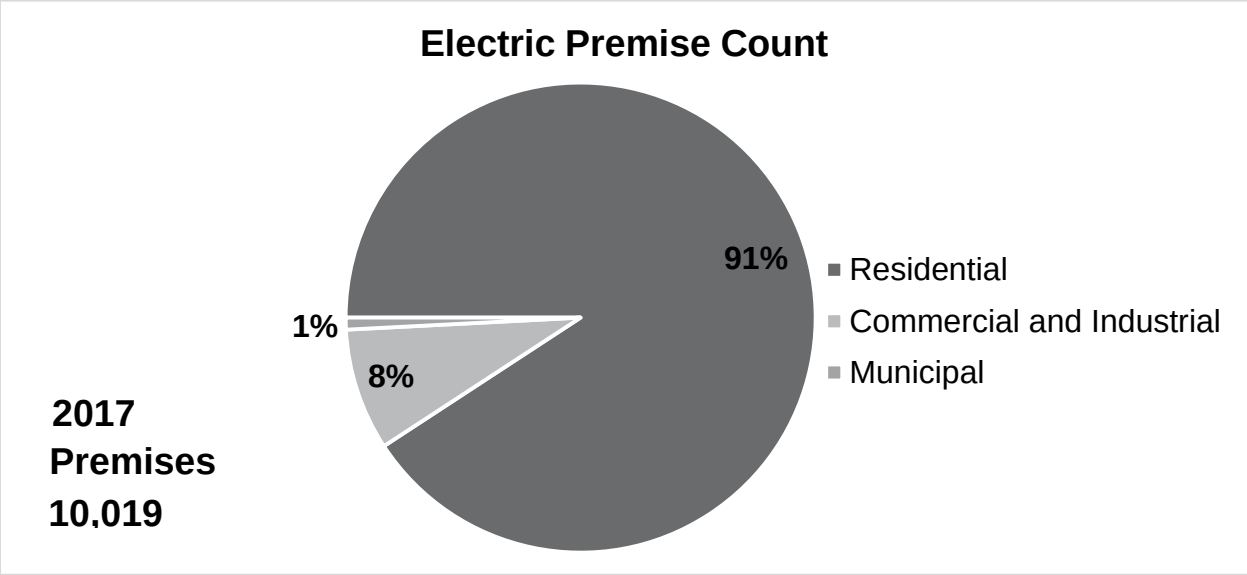
Appendix 3: Baseline Energy Analysis

An integral part of the Partners in Energy planning process is reviewing historic energy data for Hastings, which includes data on energy use, participation in utility energy conservation programs, and savings associated with participation in those programs. Data was provided by Xcel Energy, Dakota Electric Association, and CenterPoint Energy for all Hastings premises for 2015–2017. The data helped the Energy Action Team understand Hastings' energy use and opportunities for energy conservation and renewable energy. Data included in this section will also establish a baseline against which progress toward goals will be compared to in the future.

Electric and Natural Gas Premises

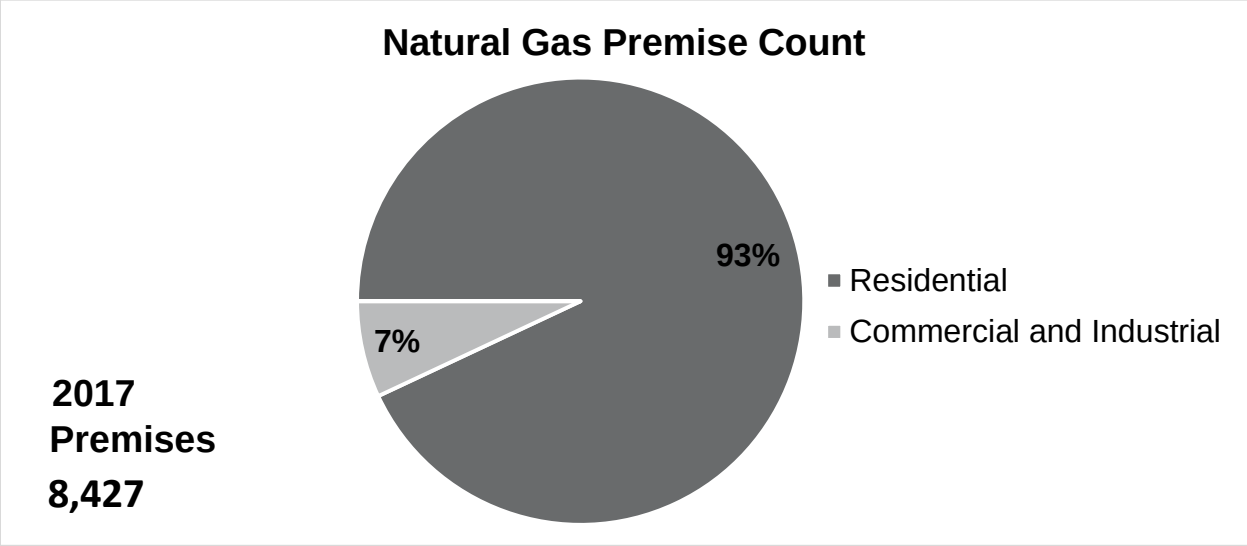
In 2017, there were over 10,000 electric premises and over 8,000 natural gas premises within the city limits.[16] Xcel Energy and Dakota Electric provide electric service to Hastings, and CenterPoint Energy provides natural gas service. A breakdown of the City's electric premises by sector is shown in Figure 6 and Figure 7. Municipal premises are separated from commercial and industrial premises in the electric data shown (Figure 6), but are not available separately from natural gas data at this time.

