

An Energy Action Plan for The St. Cloud Community



March 2017

Table of Contents

Executive Summary	1
Our Vision:	1
How We Will Get There	1
Introduction	2
Community Background	2
Business, Industry, and Jobs	2
Community, Population, and Housing Demographics	4
Community Leadership and Assets	7
Commitment to Sustainability	7
Recent City Leadership, and Energy Initiatives	9
Xcel Energy's Partners in Energy	10
Energy Action Team	11
Community Energy Use Baseline	12
Base Participation in Conservation Programs and Services .	18
Where Are We Going? The Energy Vision and Goals	20
Three Themes for Impact	21
Community Energy Goals	23
Near-Term Impact	24
Long-Term Impacts	25
How We Are Going To Get There? Strategies	27
Strategies for Accomplishing Goals	27
A Call for Community Engagement	43
How Are We Going To Stay On Course?	43
SWOT Analysis	44
Monitoring and Reporting	44
Changing Course: Corrective Action	45
Ongoing Support from Xcel Energy	45

Appendix A: Glossary of Terms

Appendix B: Planning Workshop Meeting Notes

Appendix C: Supplemental Baseline Energy Data & Comparison to Other

Communities

Appendix D: Planning Phase Memorandum of Understanding between City of St.

Cloud & Xcel Energy

Appendix E: Xcel Energy Programs & Rebate Summary

Appendix F: Energy Action Plan Overview & Infographic

Executive Summary

Our Vision:

We are energy leaders through voluntary, inclusive, and sustainable approaches that result in measurable, environmental, and economic benefits.

How We Will Get There:

Education

Conservation

The community will focus on actions and impacts over a 10-year period. Near-term goals and strategies will focus on early efforts to lay a strong foundation for long-term, community-wide achievement.

Goals:

 <u>Near-Term & Long-Term:</u> Increase energy awareness for individuals regarding actions and behaviors that reduce energy use and benefit future generations.

Strategies:

- Engage primary or secondary school age students through an annual school energy challenge.
- Hold events to educate residents about energy resources and best practices.
- Hold events to educate small and medium-sized businesses about home energy resources and best practices.
- Launch an online resource library for residents and businesses.

Goals:

- <u>Near-Term:</u> Double utility conservation program participation for both residential and small to medium-sized businesses in year 1.
- Near-Term: Save \$638,000 in energy costs community wide in year 1.
- <u>Long-Term:</u> Maintain program participation at 70% above business as usual after year 1.

Strategies:

- Host 1 to 3 events for residents to learn about and sign up for conservation programs and services.
- Create a handout on return on investment for key small to mediumsized business conservation capital and non-capital improvements.
- Host 1 to 3 events for small to medium-sized businesses to learn about and sign up for conservation programs and services.
- Launch a clean energy community action campaign that promotes healthy and efficient businesses and homes.

Goals:

 <u>Long-Term:</u> Help institutions and industrial businesses replace 21.8 million kWh of electricity with renewable electricity by 2026 via installation, purchase, or subscription.

Renewable Energy

Strategies:

- Create case studies of businesses that have completed conservation projects in preparation for future renewables.
- Hold renewable energy education workshops for institutional and industrial businesses.
- Launch a challenge program to get all institutional and industrial businesses to pledge to reach 5% renewable electricity by 2025.

1

Introduction

The purpose of this Energy Action Plan is to develop an Energy Vision for the community and outline a set of goals and recommended strategies to achieve that vision. The intent of this report is to document the character of the vision and goals with a focus on three themes: education, conservation, and renewable energy. This plan will serve as a reference for community members and a road map for implementation.

In May 2016, the City of St. Cloud signed a Memorandum of Understanding with Xcel Energy to participate in Partners in Energy (see Appendix C). The City identified the community leaders that would ultimately make up the 10-person Community Planning Team that developed the contents of this Energy Action Plan. This team participated in a series of planning workshops over the course of five months between June and November. The committee was comprised of residents, neighborhood organizers, business owners, institution facility leaders, sustainability leaders, and city staff.

Although St Cloud has always valued sustainability and made considerable efforts toward sustainability, there was not a formal action plan focused specifically on community-wide energy usage. This Energy Action Plan is intended to fill that void and create a more synergistic approach to sustainability by drilling deep into the community's energy opportunities. The process to develop the plan brought new stakeholders to the table and identified both near-term and long-term energy goals. The planning process was facilitated by Xcel Energy's Partners in Energy program and cohosted by the City of St. Cloud's Public Utilities Department and Planning and Zoning Department. The City pursued Partners in Energy as a way to renew and advance the energy related goals outlined in their 2010 Sustainability Framework Plan. The Partners in Energy planning process helped the Community Planning Team develop goals and strategies rooted in comprehensive, place-based energy data and on-the-ground campaign and capacity building.

The following plan provides an overview of the St. Cloud community's baseline energy use, a vision for energy action, targeted themes and audiences for each of the goals, and recommended strategies that reflect the spirit of the goals and best practices shared during planning. Throughout the plan and in the appendices, the planning process is documented for community reference during implementation.

Community Background

Business, Industry, and Jobs

The greater St. Cloud area is the fourth largest metro area in Minnesota. In 2015, St. Cloud's population was estimated to be 67,056. The surrounding communities of St. Augusta, St. Joseph, Sauk Rapids, Sartell, and Waite Park have a combined population of over 111,000.2 The St. Cloud

2

¹ US Census Bureau. (2015). Quick Facts. Retrieved from www.census.gov/quickfacts/table/PST045216/2756896,2767612,2757130,2758612,2758684,00 ² The St. Cloud Metropolitan Statistical Area (MSA) is estimated to be even larger, at 189,000 people.

area is a destination for central Minnesota residents' retail and recreational needs, and it also provides entertainment opportunities for the community. St. Cloud is large enough to attract business yet small enough to attract those looking for a quiet place to live, and it has seen persistent population growth over the last 15 years with continued growth projected at a slow and sustainable rate. St. Cloud's central location and proximity to both major highways and a regional airport makes it desirable location for business and institutions.

St. Cloud is located at the intersection of three counties and is the county seat for Stearns County. St. Cloud provides job opportunities in social services and public administration for both county government and state and federal government institutions.

St. Cloud is also a notable hub for healthcare and education. St. Cloud State University (SCSU) is one of the largest colleges in the Minnesota State Colleges and University (Minnesota State) system, with a student body of 19,186.³ SCSU is located adjacent to downtown St. Cloud and provides the community with opportunities for arts, culture, and athletics. It also offers noteworthy

programs in management and finance, criminal justice, communications, and medical and clinical research.

In addition to SCSU, St. Cloud Technical and Community College has a student body of $6,000^4$, and the neighboring community of St. Joseph is home to the College of St. Benedict and St. John's University, which have a combined student population of approximately 3.600.5

Healthcare is another highly visible industry with the CentraCare headquarters

located in the St. Cloud community. CentraCare



Credit: St. Cloud Downtown Council

is the major healthcare provider in central Minnesota and includes over 30 facilities in central Minnesota from hospitals to clinics and senior housing. CentraCare is a business leader in St. Cloud — it is a Top 100 Hospital (named this for the 10th time in 2015) and a sustainability leader. Because of CentraCare and others, St. Cloud attracts medical professionals from around the country.

Combined, 25% of St. Cloud's jobs are in the education, medical, or social assistance sectors.

Retrieved December 21, 2016 from the City of St. Cloud website: www.ci.stcloud.mn.us/1261/Demographics

³ Retrieved December 21, 2016 from Minnesota State's website:

www.mnscu.edu/college-search/public/institution/institutionProfile?search=college&rcld=0073

⁴ Retrieved January 3, 2017 from St. Cloud Technical & Community College website: www.sctcc.edu/about

⁵ Retrieved December 21, 2016 from College of St. Benedicts and St. John's website: www.csbsju.edu/about/at-a-glance

⁶ Retrieved December 30, 2016 from Centra Care Health website: www.centracare.com/about-us/

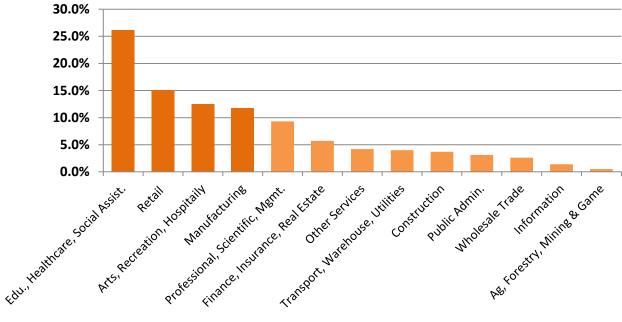
⁷ Retrieved December 30, 2016 from Centra Care Health website: www.centracare.com/locations/st-cloud-hospital/top-100-hospital/

Figure 1: St. Cloud Employment by Industry (2010-2014)9

Manufacturing, distribution, and wholesale business account for a large portion of the remaining employment sectors in St. Cloud. The St. Cloud Chamber of Commerce has over 1,000 members, 45 of which identify as one of these business types. Of note are Pan-O-Gold, DeZURIK, Electrolux North America, New Flyer of America bus manufacturer, and the Granite Supply Company.

St. Cloud also has significant workforce in retail, arts, recreation, and hospitality. The St. Cloud mall is anchored by four large retailers: Macy's, Target, Sears, and JC Penny's. The St. Cloud Rivers Edge Convention Center is the largest conference facility in central Minnesota, and hotels and restaurants are used by both residents and visitors.

Twenty-six point two percent of St. Cloud jobs are in the areas of education, healthcare, or social assistance.



Community, Population, and Housing Demographics

St. Cloud residents enjoy a close proximity to the Twin Cities metropolitan area as to take advantage of big city amenities without the hustle and bustle right in their backyard. In 2016, Forbes ranked St. Cloud as the 14th in the US for the "Best Small Place for Businesses and Careers." The cost of doing business in St. Cloud is ranked 115th, and the city is ranked 75th in education and 44th in job growth. The cost of living is calculated to be 9.4% below the national

4

Retrieved January 4, 2017 from St. Cloud Area Chamber website:
 http://chambermaster.stcloudareachamber.com/list/ql/manufacturing-production-wholesale-16
 US Census Bureau. (2014) American Community Survey. Retrieved from
 thedataweb.rm.census.gov/TheDataWeb_HotReport2/profile/2014/5yr/np01.hrml?SUMLEV=160&state=27&place=56896

average with an unemployment rate of 3.7%, which is also lower than the national average of 4.9%.10

As a hub for healthcare and education, and with industrial and agricultural roots, St. Cloud is a hybrid of small-town and big-city thinkers with values rooted in pragmatism, conservation, and innovation.

Since 2000, St. Cloud's population has been gently increasing at a rate just over 1.0%. 11 At 70.1%, the largest wedge of the population is made up of young adults and working families, those in their primary working years. Over 92% of all residents have a high school diploma or equivalent, and 28.4% of residents hold a bachelor's degree or higher, compared to the 2015 national average of 36%. The average household income in the city is \$45,437, which is lower that the state average. More than 40% of households have an income of \$35,000 or less, and 28% of residents live in poverty (in Minnesota as a whole, 11.5% of residents were living in poverty in 2014¹³).

Figure 2: St. Cloud Household Income (2014)

Figure 3: St. Cloud Race Distribution (2014)

Total Per Household	25,279	100.0%
Less than \$35,000	10,112	40.0%
\$35,000-\$49,999	3,855	15.2%
\$50,000-\$74,999	4,727	18.7%
\$75,000-\$99,999	2,880	11.4%
\$100,000 or more	3,705	14.7%
Median (2014 \$'s avg'd)	\$44,485	

Race	Count	%
White non-Hispanic	54,969	83.20%
Of Color	11,069	16.80%
Asian	1,737	2.60%
Black	5,592	8.50%
Hispanic (any race)	1,557	2.40%
Other races		<1%
Total population	66,462	

St. Cloud has seen significant growth in their immigrant population over the last 15 years. Lutheran Social Services of Minnesota, the largest of six primary service providers to refugees in the state, has relocated 1,000 refugees in St. Cloud since 2008. Because of this and the moderate cost of living, immigrants from other parts of the US have moved to the St. Cloud area, particularly from Somali communities.

The city was established in the 1850s and thus the housing stock is fairly old. The average house age is 50, and the median year built is 1969. 14 The oldest homes are those closest to downtown and the river; these were primarily built between the 1880's and post-World War II. In 2015, 67% of

¹⁰ Retrieved December 28, 2016 from: http://www.forbes.com/places/mn/st-cloud/

¹¹ This is higher than the national average of 0.7%, according to the US Census, 2013 estimate.

National Center for Education Statistics, https://nces.ed.gov/fastfacts/display.asp?id=27

¹³ Minnesota State Demographic Center. Estimated Percent of all people that are living in poverty as of 2011-2015. Retrieved from: https://mn.gov/admin/demography/data-by-topic/income-poverty/

14 City of St. Cloud. GIS Boundary Map. (M. Hoye, personal communication, May 16, 2016).

housing consisted of single-family homes, with homeownership estimated to be 52%. Since 2013 the primary growth in housing stock is in the multifamily sector at 2.5% in 2014, compared to 0.6% in single-family homes.

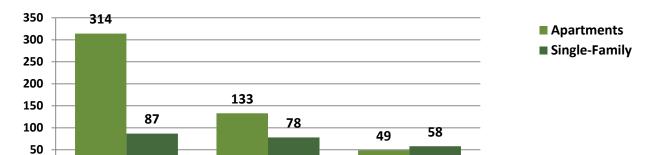
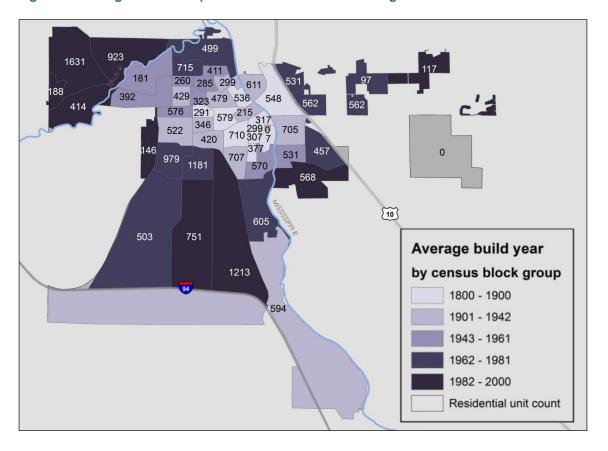


Figure 4: Residential Housing Unit New Construction/Growth in St. Cloud





Community Leadership and Assets

Early on, the City and the Community Planning Team identified possible community networks and assets to use as channels and tools in meeting energy goals. The following table includes a summary that can be used as a reference for advisors and future implementers. It is not meant to serve as an exhaustive list.

Figure 6: Community Resources & Assets

City	Business	Community
GreenStep Cities	Medical institutions	St. Cloud Neighborhood Coalition
Renewable Energy & Efficiency Initiative	Universities and technical and business colleges	Festivals: Summer by George; Wings, Wheels, and Water Festival
Streetlight Improvement Project (LED retrofit)	St. Cloud Chamber of Commerce & neighboring chambers	Public school channels & PTA
Mayor's weekly radio show	Business Central Magazine	St. Cloud Area Somali Salvation Organization
	Central Minnesota Builders Association	St. Cloud Times newspaper
	Other energy utilities	St. Cloud Library

Commitment to Sustainability

The City of St. Cloud has a long history of strong city planning practices, bringing leadership to the area to help guide future development, smart land use, and economic development opportunities. Community-based planning efforts are an embedded tradition in the Planning and Zoning Department, which has a core purpose of "providing professional assistance in creating and administering city policies, plans, and regulations with community stakeholders to enhance livability and sustainability." ¹¹⁵

Since about 2008, the St. Cloud community has shown leadership in sustainability to guide durable economic



The City of St. Cloud is committed to protecting & enhancing environmental quality today & for future generations.

development and local quality of life. The creation of the Sustainability Framework Plan in 2010 was a landmark event for the City. The plan was created by the St. Cloud Area Planning District

¹⁵ Retrieved January 4, 2017 from City of St. Cloud website: http://ci.stcloud.mn.us/88/Planning-Zoning

Sustainability Committee, a group of community, business, and city representatives. The group met with the goal of helping manage and preserve the region's natural resources including air, water, green space, and farmland.¹⁶ The plan envisioned a future for St. Cloud that leveraged significant energy efficiency, renewable energy, and district infrastructure and systems.

The Sustainability Framework Plan is still recognized today, overseen by the St. Cloud Area Sustainability Committee. However, some of the goals have exceeded their useful life.

St. Cloud has taken additional steps beyond the Sustainability Framework Plan toward deeper local government sustainability. The City became one of the initial cities to participate in GreenStep Cities, a voluntary tool from the Minnesota Pollution Control Agency (MPCA) to help city governments become more environmentally sustainable. Participating in this program has helped the City accomplish many action items, including some related to energy efficiency (such as replacing streetlights with LEDs and benchmarking all City facilities in the State's B3 Benchmarking) and renewable energy (such as adopting a Minnesota Solar Challenge land use best practice to encourage solar development). However, the City has taken steps forward on all but four of the possible 65 actions for GreenStep Cities, so it is unclear how much longer it will be an effective tool.¹⁷

The City of St. Cloud applied to Xcel Energy's Partners in Energy to update their energy-related sustainability goals and create a launching pad from recent energy conservation and renewable efforts (see the Community Background section). In their application, the City noted their interest to work with a wide array of local stakeholders to create a shared vision and improve community health and sustainability. The City also sees this effort as a way to save residents and businesses money on their energy bills and provide community services as cost-effectively as possible.





¹⁶ This group become formally known as the St. Cloud Area Join Planning District Sustainability Committee.

¹⁷ St. Cloud has earned at least 1 of 3 stars for all 65 actions (5 action categories), in many cases achieving a higher then minimum level of recommended practices (earning 2 or 3 stars). As of July 2016, St. Cloud is noted as being "Inactive" on the GreenStep Cities website.

Recent City Leadership, and Energy Initiatives

The City of St. Cloud has offered a number of initiatives in the last decade that provide a robust jumping-off point for community action on energy and sustainability goals:

2009/2010 — The City developed the Sustainability Framework Plan, which included energy efficiency and renewable energy goals, initiatives, best practice guidance, and action steps.

2011 — The City became a member of MPCA's GreenStep Cities program, achieving Step 2 Status in 2011.

2015 — City Council adopted a resolution supporting the implementation of renewable energy from solar generation facilities.

2015 — City Council signed a resolution supporting large energy efficiency improvements at the St. Cloud Wastewater Treatment Facility and construction of the Biofuel Recovery Project that will generate ~5,000 MWh of renewable energy annually (E2B Project).

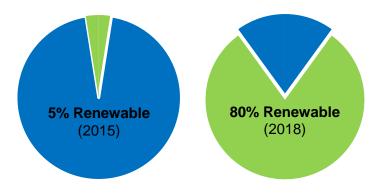
2016 — The City completed the Street Light Improvement Project (SLIP) by retrofitting all existing streetlights with LED technology, which resulted in energy savings estimated at 2,800 MWh annually.

2016 — The City's first rooftop solar array was installed at the Wastewater Treatment Facility and became operational in January 2016. A second ground-mount solar array was installed at the facility and became operational in December 2016. These two systems combined will generate approximately 342,000 kilowatt-hours of electricity annually. Two additional solar rooftop arrays were installed at St. Cloud Police Headquarters and St. Cloud Fire Station No. 2 and became operational in December 2016.

The recent energy efficiency improvements and the biofuel upgrades at the wastewater treatment facility show significant energy savings for the City and its residents.

Figure 7: City of St. Cloud Renewable Energy & Efficiency Initiative (REEI)

The City of St. Cloud has an initiative to increase energy efficiency and the use of renewable energy in city operations. The two charts show 2015 status and the 2018 goal for renewables.



St. Cloud is the only one of 22¹⁸ wastewater treatment facilities in the state to take this step. This work is part of the City's Renewable Energy and Efficiency Initiative (REEI), which started in 2014. This initiative has targeted energy improvements in the facilities and sectors that use the most energy; the top three are wastewater services, drinking water services, and street lighting.

REEI activities will conserve energy and produce enough renewables on-site to make all city government operations and services 80% renewable by 2018 (compared to 5% renewable in 2015).

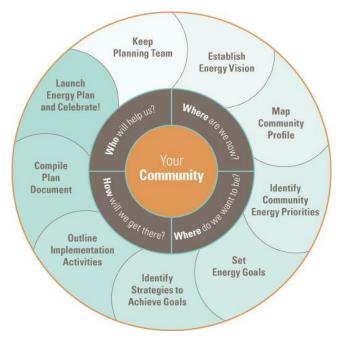
Xcel Energy's Partners in Energy

Partners in Energy is a service created for Xcel Energy communities in Minnesota and Colorado. The program provides support in the development and implementation of a customized energy action plan. St. Cloud was chosen as the **eighth Minnesota community** to participate since the program's launch in 2014. Other participating Minnesota communities at the time of writing are the Lake Street/Midtown Greenway Corridor in Minneapolis, Ramsey County Parks and Recreation, and the cities of Maplewood, Red Wing, St. Louis Park, Edina, Faribault, and Saint Paul. There are also seven Colorado communities currently participating.

The objective of the Partners in Energy planning process is to allow communities to develop actionable plans that advance their goals while being supported by Xcel Energy's technical expertise, facilitation process, and program knowledge. After six months of planning, Xcel Energy continues their support by providing18 months of plan implementation assistance.

In addition to planning workshops, communities participate in joint learning opportunities with three to five other Partners in Energy communities, forming an "Exchange." Exchanges meet for office hour calls, webinars, and peer-to-peer conversations developed around topics that support planning and implementation tasks. The goal of these interactions is to allow for collaboration between communities and access to experts in the field.