Figure 6: 2017 Electric Service Premise Count by Sector[17]



[16] A premise is a unique identifier for the location of an energy service.
[17] Includes data from Xcel Energy and Dakota Electric Association.

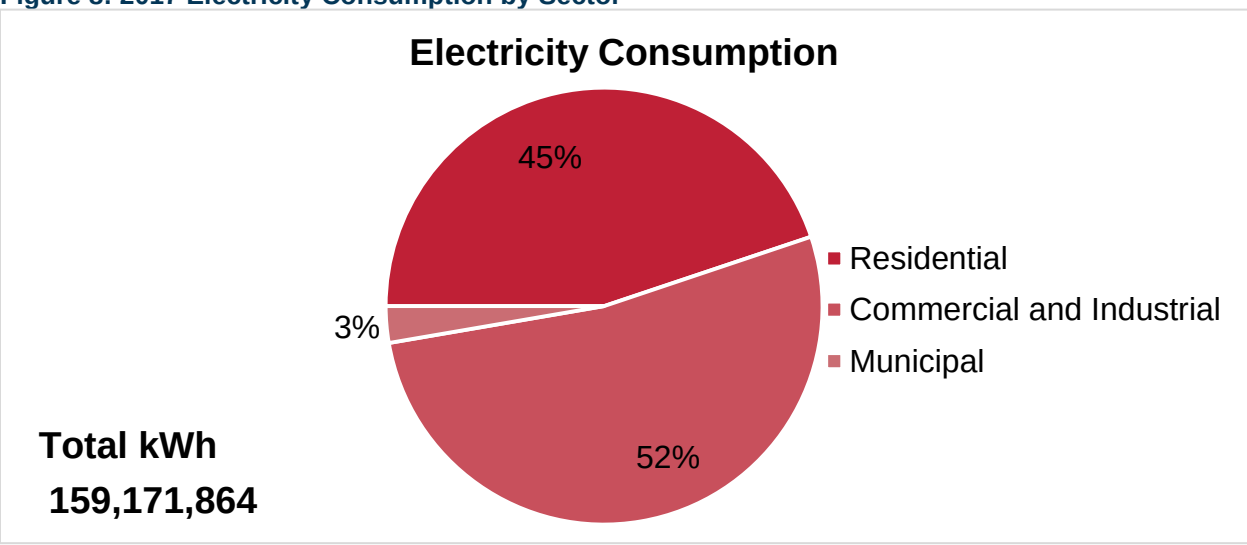
Figure 7: 2017 Natural Gas Service Premise Count by Sector[18]