Figure 8: Xcel Energy's Partners in Energy Planning Process Diagram



10

¹⁸ Bilek, A. Minnesota Biogas: Overview, Status, Opportunities and Trends [pdf document]. Retrieved from presentation slides pdf online: http://www.lec.leg.mn/2014/091614BilekPresentation.pdf

Community Planning Team

This Energy Action Plan was created through a community-based planning process that incorporated local insights, concerns, and aspirations. The Community Planning Team is the group of community leaders brought together by the City of St. Cloud to help shape the plan. The team included an array of neighborhood and business leaders as well as city government staff. They were supported by Xcel Energy program, account, and community relations managers, as well as the Xcel Energy facilitation team that helped guide the group through the planning process.

See appendix A for more information about the planning process, individual workshops, and additional data shared.¹⁹

Figure 9: List of Community Planning Team & Xcel Energy Collaboration Representatives

St. Cloud Community Planning Team (pictured above)

Business & Community Representatives

- 1. Bryan Brown District 742 Schools, Buildings & Grounds Supervisor*
- 2. Nick Barth Beaver Island Brewing, Business Owner
- 3. Jane DeAustin Central MN Builders Association
- 4. Joan Jaye St. Cloud Neighborhood Coalition, Executive Director
- 5. Dustin Maddy CentraCare, Sustainability Program Specialist
- 6. Phil Moessner St. Cloud State University, Facilities Management, Assistant VP

City Government Representatives

- 1. Jim Flaaen Senior Planner (City contact during implementation)
- 2. Matt Glaesman Community Development Director
- 3. Tracy Hodel Assistant Public Utilities Director (City contact during planning)
- **4.** Emma Larson Utilities Water Quality Coordinator
- 5. Patrick Shea Public Services Director

Xcel Energy Representatives

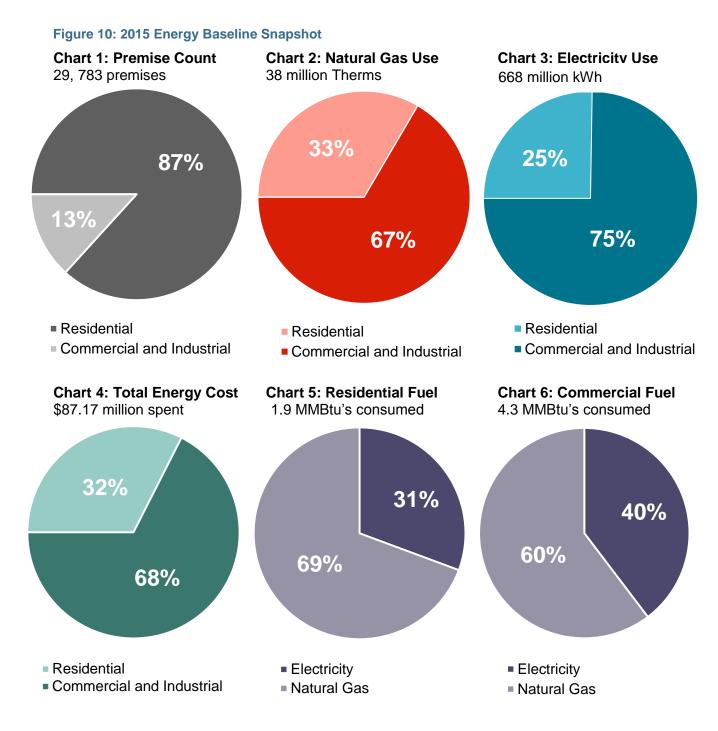
- 1. Tami Gunderzik Partners in Energy Program Manager
- 2. Yvonne Pfeifer DSM Community Manager
- 3. Mark Osendorf Community Relations and Economic Development Manager
- 4. Megan Hoye, Center for Energy and Environment Facilitator Lead
- 5. Jenny Edwards, Center for Energy and Environment Facilitator
- Elena Foshay, Center for Energy and Environment Facilitator

*Participated during Workshop 1, but was not able to participate throughout the full planning process.

¹⁹ Data disclaimer: The cost data provided in this report considers only the energy and demand costs, not additional costs such as taxes or local fees that might be incurred indirectly, but which may appear on an energy bill. Additionally, in accordance with Xcel Energy's data privacy policies in the state of Minnesota, all data used in the planning process and reported in this Plan comply with the rule commonly called *15 x 15*. This means that no data has been shared for customers that account for 15% or more of a segment of energy described, and all aggregated data includes data for a minimum of 15 customers.

Community Energy Use Baseline

This section provides a look at how the St. Cloud community currently consumes and saves energy. The most recent data covers the years 2013, 2014, and part of 2015. This information was presented to the Community Planning Team during planning as a starting point for conversations and a resource for determining where to focus the efforts and goals outlined in this plan.



12

As of 2015, there are 28,783 premises within the Xcel Energy St. Cloud territory divided between 3,813 commercial premises and 24,969 residential premises. A premise is the area served by a single electric or natural gas meter. Most houses have just one meter each, while large businesses often have more than one. While premise count is not necessarily representative of how many businesses or homes are in the community, it is the unit on which utility data is based.

In 2015, the average total energy cost per year for a residential customer was \$1,134 and \$15,436 for commercial customers. Figure 10 provides a range of charts that show a breakdown of thermal energy and electric energy use as well as cost by commercial and residential customers in 2015. Just over half (51%) of all the energy consumed by Xcel Energy customers in St. Cloud is natural gas energy while 49% is electricity, which comes from a variety of fuel types including natural gas, nuclear, coal generation, wind, and solar.

Commercial and industrial (C&I) customers consume the most energy. The 50 largest users of consume 52% of all C&I natural gas and 56% of all C&I electricity (according to 2015 data). These largest users have the greatest potential

Residential Natural Gas 21%

Commercial Electricity 28%

Commercial Natural Gas 42%

to influence total energy use and savings even though many often already engage with utility conservation programs, working directly with an Xcel Energy customer representatives. These businesses often include large institutions, manufacturers, and buildings that provide specialty services.

Figure 12: Energy Use from 50 Largest Users by Fuel Type (based on 2015 energy consumption)

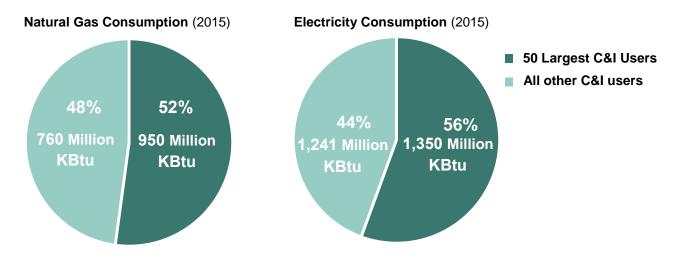
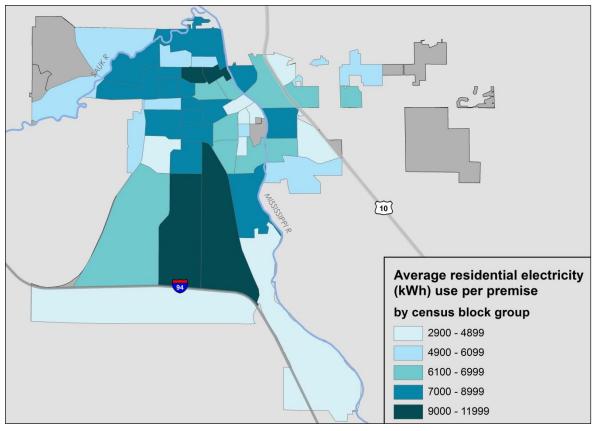
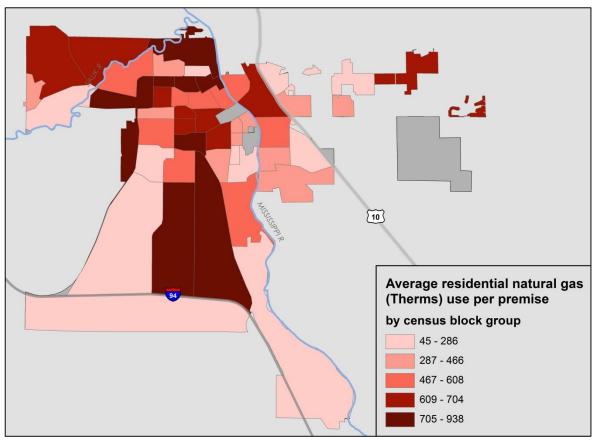


Figure 13a & b: Average Residential Electricity Use and Natural Gas Use by Premise (2015) Included in these maps are all residential premises, including apartments and condos.





Energy usage by geographic area does vary within the city. The maps in Figure show annual average electricity and natural gas usage by census block group (a geographic unit of area) based on 2015 data. Residential premises are defined as those buildings or houses that have four or fewer living units. The parts of the city with a lower density of buildings are darker in color either because of the higher energy usage by a small number of businesses or because the average energy use per home is higher in that area.

Xcel Energy is the sole provider of natural gas to St. Cloud businesses and residents, and it is one of three electricity providers with the city limits and surrounding area. As an Xcel Energy service, Partners in Energy was only able to provide data about customers that fall within Xcel Energy's service area. Businesses such as BlueStem, New Flyer, Wapicada Golf Course, and the St. Cloud Airport, along with residential customers in the Kenwood neighborhood, are all examples of customers for which Xcel Energy is not able to provide data.

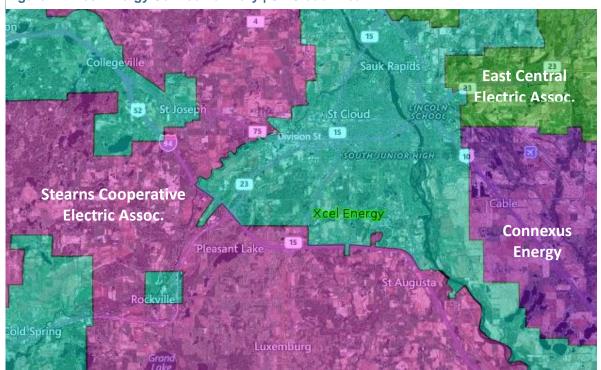


Figure 14: Xcel Energy Service Territory | St. Cloud Area

The Community Planning Team was thoughtful in considering how customers outside of this boundary could and should be served by this Energy Action Plan. Collaborating and communicating with Stearns Cooperative Electric Association, East Central Energy, and Connexus Energy about how these customers can access programs and services will help reach the goals laid out in this plan.

Base Participation in Conservation Programs and Services

Between 2013 and 2015, 26.8% of Xcel Energy's residential premises within the City of St. Cloud either participated in an energy efficiency program or received a rebate at least one time. The programs and rebates most commonly used by St. Cloud residents were the heating system rebate, cooling efficiency rebates, and home energy audits or assessments. The map below (Figure 15) shows which neighborhoods within the city have the highest absolute participation in a program or rebate. Most neighborhoods have an annual average participation of 85 to 120 customers. The highest participation in the last three years (2013-2015) has been in the outer neighborhoods where the homes are newer and incomes tend to be higher. These neighborhoods are also highly residential and have the greatest potential for residential participation (absolute counts). ²⁰

Over a nearly three-year period, participation counts equaled approximately 9% of all residential premises and, coincidentally, 9% of all commercial premises. In some instances, a homeowner or business participated in more than one program in a year so this map does not represent that quantity of the premises that participated. Rather, it is an approximation of the fraction of businesses and residents that can be engaged within a few years.

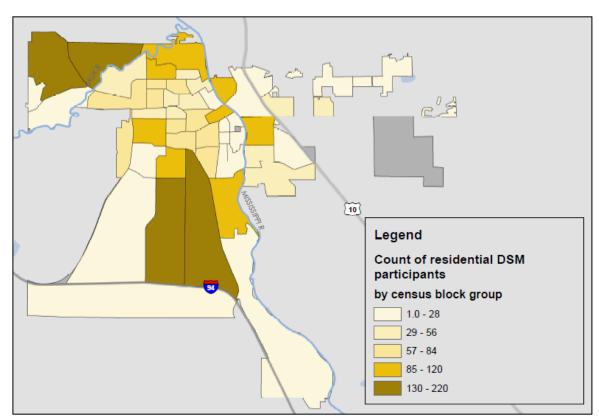


Figure 15: Residential Baseline | Average Annual Program & Rebate Participation (2015)

_

²⁰ Participation counts in Figure 15 and Figure 16 do include all program and service participation. These totals vary from the participation counts used as a basis for setting conservation program participation goals.

Similarly, Figure 16 shows commercial premise participation in conservation programs and rebates. These are described per premise, and it is not uncommon to have a business that has participated in more than one program or service within a year, as customers often make improvements in batches.

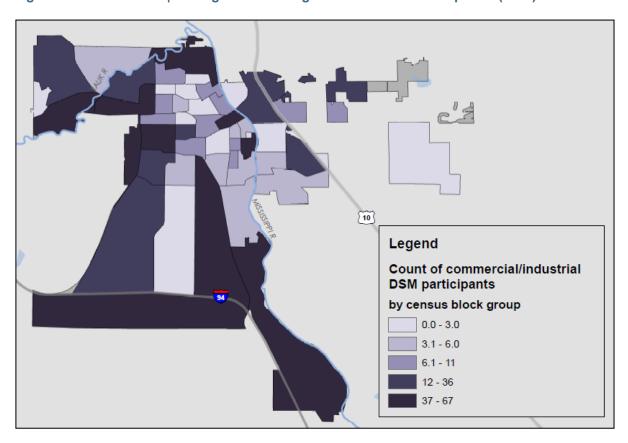
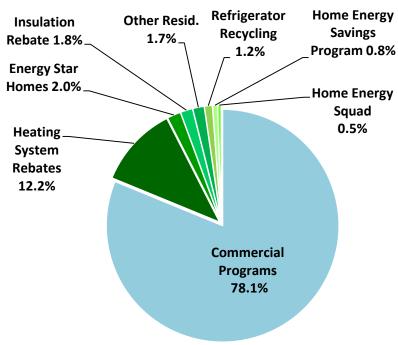


Figure 16: C&I Baseline | Average Annual Program and Rebate Participation (2015)

Figure 17: 2013-2015 Instances of Program Participation (%)

Looking at all St. Cloud program participation from 2013 to 2015, 78.1% are from commercial premises, even though there are far fewer of them. Within residential programs, heating system rebates have the highest rate of participation.

Figure 17 and Figure 18 provide snapshots of the



types of residential and commercial conservation programs that have the highest and lowest rates of participation. Those with the highest rates of participation often have the greatest name recognition within the community and can boost efforts to increase engagement with a program. On the other hand, programs with lower rates of participation may indicate an opportunity to increase participation and service businesses that may not be utilizing a potentially valuable service.

Within commercial program participation, some types of programs have higher participation than others. This chart shows the percentage of commercial premises in St. Cloud that have participated in conservation, or demand-side, savings programs in the last 3 years.

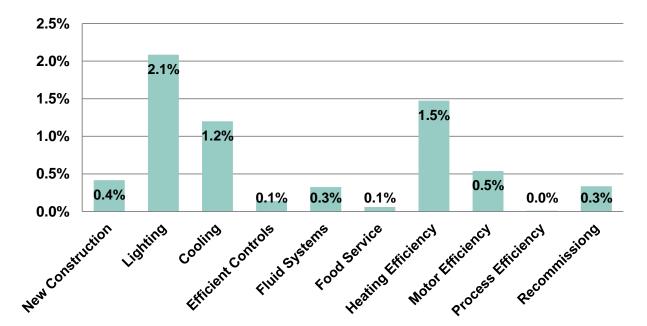


Figure 18: Commercial Program Participation (Annual Average Across 3 Years, 2013-2015)

Where Are We Going? | The Energy Vision and Goals

In June 2016, the City of St. Cloud worked with Partners in Energy to assemble a group of community leaders that would provide guidance and input for the creation of the Energy Action Plan. The group, called the Community Planning Team, consisted of ten individuals representing nonprofits, businesses, institutions, and the City. The team met monthly from July through November to walkthrough a community-based energy planning process.

After discussing a common planning purpose, the Community Planning Team was asked to share community insights and begin to put a critical eye towards baseline energy data shared in workshops. The team participated in an Energy Vision drafting process which consisted of individual surveys, group conversations, and small group work. The Energy Vision is meant to guide action toward St. Cloud's energy goals.

As part of the process, team members were asked to describe what, how, and the extent to which the City should carry out the actions. These became the guiding principles for drafting the Energy Vision and are included here as they convey the spirit and intent of the plan. In workshops 3, 4, and 5, the Community Planning Team returned to the Energy Vision to help guide the creation of strategies and course correct the refinement of goals. Key principles point to community values such as making opportunities voluntary and embedding opportunities for impact within the community so that they become durable. Creating goals that are measureable is not only good practice, it is important to the planning team to hold the community accountable to goals. Discussed at nearly every workshop was the trickle up and down potential of education; the team carefully considered how individual education and action can have ripple effects at home and work. Lastly, the team identified early on that they wanted to take a balanced approach to both short-term and long-term impact.

These key principles appear in the Energy Vision statement and throughout the Energy Action Plan. The Community Planning Team felt strongly that the Energy Vision should speak to St. Cloud residents and local government and serve as a call to action for the community.

Figure 19: Energy Vision and Principles

St. Cloud Community Vision Statement: We are energy leaders through voluntary, inclusive, and sustainable approaches that result in measurable environmental and economic benefits.

What	How	To What Extent
Be leaders	Embed	Durable & Sustainable
Energy awareness	Include	Long-Term
Cost-effective benefits	Educate	Short-Term
Enhance economic vitality	Voluntary	Residents & Neighborhoods
Reduce city energy footprint	Measure	Businesses & Institutions
Environmental quality for future generations	Leverage tools & services	

Three Themes for Impact

To focus and prioritize conversations around the goals, the Community Planning Team identified three themes that became the framework that drove discussion in workshops 3, 4, and 5 and helped identify the types of impact that should be delivered and who the recipients should be. The themes provided a layer of guidance for both goals and strategies, beyond the overarching vision and principles.

As a method for moving from action themes to more specific goals and implementation ideas, the Community Planning Team shared, discussed, and voted on additional energy data relevant for the themes and possible action. Energy data and example actions from other communities were used to highlight potential impacts and barriers for various activities and provide directions for what could be possible. Ultimately, the team was tasked with identifying key audiences or types of actions that should be targeted within each of these themes summarized in Figure 20.

Figure 20: Impact Themes Summary Table with Target Audiences for Each

THEME 1	THEME 2	THEME 3
Education	Conservation	Renewable Energy
Youth & All Individuals	Small Businesses & All Individuals	Institutions & Industrial Businesses

The theme of education focuses on increasing individual awareness about energy, the impacts of energy consumption, and individual or collective actions that can make a difference. The hope is that education will lead to further actions that fall under the conservation or renewable energy themes, and that it will be a vehicle for changing the way a community thinks and talks about energy. Helping make energy information more digestible and accessible will make conversations between individuals easier and help grow a proactive culture that cares about taking action and is aware of the importance of conversations within their own social network.

The theme of conservation focuses on individuals and businesses taking specific actions to save energy at home or work. One of the most direct and cost-effective ways to do this is through utility programs offered by Xcel Energy and the other local utilities. These may include programs such as the Multifamily Building Efficiency Program, which offers free on-site assessments, data reporting, direct installation of efficient lighting and showerheads, and help to guide building owners to whole-building energy savings opportunities. The theme of conservation is focused on program participation as well as incentives for achieving energy efficiency goals.

Renewable energy options are changing as services offered through Xcel Energy and outside providers diversify. The renewable energy theme focuses on increasing the use of renewable energy in the community, either through direct installation or purchase, and the Community Planning Team called out a combination of industrial businesses and institutions as primary targets for engagement. A small working group within the team developed a list of the types of businesses and institutions that could be targets. The list is comprehensive, though not all inclusive (see page 35 for this list).

Some of the audiences specified within a theme are very specific while others are broad (such as "all individuals"). The notion of "all individuals" was maintained throughout the planning process and draws the principle of education and the ability of information to trickle up, down, and laterally

across a community. Youth, small business owners, and staff are sub-sets of "all individuals" that were specifically called out by the Community Planning Team, but the team also wanted to leave open opportunities for information to be shared across audiences, particularly in the education and conservation themes. This could be valuable in many ways, such as a homeowner learning about the benefits of a high-efficiency furnace then telling a friend who owns a business to consider a boiler tune-up.

When asked whether
the community goals
should be "achievable"
or "aspirational"
83% of Community
Planning Team members
answered "achievable."



Community Energy Goals

In the earliest planning workshops, the Community Planning Team identified the need to consider both long-term and short-term impacts. The intent of this Energy Action Plan is to provide the St. Cloud community with energy action guidance for the next 10 years. The goals laid out here are community-wide goals that are guided by the three impact themes and target audiences, and will engage and benefit a wide array of residents and businesses.

The combination of near-term and long-term goals will simultaneously set a foundation for early community action and drive long-term engagement. The plan contains strong, short-term goals that will ask the community to dive in early through involvement in workshops, programs, events, and school initiatives. Then these early, hard-earned accomplishments will pay dividend in achieving the long-term goals of 70% higher participation than between 2013 and 2016. The 10-year term of this plan will particularly benefit the renewable energy theme as institutions and industrial businesses will be asked to learn about renewable energy options and consider options that both suite their needs and contribute to the community-wide goals.

Through Partners in Energy, Xcel Energy will provide close partnership and support for the first 18 months of implementation to boost early action and establish durable collaborations that will span the life of this plan.

A survey of the Community Planning Team indicated that 83% team members recommended that goals should err on the side of being achievable rather than aspirational. While some goals are

defined to make the community reach, all of the selected goals meet the team's standard of being within the realm of achievable.

Part of making goals achievable involves identifying metrics that will resonate with the audience. Embedded in the goals of each theme are the metrics that the Community Planning Team determined would be most meaningful to the community. For education, success will be measured by the quantity and breadth of people engaged directly through events, competitions, or campaigns. For conservation activities, achievement will be calculated in the quantity of people participating in programs and incentives and in the dollars saved by the community through lower energy bills. For renewable energy, the metric will be the increase in kilowatt hours of electric energy used or purchased.

Figure 21 summarizes the Energy Action Plan's goals by theme.