Electricity and Natural Gas Consumption by Sector

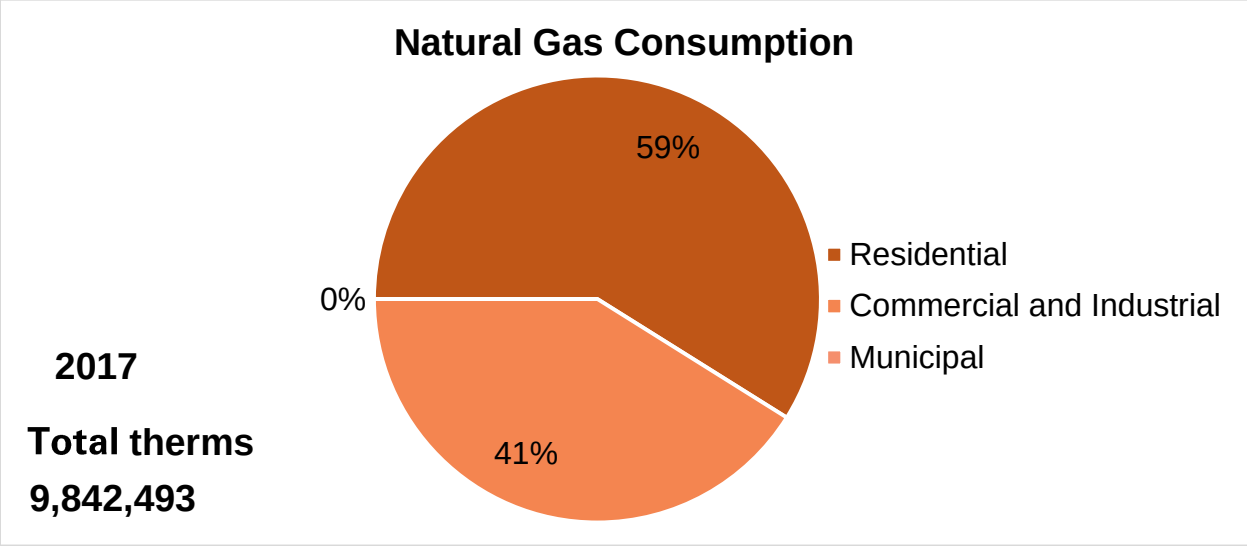
While commercial and industrial premises only make up 8% of electric premises and 7% of natural gas premises, they account for 52% of the community's electricity consumption and 41% of natural gas consumption (Figure 8 and Figure 9). Municipal premises consumed 3% of electricity community-wide and accounted for 1% of electric premises.[19]

Figure 8: 2017 Electricity Consumption by Sector[20]



[18] Includes data from CenterPoint Energy.
[19] Natural gas use and premise counts for municipal facilities not available at this time.
[20] Includes data from Xcel Energy and Dakota Electric Association.

Figure 9: 2017 Natural Gas Consumption by Sector[21]