Figure 21: Summary of Energy Action Plan Goals

Goal: Near-Term & Long-Term: Increase energy awareness for individuals Education regarding actions and behaviors that reduce energy use and benefit future generations. Goals: Near-Term: Double utility conservation program participation for both Conservation residential and small to medium-sized businesses in year 1. Near-Term: Save \$638,000 in energy costs community wide in year 1. Long-Term: Maintain program participation at 70% above business as usual after year 1. Goal: Renewable Long-Term: Help institutions and industrial businesses replace 21.8 million kWh of electricity by 2026 with renewable electricity via installation, **Energy** purchase, or subscription.

Near-Term Impact

Achieving the near-term goals laid out in this plan will engage and educate a few hundred residents on the impacts of energy on our environment and the ways that they can reduce their individual and collective impact.

Conservation efforts in year one will result in approximately double the energy savings achieved by the community compared to baseline energy saving improvements. Exactly which programs homeowners, renters, and businesses select for participation will be determined by the strategies and individuals engaged in these efforts.

Between 2013 and 2015, there was an average of 849 instances²¹ of participation in Xcel Energy residential programs (including rebates earned).²² During that same period, there was an average of 204 instances of participation in commercial and industrial programs.²³ However, only 127 of the 204 instances were from programs directed at small to medium-sized businesses, as defined in the planning process.²⁴

Goal participation counts may vary as implementers consider which programs and services to target given their potential impact, cost, and accessibility. Given this variation, the goal range for the first 12 months of implementation is 1,065 to 1,698 counts of residential program or rebate participation. For small business participation, scenario planning pointed towards a more specific goal of 242 counts of participation. (See Figure 25, Figure 26, and Figure 27 for scenario visualizations). Overall, the community is aiming for 1,392 points of participation in the first 12 months of implementing this Energy Action Plan.

Through increased program participation, St. Cloud aims to achieve \$638,000 in shared energy cost savings for individuals and businesses in the first 12 months of implementation. This includes projected business as usual savings and additional energy savings based on this plan combined. Realized energy cost savings will be tracked and provided to the implementation team on a semi-annual basis as a way to measure progress and reflect on which implementation efforts have been most effective. Not included in this cost savings goal are the additional, ongoing cost-savings that will result after year one as individual improvements pay for themselves through lower energy bills.

Long-Term Impacts

Based on conservation program participation from 2013 to 2015, business as usual annual savings are 65,059 million BTU (for electricity and natural gas combined). By accomplishing the goals outlined in this Energy Action Plan, the community will see impacts from the savings achieved the year the improvements are made, as well as cumulative savings for 10 to 30 years after. These are considered the lifetime savings of any given improvement to a house, business, or city building. By achieving these goals, the community will save an additional 205,011 million Btu by 2026, above and beyond business-as-usual energy savings.

Figure 22 provides a comparison of what energy savings would look like with and without the goals and actions established in this plan. By achieving these goals, the community will save an additional 205,011 million Btu by 2026, above and beyond business-as-usual energy savings.

²¹ Participation count does not include passive participation programs such as the Energy Efficiency Showerhead mailout program or Saver Switch program, a "demand response" focused program.

²² These counts represent unique instances of participation, although some participants may have participated in more than one program, which would be counted as two instances of participation.

²³ Commercial program participation counts do include services such as Saver Switch, but do not include non-conservation based programs, such as Solar Rewards.

conservation based programs, such as Solar Rewards.

24 Small to medium-sized business program participation counts do not include Saver Switch, as these counts include both large and small commercial business participants and this type of program was not targeted in the conservation participation goals.

Figure 22: Business-as-Usual Energy Savings and Energy Saving Impacts of Energy Action Plan (MMBtu)

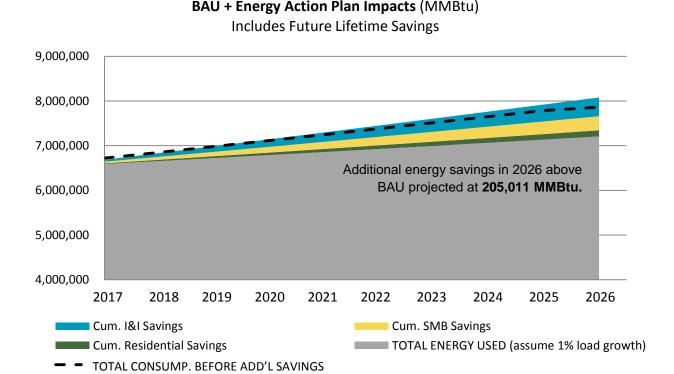


Figure 23 provides a snapshot of the energy impacts that will be realized in 2026, which will be year 10 of this plan. The chart summarizes the impacts of all business-as-usual conservation, new conservation, and the additional impacts from conservation efforts and renewable energy use. If all of the goals outlined in this Energy Action Plan are achieved by 2026, the St. Cloud community will save 205,011 MMBtu of additional energy (60,083 thousand kWh) and use approximately 21,800,000 kWh of additional renewable energy.

Beyond the positive environmental contributions, the community will also benefit financially. In the first 12 months of action, the reductions in energy use will save the community an estimated \$194,000 (based on the *Scenario B 'Preferred'* for residential conservation shown in the Strategies section). Combined with ongoing energy cost savings, the St. Cloud area would save approximately \$638,000 in year one alone (approximately \$178,000 of these savings for residents directly). By 2026 the additional savings will accumulate (due to lifetime savings) delivering local residents and businesses with total cumulative cost savings estimated at \$9.2 million above business-as-usual.

Not included in this snapshot are natural increases in installation or the use of solar or wind energy that residential customers may subscribe to or procure between 2015 (the last year of available baseline data) and 2026. The additional renewable energy that Xcel Energy will be adding to its electricity generation portfolio in the next 10 years to meet the state mandate is also not included, making positive environmental impacts even greater.

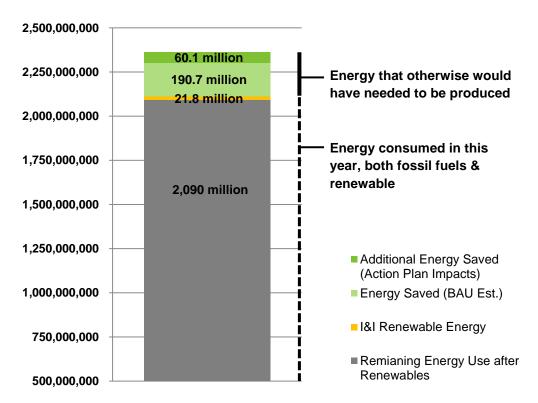


Figure 23: 10 Year Impact Summary | Conservation and Renewables (MMBtu)

How We Are Going To Get There? | Strategies

This section will discuss how the community is going to achieve the Energy Vision. The Community Planning Team spent considerable time brainstorming and evaluating the types of goals that would resonate most with the community and the strategies that will be most feasible and effective.

Strategies for Accomplishing Goals

This section lays out the strategies that the team identified for accomplishing the goals prioritized in this plan. During the planning phase, the team made great effort to study energy data and community assets and this informed the strategies that were identified as the most effective in accomplishing the goals. As part of their efforts, the team identified why and how various strategies should be used as well as the barriers and opportunities that need to be overcome.

Figure 24: Summary Table of Goals & Strategies

Goal:

 Near-Term & Long-Term: Increase energy awareness for individuals regarding actions and behaviors that reduce energy use and benefit future generations.

Strategies:

Education

- Year 1: Launch an online resource library for residents and businesses with handouts on key improvements return on investment.
- Year 1-2: Hold 1 to 3 events to educate residents about home energy resources and best practices.
- Year 1-2: Hold 1 to 3 events to educate small and medium- sized business owners about energy resources and best practices.
- Year 1-10: Engage 150 or more primary or secondary school-age students annually for at least 5 to 10 years.

Goals:

- <u>Near-Term:</u> Double participation in utility conservation programs and services for both residential and small to medium sized businesses in year 1.
- Near-Term: Save \$638,000 in energy costs community wide in year 1.
- <u>Long-Term:</u> Maintain program participation at 70% above business as usual after year 1.

Conservation

Strategies:

- Year 1-2: Host 1 to 3 events for residents to learn about & sign up for conservation programs and services.
- Year 1-2: Create a handout showing return on investment for key small to medium-sized business conservation capital and non-capital improvements.
- Year 1-2: Host 1 to 3 events for small to medium-sized businesses to learn about and sign up for conservation programs and services.
- <u>Year 1-5+:</u> Launch a clean energy community action campaign that promotes healthy and efficient businesses and homes.

Goal:

<u>Long-Term:</u> Help institutions and industrial businesses replace 21.8
million kWh of electricity by 2026 with renewable electricity via
installation, purchase, or subscription.

Renewable Energy

Strategies:

- Year 1: Create 2 to 3 case studies of conservation projects businesses have completed to prepare for future renewables.
- Year 1-2: Hold 1 to 2 renewable energy education workshops for institutional and industrial businesses to learn about their options.
- Year 1-3: Launch a 5% challenge to get all institutional and industrial businesses to pledge to reach 5% renewable electricity by 2025.

The preferred strategies are summarized below by each of the three themes of education, conservation, and renewable energy. While some strategies serve more than one goal, each strategy is tied to the specific theme and goal to which it most closely aligns. Opportunities and needs for overlapping benefits across themes are noted throughout. Under each strategy additional information is called out regarding who should be engaged and how Xcel Energy can support specific tactics.

The tables note detailed work plans and provide a strong structure of boundaries and guidelines for those that will be implementing these efforts. More specific work plans and details on how to make the strategies successful will need to be determined during implementation and oversight. Ongoing support from the Community Planning Team will help to further guide the translation of intent to on the ground impact.

The Summary Table of Goals is presented is a visual guide with relevant goals highlighted under each theme. This visual aid will help underline the linkages between goals and strategies and the metrics by which success will be measured.

THEME 1: Education

The Community Planning Team defined *education* as increasing individual awareness about the variety of actions that can make an energy impact difference, from small behavior changes to capital improvements. This includes providing inspiration and motivation for why certain actions are worth taking.

Youth and "all community individuals" are the target audiences for education. The audience of all community individuals indicates residents, workers, and businesses. Each of the goals listed in the table are called out below.

Goal:

 <u>Near-Term & Long-Term:</u> Increase energy awareness for adults around actions and behaviors that reduce energy use and benefit future generations.

Strategies:

Education

- Year 1: Launch an online resource library for residents and businesses with hand-outs showing return on investment for key improvements.
- 2. <u>Year 1-2:</u> Hold 1 to 3 events to educate residents about energy resources and best practices.
- 3. <u>Year 1-2:</u> Hold 1 to 3 events to educate small and medium-sized businesses about home energy resources and best practices.
- 4. <u>Year 1-10:</u> Engage 150 or more primary or secondary school age students annually for at least 5 to 10 years.

The education-based strategies and metrics include:

- 1. Create and launch an online resource library. Collect existing information and tools in one place will help residents and businesses make smart purchasing decisions when it comes to conservation improvements. Hard copy summaries may be a helpful resource for tabling events and community outreach. The city planning and permitting office can also make copies available to the trades. Summaries should include best practices and behaviors for residents (both homeowners and renters) and businesses (owners, operators, and employees).
- 2. One to three resident events. Educational workshops will increase resident (both renters and homeowners) awareness of the impacts of energy use. These workshops will introduce tools to help save energy and provide support to residents completing actions that will reduce their energy use. In support of the conservation goals, these events will also serve as an opportunity for residents to learn about targeted programs and sign up for services such as a Home Energy Squad visit.
- 3. One to three small to medium-sized business events. Educational workshops will increase business owners and operators awareness of the opportunities to cost-effectively save energy in their buildings. These workshops will include information about simple behavior and operational changes as well as return on investment information, local stories, and case studies. In support of the conservation goals around business program participation, these events will also serve as an opportunity for businesses to learn about targeted programs and to sign up for services.
- 4. Engage 150+ students. A cross-community school energy challenge in primary or secondary schools will provide energy engagement opportunities and recognition to students who are helping to save energy in their schools. The knowledge students gain through the challenge can then apply at home and used for the rest of their lives. The challenge or any other initiative should be set up to engage students each year. Early actions in 2017 and 2018 will set the groundwork for long-term engagement.

Below are details of each of the recommended education strategies.

STRATEGY 1 | Online Resource Library

<u>Objective:</u> Educate community members about the "best" conservation projects (i.e. the most cost-effective and popular improvements such as lightbulbs and furnaces).

<u>How:</u> Gather links and examples from existing resources to give an overview of a variety of improvement costs and recommendations to help people at the point of purchase.

Audience:

- Residents (homeowners & renters)
- Possibly business operators and owners

Barriers:

 The City and Xcel Energy can't be seen supporting one brand/product over another

Doers & Collaborators:

- City's sustainability webpage and/or the **Building and Planning Department** website
- Facilitation Team to create core content and planning team to provide feedback

Ideas for Action & Implementation:

- Neighborhood Coalition and Chamber to provide links on their webpage
- Create button on City website homepage for a promotional period of time
- Cross promotion from St. Cloud Times and Mayor

Opportunities & Assets:

- Consumer Reports® Magazine (print and distribute at neighborhood meetings)
- Websites that compare products and highlights
- Energy Star website

How Xcel Energy can support/help:

Information to help compare products (e.g. cost, contractor familiarity, customer satisfaction)

STRATEGY 2 | Workshops for Residents

Objective: Increase residential program participation.

How: Support organizing and new neighborhood groups by building community around energy interest and education (a reason to come together).

Audience:

Residents: single-family and multifamily, low-income and non-low income

Doers & Collaborators:

St. Cloud Neighborhood Coalition (engage the active groups first)

Ideas for Action & Implementation:

- Create home energy party kits
- Have guest speakers talk about home energy experiences, resources, and takeaways
- Customize workshops according to neighborhood needs and resources (e.g. demographics, house age, language)

Barriers:

- Some neighborhoods aren't organized
- Not all neighborhoods have strong leaders
- Neighborhoods are very different from each other; need to find ways to target messaging/education

Opportunities & Assets:

- Have Mayor host the first party
- Hands Across the World outreach to recent immigrants/refugees

How Xcel Energy can support/help:

- Funding for materials & food (e.g. education materials & takeaway materials like LEDs)
- Xcel Energy staff and energy advisors to attend meetings

STRATEGY 3 | Small and Medium-Sized Business Owner and Operator Workshops

<u>Objective:</u> To increase small and medium-sized business awareness of energy programs and services.

How: Create small business-led energy coalition.

Audience:

 Small and medium-sized business owners and/or operators

Doers & Collaborators:

- Beaver Island Brewing to host and provide case study (Nick Barth to lead)
- Mathew Hall Lumber
- Partner with contractor expos that take place annually

Ideas for Action & Implementation:

- Hold events with food and beverage
- Provide stickers to those businesses that take action to make participation more visible
- Have case study presentations at each event

<u>Barriers:</u>

- Getting people to attend and come back
- Need wide variety of sectors to bring forward case studies

Opportunities & Assets:

 Get local business owners to present to each other

How Xcel Energy can support/help:

- Recruit those who can speak about business programs
- · Bill insert/email invitations
- 15 min building walkthroughs via Turn Key

STRATEGY 4 | Cross-Community School Energy Competition

<u>Objective:</u> Get the right leaders at each school involved in clean energy and engage at least 150 students per year.

How: Video competitions, assemblies, and student energy committees.

Audience:

- Gifted & Talented program for teachers and students
- After-school programs like Kids at Kid-Stop
- Outside of school programs like Girl Scouts and Boy Scouts

regrame into rado at rad otop

Doers & Collaborators:

- MNTAP & GreenCorp spearhead
- PTA to support and champion
- Teachers who can help champion
- School district leaders who can help champion

Barriers:

- Reaching the schools
- Resources to organize & coordinate
- Buy-in from teachers
- Applicability to curriculum standards
- All around cost

Opportunities & Assets:

- Planning team connections within the school (e.g. school board members, PTA president)
- Boys and Girls Club
- Big Brothers/Big Sisters

Ideas for Action & Implementation:

- Science Fair
- Month long competition between schools
- City-wide events that are youth focused

How Xcel Energy can support/help:

 Funds for a prize or an intern who can organize

THEME 2: Conservation

While a number of education-focused strategies will focus on teaching residents about energy saving behaviors, programs, and rebates, the goal of those activities is aimed at making individuals more cognizant of energy use and energy impacts. Therefore the education strategies are focused on raising community awareness. The strategies listed under the *conservation* theme focus on increasing participation in conservation programs and services, all of which are designed to offer cost-effective savings to customers. "Cost effective" means that the energy cost savings of an improvement are such that the improvement will pay for itself over its lifetime. Sometimes this can be in as little as one or two years and it is almost always 10 years or less.

Xcel Energy offers a wide range of services and incentives that target cost-effective energy saving opportunities and draw customers to the most effective opportunities for saving energy and money. A full list of the services and programs offered by Xcel Energy is included in Appendix D for reference. It is important to note non-Xcel Energy customers may be able to access similar programs through the other local utilities.

Goals:

- <u>Near-Term:</u> Double participation in utility conservation programs and services for both residential and small to medium-sized businesses in year 1.
- Near-Term: Save \$638,000 in energy costs community wide in year 1.
- <u>Long-Term:</u> Maintain program participation at 70% above business as usual after year 1.

Conservation

Strategies:

- 1. <u>Year 1-2</u>: Host 1 to 3 events for residents to learn about and sign up for conservation programs and services.
- Year 1-2: Create a handout showing return on investment for key small and medium-sized business conservation capital and non-capital improvements.
- Year 1-2: Host 1 to 3 events for small to medium-sized business owners to learn about and sign up for conservation programs and services
- 4. <u>Year 1-5+:</u> Launch a clean energy community action campaign that promotes healthy & efficient businesses & homes.

The conservation strategies target residents and small business owners. While in most cases strategies will directly engage these individuals, in some circumstances it may be appropriate to

engage those individuals who serve these audiences (e.g. heating contractors). The team identified small businesses as an audience that is currently not receiving as many conservation program services and benefits as some other groups and could likely be greatly impacted by targeted energy cost savings opportunities. Of particular interest in the small and medium-sized business category are retail, restaurants, and hospitality businesses.

The conservation-based strategies and metrics include:

- 1. Clean energy community action campaign. A community-wide clean energy campaign will provide pledge opportunities and recognition to individuals, neighborhoods, businesses, and community groups that participate in conservation efforts in their homes and businesses. Special recognition may be awarded to groups with the most new participants and deepest improvements. In connection with the overall goals under the education theme, the campaign will also help to raise awareness of energy tools and options.
- 2. **Double current residential program participation.** Residential workshops (described under the education strategies) will serve as channels for renters, homeowners, and landlords to sign up for targeted conservation programs.
- 3. Return-on-investment handout for small and medium-sized businesses. Handouts for businesses will describe the return-on-investment (ROI) for key energy efficiency improvements and services. These handouts will target retail, restaurant, and hospitality businesses in the community as cost savings will be particularly beneficial for them and they have had lower program participation than other business segments. The handout may be a helpful resource for tabling events, community outreach, and materials the city planning and permitting office can make available to the trades. This tool will be used at the workshops with businesses to help them determine which programs, rebates, or improvements are best.
- 4. Double current small and medium-sized program participation. Business owner and operator workshops will provide an opportunity for businesses to sign up for conservation programs or services. These opportunities should be education-based as opposed to sales oriented.

The intent of doubling participation is to increase the number of residents and obtain comparable energy savings. With this in mind, the Community Planning Team studied various participation scenarios that will all result in energy savings double the recent annual participation rates. The following figures provide helpful guidance as to which programs will provide the most cost-effective impact.

Figure 25: Scenario A: Residential Conservation Participation | Equivalent to 2x's BAU Participation

Scenarios such as this one are helpful tools when detailing strategies to educate and market programs to the community. This specific scenario shows how targeted outreach and participation could achieve double participation goals and also double impact goals using high impact programs that could absorb more participation. Targeting fewer programs can help streamline community messaging and marketing. The proposed scenario is also compared to commercial program participation as a reference for understanding total energy savings impact.

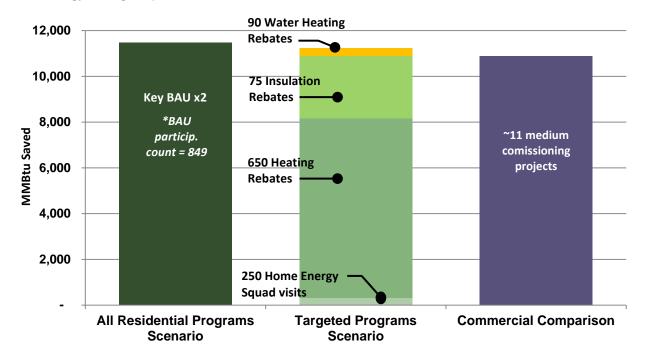


Figure 26: Scenario B 'Preferred': Residential Conservation Participation | Equivalent to 2x's BAU Participation

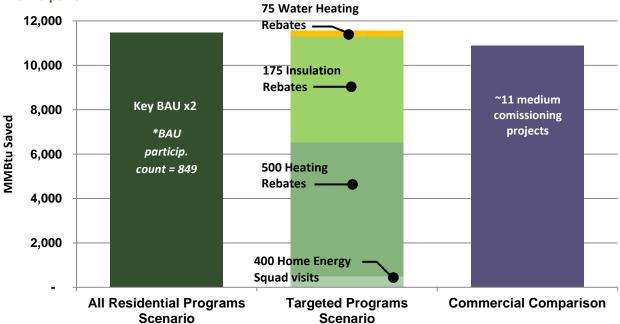
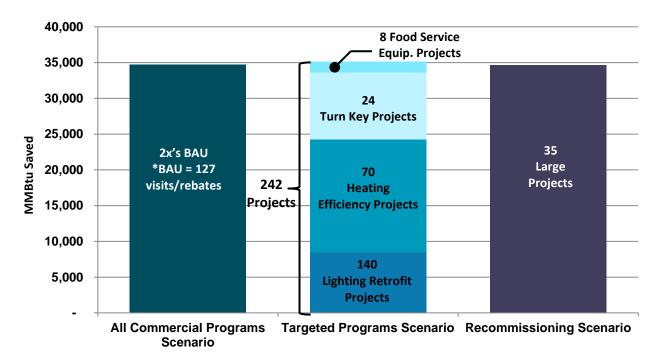


Figure 27: Small and Medium-Sized Business Conservation Participation | Equivalent to 2x's BAU Participation

This scenario provides recommendations for programs that could be targeting with educating businesses about quick return-on-investment conservation program opportunities. Some programs, such as the Food Service Equipment program, are also particularly appropriate for targeting some of St. Cloud's main small business segments.