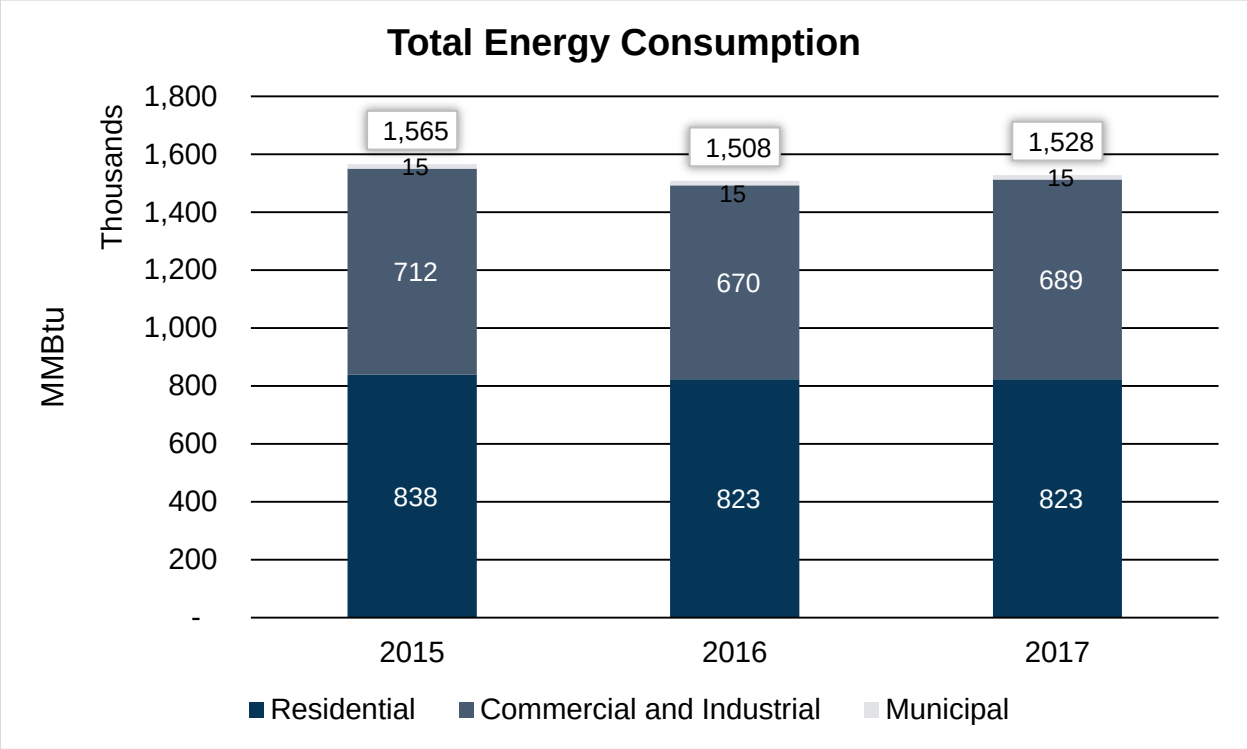


Energy Use Trends[22]

Over the baseline period of 2015 to 2017, total energy use decreased 2% community-wide. This corresponded with a 4% decrease in electricity consumption and a 1% decrease in natural gas consumption. As shown in Figure 10, residential premises are responsible for the majority of community-wide energy use.

[21] Includes data from CenterPoint Energy.
[22] For the purpose of this plan, energy refers to electric and natural gas consumed by premises.

Figure 10: 2015–2017 Total Energy Consumption by Sector[23]



Greenhouse Gas Emissions and Trends

Similar to community energy use, residential premises were responsible for the greatest portion of greenhouse gas emissions in Hastings. In 2017, energy use in Hastings accounted for over 111,500 $MTCO_2$, approximately equivalent to 23,600 passenger vehicles driven for one year.[24] Table 8 shows that community-wide greenhouse gas emissions from energy use have been trending downwards over the three years shown, and at a faster rate than electricity and natural gas use. While overall energy use decreased by 2% from 2015 to 2017, carbon emissions decreased 14% in the same period. The faster rate of decreasing emissions can be attributed to "grid decarbonization," which includes the current and planned reductions in the carbon intensity of electricity provided by Xcel Energy through the addition of low- or no-carbon energy sources to the electricity grid.[25]

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[23] Includes data from Xcel Energy, CenterPoint Energy, and Dakota Electric Association. "Municipal" in this chart refers only to municipal electricity use.
[24] United States Environmental Protection Agency, Greenhouse Gas Equivalencies Calculator.
[25] For more information about Xcel Energy's Carbon Reduction Plans, see "Building a Carbon-Free Future."