Below are more details about the strategies identified under the conservation theme.

STRATEGY 1 | Clean Energy Campaign

<u>Objective:</u> Increase clean energy action by increasing program participation throughout the community and bridging knowledge gaps about product options so that lack of information isn't a barrier to action.

<u>How:</u> Develop a clean energy community action campaign and logo that promotes healthy and efficient environments in businesses and homes.

Audience:

- All buildings and spaces that are served by energy utilities
- Homeowners and landlords
- All business owners and employees

Barriers:

- Getting the campaign name to be a household name
- Getting the community excited about the campaign; linking the campaign to benefits and fun

Doers & Collaborators:

- The Chamber of Commerce
- Downtown Council
- Greater St. Cloud Development Corp.
- St. Cloud Neighborhood Coalition
- The City and the Community Planning Team

Ideas for Action & Implementation:

- Create time sensitive goals to help motivate
- Offer incentives or recognition (various categories) for those that take action
- Create bumper stickers, bike stickers, or garden signs to increase awareness and pride

Opportunities & Assets:

- Create a logo to help make the campaign identifiable
- Use existing City webpage as an online resource for the campaign
- Build off City's renewable energy initiative

How Xcel Energy Can Support/Help:

- Provide small rewards for participants or award winners
- Support logo and marketing campaign design

STRATEGY 2 and 4 | Workshops for Businesses

See Strategies 2 and 3 under the education theme. The Community Planning Team saw these events as being one in the same for the greatest impact. (See pages 31 & 32.)

STRATEGY 3 | ROI Handout for Small and Medium-Sized Businesses

<u>Objective:</u> To make conservation investment decisions easier and provide support at the moment when businesses are ready to make a building investment or change.

<u>How:</u> Develop a handout (paper and online) that provides local examples of investment costs, return on investment, and product information. Use this tool during educational events for business owners and operators and contractors.

Audience:

- Small and medium-sized business owners and/or operators
- Contractors
- Other local utilities

Doers & Collaborators:

- Beaver Island Brewing (Nick Barth)
- 2-3 other business owner champions

Ideas for Action & Implementation:

 Get 3-4 examples of improvements locally and combine with existing Xcel Energy

Barriers:

- -Getting business owners to donate their time/effort to this cause
- -Getting an accurate costs of some projects from local businesses so that an accurate ROI can be calculated

Opportunities & Assets:

- -Get tool input from businesses who have made improvements or are planning to act
- -Engage local contractors for input

How Xcel Energy Can Support/Help:

-Aggregate appropriate case studies for inclusion

case studies and cost estimates

 Group improvement types in cost tiers for easier use and decision-making -Gain insights from the Business Solution Center or account representatives

THEME 3: Renewable Energy

During planning, the Community Planning Team agreed that working to increase renewable energy uptake in the institutional and industrial sectors was the most important thing to do. The team arrived at this decision after learning that 52% of St. Cloud's total commercial energy use (see Figure 12) comes from the 50 largest users of energy. These large users tend to be institutional or industrial businesses or other large commercial or public buildings. By targeting these largest users, early actions can lead to the greatest reduction of fossil fuel electricity use.

Renewable Energy

Goal:

Long-Term: Help institutions and industrial businesses replace 21.8
million kWh of electricity by 2026 with renewable electricity via
installation, purchase, or subscription.

Strategies:

- Year 1: Create 2 to 3 case studies of conservation projects businesses have completed to prepare for future renewables.
- Year 1-2: Hold 1 to 2 renewable energy education workshops for institutional and industrial businesses to learn about their options.
- Year 1-3: Launch a 5% challenge to get all institutional and industrial businesses to pledge to reach 5% renewable electricity by 2025.

With a number of local institutional and industrial facilities already setting an example, there is an opportunity to share practices and insights with others for long-term operational cost reduction, predictability, and community benefit. The team created a list of the targeted facility types, which include the following:

- City and County government buildings (e.g. County Courthouse)
- State and Federal government buildings (e.g. MN DOT, MN Correctional Facility, VA Hospital)
- School District 742 facilities

- Regional Airport
- Universities and Colleges
- Corporate Campuses
- Manufacturers and large repair facilities
- Utilities

The intent of the *renewable energy* goals is to increase the use of renewable energy, either through increased on-site generation within the community or through the purchase of renewable energy through Xcel Energy, surrounding electricity providers (for those operating in other utility service territories), subscription to renewable energy, or a third party via the purchase of renewable energy credits (RECs). Part of this goal is to inform businesses about the differences between each of these options and their differing values and benefits (e.g. REC purchases may not

increase renewable energy use in Minnesota beyond the mandated levels that Xcel Energy must meet whereas on-site generation would directly increase Minnesota renewable energy use).

These goals were drafted with the intent to leverage the knowledge of Xcel Energy and other local utilities and the hope that the private sector would inform and motivate each other to reach this goal. Making investments and operational decisions around the purchase or installation of renewables is often an action that takes time, so the goals under this theme are more long term. While action will begin in year one, the renewable energy goal benchmarks don't begin until year 5.

Renewable energy strategies and metrics:

- 1. Conservation-first case studies. Case studies on local businesses (preferably large commercial or industrial businesses and institutions) that have recently completed energy efficiency improvements will serve as examples of how conservation efforts can be beneficial to preparing for a future renewable energy install/purchase. This will help businesses procure the correct amount of renewable energy, ensuring they do not build or buy more than they need.
- 2. Renewable energy education workshops: Workshops will provide information to facility managers, operators, and appropriate decision-makers regarding options for purchasing or installing renewable energy. While these workshops will target industrial businesses and institutions, they will not be limited to these audiences. They will also provide participants with case studies from local businesses regarding good experiences and the pros and cons of various options. These workshops will help facilitate conversation, encouraging the sharing of experiences and will serve as a channel for engaging businesses in the 5% by 2025 challenge (see below). These events will be educational and should not include sales pitches as part of the presentation.
- 3. 5% by 2025 challenge: All industrial businesses and institutions will be challenged to purchase or install renewable energy (e.g. wind and solar) equivalent to 5% of their total annual electricity use. A combination of competition, public pledges, and rewards will be used to achieve the goal of all St. Cloud industrial businesses and institutions to make the pledge and follow through on it by 2025. This strategy builds off of the City's own 80% by 2018 model, focusing on the largest energy users in the community.

Below are more details about the strategies identified under the renewable energy theme.

STRATEGY 1 | Conservation-First Case Studies (institutions and industrial businesses or other large businesses)

<u>Objective:</u> Get more industrial businesses and institutions ready for cost-effective renewable energy use by completing conservation projects that will reduce the amount of renewable energy needed.

<u>How:</u> Create at least one industrial businesses and institutions conservation project case studies that can be used at renewable energy events and as mailers.

Audience:

- Institutional operational investment decision-makers and facilities staff
- Industrial business operational investment decision-makers and facilities staff

Doers & Collaborators:

- CentraCare to provide a case study
- SCSU, CentraCare, and the City to help with initial outreach to industrial businesses and institutions regarding examples
- · Partners in Energy to create case studies

Ideas for Action & Implementation:

 Keep definition of appropriate projects broad

Barriers:

- Not sure how many examples will exist (e.g. completed electricity conservation projects)
- Conservation projects can take time so new examples may take 1-2 years

Opportunities & Assets:

 Can get first hand stories and insights from case study interviews that will be helpful for events

How Xcel Energy Can Support/Help:

- Get information from account reps regarding projects completed locally
- Help disseminate information to industrial and institutional customers

STRATEGY 2 | Renewable Energy Education Workshop

<u>Objective:</u> Encourage institutions and industrial businesses to consider how they might invest in renewable energy by learning from other businesses and renewable energy experts.

How: Introduce the 5% by 2025 challenge as an initiative that aligns with the City's 80% by 2018 goal.

Audience:

- School district buildings
- College and vocational school facilities
- Hospitals, clinics, and senior living
- Manufacturing and distribution centers

Doers & Collaborators:

- Volunteer/appointed team of executives and facilities leaders
- Coordinators for the event(s)

Ideas for Action & Implementation:

- Need meaty content
- Get started by speaking at the Chamber (Q1 of implementation)

Barriers:

- Buy-in
- State level restrictions

Opportunities & Assets:

- Initiate at the greater St. Cloud economic level
- Leadership of large institutions that can provide examples, insights, and support

How Xcel Energy Can Support/Help:

 Bring renewable program expertise and ROI examples/info

- Maybe get a sense of how many industrial businesses and institutions participate in the Chamber
- Update decision-makers or building experts on technologies

STRATEGY 3 | 5% by 2025 Challenge

<u>Objective:</u> To encourage businesses and recognize those that make efforts in sustainability and greenhouse gas emission reduction.

How: Introduce the challenge as an initiative that aligns with the City's 80% by 2018 goal.

Audience:

- School district facilities
- College and vocational school facilities
- Hospitals, clinics, and senior living
- Manufacturing and distribution centers

Doers & Collaborators:

- CMBA (builders/installers)
- Chamber (help bring in institutions)

Ideas for Action & Implementation:

• Start challenge early 2017

Barriers:

- Buy-in
- State level restrictions

Opportunities & Assets:

- CERTS Conference
- Camp Ripley could share their story
- Laweress may have data tools or support that could be helpful (league of graphs, competition, data viz for portal)

How Xcel Energy Can Support/Help:

- Bring renewable program expertise
- Flyer from Xcel Energy

A Work Plan & Call for Community Engagement

While the Goals Summary Table (Figure 24) provides guidance on when goals should be achieved, it does not always correlate to when efforts should begin. There are many efforts that will have to start in the first year to set the stage for short-term and long-term goals. During the planning phase, the team highlighted early actions to consider in the beginning stages of implementation. Figure 28 illustrates the recommended action pathway for accomplishing the community's goals in a timely fashion.