Figure 11: 2017 Greenhouse Gas Emissions by Sector

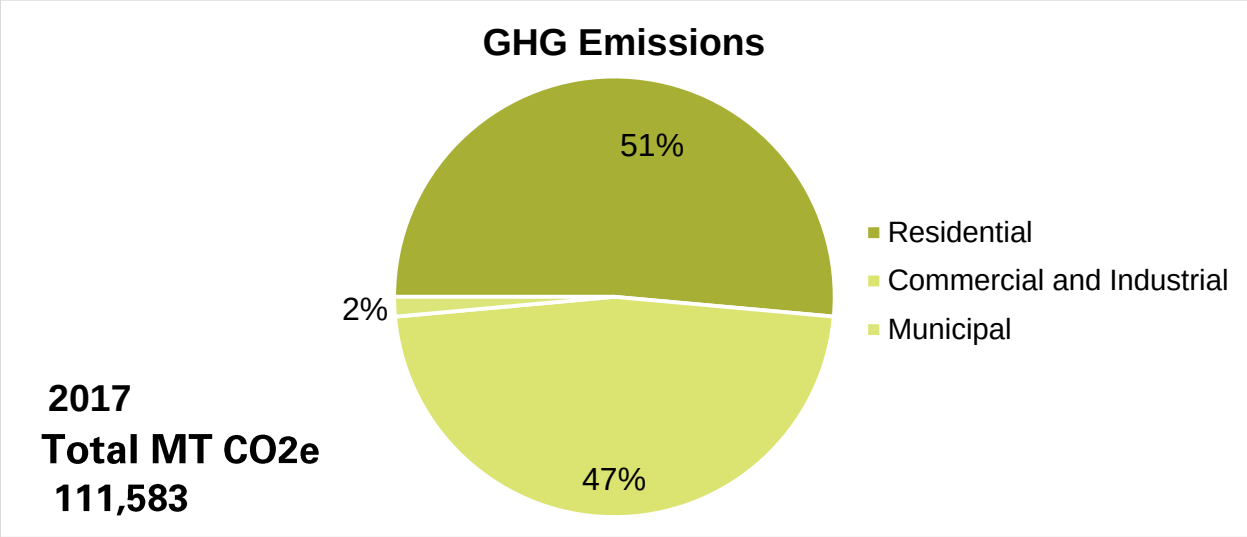
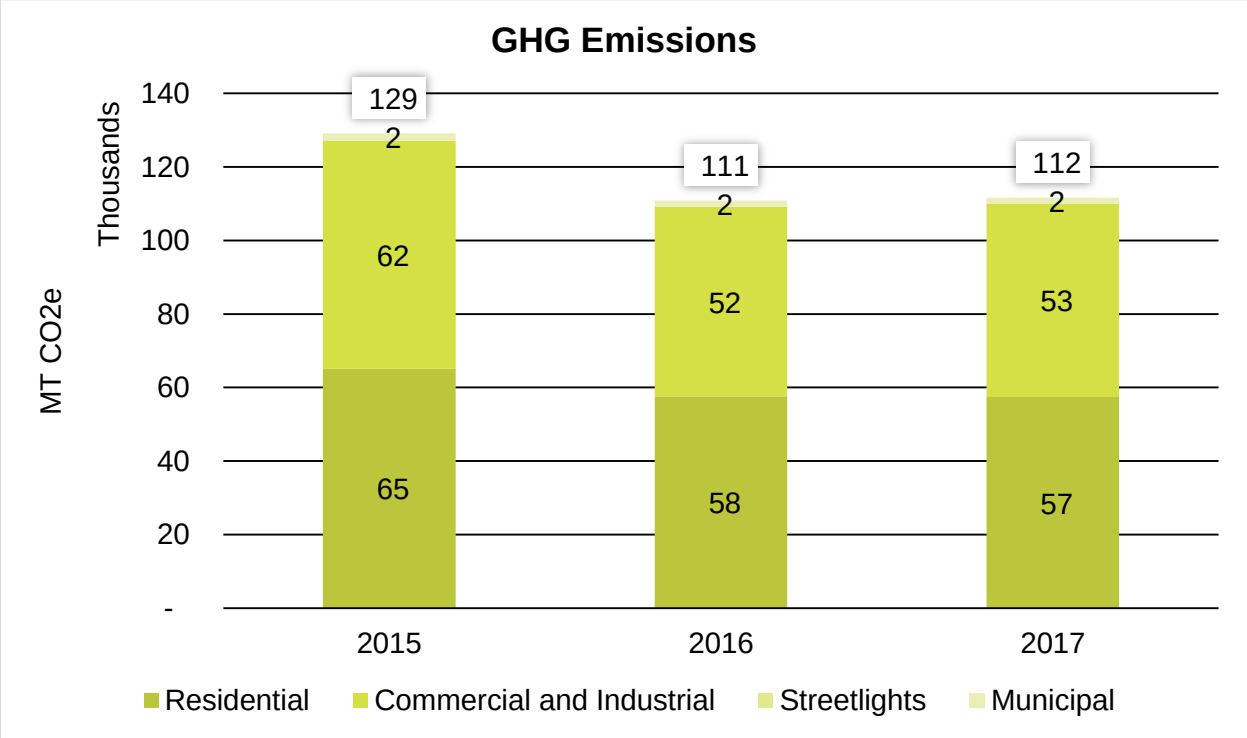


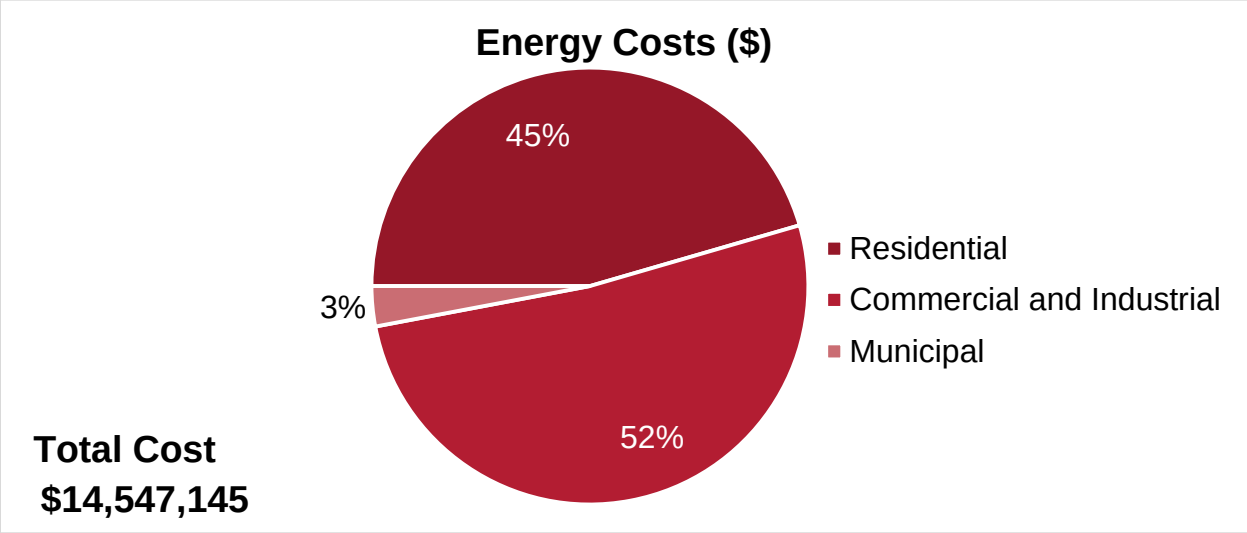
Figure 12: 2015-2017 Greenhouse Gas Emission Trends by Sector



Energy Costs and Trends (2015–2017)

In 2017 alone, Hastings customers spent over $14.5 million on energy. Residents spent over $6.6 million, while commercial and industrial customers spent over $7.4 million. The City of Hastings spent $431,000 on electricity for city-owned facilities in 2017.

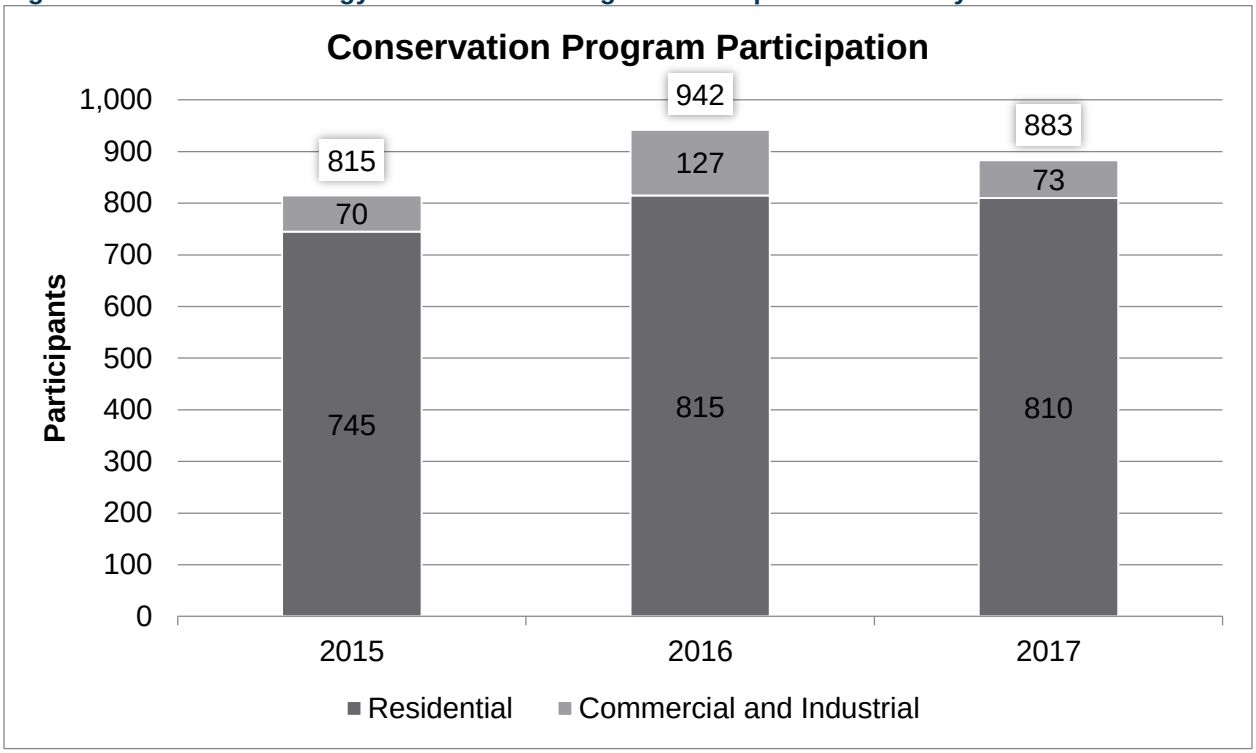
Figure 13: 2017 Energy Costs by Sector



Energy Conservation Program Participation

Hastings residents and businesses have actively participated in utility energy conservation programs. Figure 14 shows total participation in all utility conservation programs from 2015–2017. Tables 9, 10, and 11 show program participation by utility.

Figure 14: 2015–2017 Energy Conservation Program Participation Trends by Sector[26]



[26] Includes data from Xcel Energy, CenterPoint Energy, and Dakota Electric. Home Energy Squad participation is only counted from Xcel Energy to avoid double counting.

Table 9: 2015–2017 Xcel Energy Energy Conservation Program Participation and Savings by Sector

		2015		2016		2017	
	Programs	Participants	Savings (kWh)	Participants	Savings (kWh)	Participants	Savings (kWh)
Residential	Efficient New Home Construction	5	3,262	2	776	1	878
	Home Energy Audit	2	-	3	-	3	-
	Home Energy Savings Program	4	1,456	9	567	4	528
	Home Energy Squad	16	10,651	7	5,031	10	14,324
	Low-Income Home Energy Squad	-	-	-	-	37	22,437
	Multi-Family Energy Savings Program	-	-	-	-	-	-
	Residential Cooling	74	41,010	98	58,112	76	24,753
	Residential Heating	62	38,418	63	44,768	111	75,997
	Refrigerator Recycling	41	37,953	19	18,499	41	42,161
	Residential Saver's Switch	99	792	58	464	136	274
	Smart Thermostat	-	-	13	-	4	75
Commercial	Computer Efficiency	-	-	1	4,550	-	-
	Cooling	4	78,088	3	79,901	5	5,930
	Custom Efficiency	1	13,292	1	323,930	1	263,702
	Data Center Efficiency	-	-	-	-	-	-
	Efficiency Controls	-	-	-	-	1	551,281
	Electric Rate Savings	1	(1,328)	-	-	3	11,134
	Energy Design Assistance	-	-	-	-	-	-
	Energy Efficient Buildings	-	-	1	149,216	1	65,151
	Fluid System Optimization	3	407,453	1	76,649	1	3,852
	Foodservice Equipment	-	-	-	-	-	-
	Heating Efficiency	-	-	-	-	1	3,783
	Lighting Efficiency	12	210,286	14	166,141	16	417,681
	Motor Efficiency	3	170,720	5	305,407	2	35,465
	Multi-Family Building Efficiency	-	-	-	-	-	-
	Process Efficiency	-	-	-	-	-	-
	Recommissioning	-	-	-	-	-	-
	Saver's Switch for Business	2	15	50	727	2	5
	Small Business Lighting	8	46,548	19	566,390	6	63,782
	Turn Key Services	-	-	1	-	1	-

Table 10: 2015–2017 CenterPoint Energy Energy Conservation Program Participation and Savings by Sector[27]

		2015		2016		2017	
	Programs	Participants	Savings (kWh)	Participants	Savings (kWh)	Participants	Savings (kWh)
Residential	CenterPoint Energy Home Efficiency Rebates[28]	346	19,690	409	23,800	298	28,860
	CenterPoint Energy Home Insulation Rebates	9	1,540	2	260	-	-
	CenterPoint Energy Home Energy Squad	13	1,420	7	650	13	623
	CenterPoint Energy Residential Energy Audit	8	n/a	4	n/a	-	-
	CenterPoint Energy New Home Construction Rebates[29]	3	1,090	6	1,460	12	300
	CenterPoint Energy Low-income Residential Programs	6	950	5	170	-	-
Commercial	CenterPoint Energy — C&I Heating and Water Heating Rebates	28	52,690	23	62,480	27	29,490
	CenterPoint Energy — All Other C&I Programs	5	2,600	5	66,850	5	11,660

[27] Certain programs are excluded from these charts and participation counts. For CenterPoint Energy, these programs are Home Energy Reports and Low-Flow Showerhead and Aerator.
[28] Includes Heating System, Water Heating, Hearth, Laundry & Thermostat Rebates
[29] Includes CenterPoint Energy Whole Home New Construction for 2015 and 2016.

Table 11: 2015–2017 Dakota Electric Association Energy Conservation = Program Participation and Savings by Sector[30]

		2015		2016		2017	
	Programs	Participants	Savings (kWh)	Participants	Savings (kWh)	Participants	Savings (kWh)
Residential	Dakota Electric Income Qualified Programs	-	-	5	3,878	2	188
	Dakota Electric Residential Cooling Rebates	31	9,969	48	16,967	55	32,497
	Dakota Electric Other Equipment Rebates	6	4,132	11	5,546	4	3,262
	Dakota Electric Refrigerator and Freezer Recycling	10	10,029	21	21,501	16	16,266
Commercial	Dakota Electric LED Lighting	3	86,481	3	27,988	-	-
	Dakota Electric Whole Building Commissioning & Retrofit	-	-	-	-	1	219,000

How is Hastings Investing in Renewable Energy?

In 2017, 335 total Hastings residents and businesses subscribed to support renewable energy through Xcel Energy's Windsource®, Dakota Electric's Wellspring Renewable Energy®, and community solar gardens (Table 12). On-site installations were less popular, with only two residential premises and four business premises participating in Solar*Rewards and no customers participating in Dakota Electric Solar.

[30] Certain programs are excluded from these charts and participation counts. For Dakota Electric, these programs are LED lights, CFL Bulbs, Holiday LEDs.

Table 12: 2017 Renewable Energy Support Summary by Sector

Windsource®	Residential	Commercial & Industrial
Subscribers	210	2
Subscription Amount (kWh)	463,321	17,466
Community Solar Gardens[31]		
Subscribers	103	1
Subscribed Amount (kWh)	277,107	2,988
Solar*Rewards[32]		
Installations	2	4
Total Capacity (kW)	17	107
Wellspring Renewable Energy		
Subscribers	18	-
Subscribed Amount (kWh)	59,100	-
Dakota Electric Solar		
Installations	-	-
Total Capacity (kW)	-	-

[31] Xcel Energy Community Energy Report, 2017.
[32] Ibid.

Appendix 4: Methodology for Measuring Success

As part of implementation support, Partners in Energy will provide biannual progress reports for Xcel Energy participation and savings data. All goals will be measured against a 3-year baseline of 2015–2017 data unless otherwise noted.

The following section defines the 3-year baseline against which progress will be measured, including the utility program(s) included in the baseline.

Residential Energy Efficiency Focus Area Goals

1. 100 Home Energy Squad® visits completed annually.

   This target will be measured against a 3-year baseline of 26, which includes participation counts from Xcel Energy's Home Energy Audit, Home Energy Squad, and Low-income Home Energy Squad.

2. 20 home insulation projects completed.

   This target will be measured against a 3-year baseline of 4, which includes participation counts from CenterPoint Energy Home Insulation Rebates.

   Note: CenterPoint Energy data not included in biannual progress reports.

3. 70 refrigerator or freezer recycling rebates annually.

   This target will be measured against a 3-year baseline of 50, which includes participation counts from Xcel Energy's Refrigerator Recycling and Dakota Electric Association Refrigerator and Recycling.

   Note: Dakota Electric Association data not included in biannual progress reports.

4. Distribute 200 LED bulbs at community events.

   Xcel Energy provided 200 LED bulbs to Hastings City Staff on April 26, 2019. This target will be measured against success of distributing those bulbs. Additional bulbs provided by Xcel Energy, Dakota Electric Association, or another entity will be included in the total count.

Business Energy Efficiency Focus Area Goals

1. Conduct two business blitzes.

   This target will be measured against a baseline of zero.

2. 100 commercial and industrial energy conservation program participants annually.

This target will be measured against a 3-year baseline of 89, which includes all participation counts in Xcel Energy, CenterPoint Energy, and Dakota Electric Association commercial and industrial programs and rebates.

Note: CenterPoint Energy and Dakota Electric Association data not included in biannual progress reports.

Electric Vehicles Focus Area Goals

1. Host three electric vehicle showcase events.

   This target will be measured against a baseline of zero. All showcase events hosted between April 2019 and December 2020 will be included.

2. Deliver one fleet electrification workshop.

   This target will be measured against a baseline of zero. All electrification workshops hosted by the City will be included.

Appendix 5: Glossary of Terms

15 x 15: Xcel Energy's privacy rule, which require all data summary statistics to contain at least 15 presmises, with no single premise responsible for more than 15% of the total. Following these rules, if a premiseis responsible for more than 15% of the total for that data set, it is are removed from the summary.

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.

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

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 (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.

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

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.