Figure 28: Implementation Work Plan | Early Actions Education Conservation Renewable Energy (RE) Implementation Q1 — Foundation First Steps: For each near-term goal, a primary point of contact needs to be defined to use, expand, and own this work plan. For each theme, building a coalition of champions is recommended as integral to Q1. Find volunteers to host Define what it is to Refine the objectives of neighborhood workshops the community energy participate in the 5% and set up home energy campaign, develop Challenge assessments branding and identify partners Outline content for Outline content for SMB Launch call to action for neighborhood workshops events that will be 5% Challenge and create effective to increase sign-up access Assemble existing resources participation for online resource library District, PTA, teachers for Connect with SMB event Outline content to present input on school competition outreach partners at RE workshop(s) Identify 1-2 small-medium Outline information Establish relation with businesses for case studies needed for ROI handout business coalition to build and hosting SMB events to and work with Xcel **RE workshop** demand increase participation Energy to populate Implementation Q2 — Outreach & Refinement *Receive community progress update via Partners in Energy Set dates for neighborhood Finalize early marketing Find local businesses workshops and get out the for community campaign energy efficiency case word and make soft launch studies public Outline information to Get feedback on resource Set date for SMB event(s) collect for case studies library content and refine and line up presenters Design school competition Initiate SMB event Set dates for **RE** with school leaders and outreach workshop(s) community champions Implementation Q3 — Action & Engagement *Receive community progress update via Partners in Energy Finalize case studies and Launch online library (or Host **SMB event(s)** completed content for it) begin dissemination Host neighborhood Get **ROI tool** out through Host **RE workshop(s)** workshop(s) City, community, and Xcel

- Energy channels
- Launch school competition and engage students in implementation decisions
- Make campaign outreach plan and sub-goals
- Formally announce 5% Challenge and proactively invite participation

 Utilize Mayor's radio show and newspaper for campaign dissemination

Implementation Q4 — Action & Recognition *Receive community progress update via Partners in Energy

- Host neighborhood workshop(s)
- Establish ongoing guidance body for competition (students and staff)
- Host SMB event(s)
- Establish recognition tactics for campaign using behavior best practices
- Host RE workshop(s)
- Publically recognize early5% Challenge actions

These goals are intended to be achievable — they are not purely symbolic — and they will not happen without careful and dedicated action on the part of community, business, and local government champions, some of whom have not yet been identified. In addition to the completion of line item tasks, success will rely on outreach, planning, and ongoing feedback. Ingraining the Energy Vision into our minds and our neighbors' minds will be essential to achieve these goals. We also need to keep thinking about small or large contributions that can be made to reduce overall energy use.

How Are We Going To Stay On Course?

A diverse group of key stakeholders participated in the development of this plan, and its implementation must be "owned" and driven by St. Cloud community members, businesses, and institutions. The City will contribute to community-based implementation and will work with the City Council, the Mayor, and other departments to ensure that the goals outlined here are achieved.²⁵

The Community Planning Team members are dedicated to achieving the goals and will advise over the first year or two of implementation. The team will come together for quarterly calls or meetings to offer insights and ideas and evaluate progress and the need for course correction. The City of St. Cloud will be among those checking in regularly, as the City's role in communication and transparency will be important for the success of this plan. Jim Flaaen, Senior Planner in the Zoning and Planning Department, will be the lead point of contact for the city (im.flaaen@ci.stcloud.mn.us). All Energy Action Plan related questions can be directed to him through implementation.

²⁵ In February 2016, the City published their comprehensive plan (2016-2026), thus opportunities to inform a new comprehensive plan were not a central question during the planning process.

The Partners in Energy facilitation team will continue to work with the Community Planning Team as the community transitions from planning to implementation. Support will include accountability check-ins, help identifying the most effective next steps, and advice on best practices for community outreach, engagement, and education. The facilitation team will work with the community and the Xcel Energy team to gather information for tools and help in the refining of marketing materials and tools.

SWOT Analysis

This Energy Action Plan was evaluated in brief by the Community Planning Team through a SWOT analysis. This process documents the observed strengths, weaknesses, opportunities, and threats of the plan, as these are important to keep in mind as the plan moves from planning to implementation in case course corrections are needed.

Figure 29: SWOT Analysis Summary Table

Strengths	Weaknesses	Opportunities	Threats
Community Planning Team and Xcel Energy Facilitation Team are dedicated	Broad partnership beyond the Community Planning Team doesn't yet exist	Coordinated plan release: get the word out and signal the start of something	Make sure goals go beyond year 1
Great City leadership	Unclear how much Community Planning Team involvement will drop off, although some early commitments exist	Kick-off event: invite new people who will champion or play an implementation role	Potential burn-out for Community Planning Team members and volunteers should be avoided
Community Planning Team holds many individual champions	Volunteers that will likely be primary implementers doesn't have the knowledge to education and "sell" clean energy and impacts	12-18 month start-up period or "limited time" recognition can be a source of action and urgency for the community	City budget changes annually due to outside factors (e.g. snowy winter plowing)
Many local leaders beyond those in the room	Commitments from "doers" is an element of uncertainty	Make Community Planning Team an advisory committee to move plan forward (accountability)	Federal funding opportunities may be reduced or change under new administration
Plan and action will provide the City with an opportunity for bonding		Trainings for volunteers who can continue to do them, residents, and local government staff	

Monitoring and Reporting

To assist in implementation, the Partners in Energy facilitation team will work with Xcel Energy to obtain quarterly program participation and energy savings data for the residential sector, the

commercial sector, and the industrial sector. This data will be shared with the Community Planning Team and future key implementers as a way to track progress and identify when course correction is needed. To keep this effort as transparent as possible and motivate ongoing action, this data will also be shared with the broader community by publishing progress on the City's sustainability website (likely at this URL: www.ci.stcloud.mn.us/1428/Partners-in-Energy).

Changing Course: Corrective Action

This plan outlines strategies and goals for an 18-month implementation period. It is anticipated that the success and outcomes of initial actions will impact progress towards long-term goals in each theme. Initial actions that will take place in the next three to five months are relatively clearly defined, with mid-term actions intentionally left broad to flex with the outcomes of the first few months of implementation. City staff and Community Planning Team members working on plan implementation will help to determine how and when strategies and actions need to shift course.

Once this Energy Action Plan is approved, a Memorandum of Understanding (MOU) will be developed between the City of St. Cloud and Xcel Energy. This agreement will establish short term milestones to be evaluated after six months to determine whether there is a need to change course.

Ongoing Support from Xcel Energy

Xcel Energy will continue to support the City of St. Cloud in implementing its goals. Partners in Energy service provides a community facilitator to help track and manage progress, including regular check-ins with key implementers. Support for this plan will include materials to assist with education and outreach, partnership on broader marketing opportunities, collaboration on community and school-based campaigns, and expertise on renewable energy and targeted programs relevant for workshop and event efforts. Details of ongoing support, starting with an initial 18-month implementation period, will be spelled out in the forthcoming MOU between Xcel Energy and the City of St. Cloud.

Xcel Energy will provide semi-annual program participation and energy savings data reports over the first 18 months of plan implementation to help the City of St. Cloud track progress on its goals. After the first 18 months the City and implementers will have access to a Community Energy Report produced annually by Xcel Energy.

Appendix A: Glossary of Terms

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

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

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

Energy Star Homes: A certification program administered by the U.S. Environmental rotation Agency, for new homes that are designed and built to defined high energy efficiency standards.

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

Greenhouse Gas (GHG): Atmospheric gases that absorb infrared radiation and contribute the greenhouse gas effect, including carbon dioxide (CO2), methane (CH4), nitrous oxide (NO2), and water vapor.

kBtu (1000 British Thermal Units): A unit of energy that can describe natural gas or electricity use and is commonly used as the common unit when referring to total energy

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

Home Energy Squad (HES): Home Energy Squad is a joint offering between Xcel Energy and CenterPoint Energy in communities where CenterPoint Energy provides natural gas service. The program helps residential customers reduce energy use in their homes by completing direct installs. The enhanced version of the program includes home energy audit with thermal imaging and an assessment of air leaks.

Metro Clean Energy Resource Teams (CERTs): A Twin Cities based organization that empowers communities and their members to adopt energy efficiency and renewable energy technologies and practices for their homes, businesses, and local institutions.

Minnesota GreenStep Cities: Minnesota GreenStep Cities is a voluntary challenge, assistance, and recognition program to help cities achieve their sustainability and quality-of-life goals.

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.

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

Regional Indicators Initiative: The Regional Indicators Intiative measures annual performance metrics for 22 Minnesota cities. The project tracks data on Energy, Water, Travel, Water, GHG Emissions, and Cost. To learn more, visit www.regionalindicatorsmn.com.

Windsource[®]: A program from Xcel Energy that allows customers to purchase blocks of wind energy as their electricity source.

Appendix B: Planning Workshop Meeting Notes

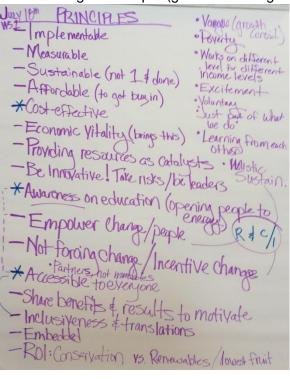
Workshop Process Overview

Workshop 1

The facilitation team introduced the Partners in Energy program, and presented an initial set of data on Edina energy usage. The facilitation team shared Planning Team input (gathered through

an *Introduction Survey*) to highlight community assets and communication channels that should be remember during planning. Questions were raised by the Planning Team as to how the Energy Action Plan can include those not served by Xcel Energy. Individually, Planning Team members drafted two to three principles that should be reflected in the Energy Vision, and ultimately the Energy Action Plan. These were shared with the entire team, brainstormed further, and discussed. The result of this discussion was a list of principles that describe the *what*, the *how*, and the *to what extent* action should be taken in the community.

At the end of Workshop 1, three volunteers formed a small workgroup to wordsmith a draft vision statement. It was decided that awareness, cost-effectiveness, and inclusiveness were the key principles that the workgroup would work to embed in the vision.



Workshop 1 | Vision principles brainstorm

Small Visioning Group

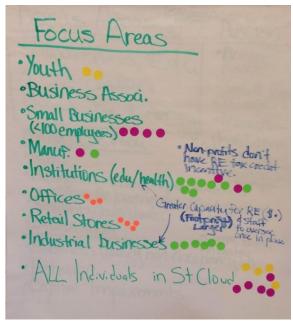
The facilitation leader drafted two vision statement options for the small workgroup to work from. The workgroup took parts of both of these to create a third vision. One of the original statements and the third version were presented to the Planning Team in Workshop 2. From the small group, a list of considerations was outlined for the larger Planning Team to consider when selecting or refining one of the statements:

- Tone (future or present)
- Inclusion of time frames in the vision or embedded within the goals
- Complex vs. Simple
- A statement that excites the community & catches attention
- Use the word energy
- Education vs. Awareness
- Charge to the community not just the City (local gov.)
- A more action oriented/ motivating statement

Workshop 2

Workshop 2 started by reviewing the agenda and reviewing the Vision Principles from Workshop 1. The facilitation team then presented a word cloud that captured all of the principles that people drafted individually in Workshop 1. Measurable, sustainable, cost-effective, implementable, and renewable were the terms that were used most frequently. A final Vision Statement was co-created during the workshop through revising one of the statements prepared by the small workgroup.

The facilitation team defined *focus areas*, *goals*, and *strategies* for the Planning Team and that was followed by a group brainstorm on focus areas for St. Cloud. The team moved to a theme based framework of three different action categories: education, conservation, and renewable energy.



Workshop 2 | Dot voting on Focus Areas

Further discussion explored opportunities to hone these themes based on specific audiences, geographies, business types, etc. All ideas were recorded in real time and the Planning Team identified focus areas by dot vote. The workshop ended by discussing goal setting for the plan and asked people to individually draft three measurable goals (for any focus area) to help launch the next workshop.

Workshop 3

The Planning Team reflected on the Vision Statement and looked at the dot vote results from Workshop 2. These results showed the focus areas of greatest interest to the team by theme (e.g. youth as a focus area audience under the theme of education). We discussed the concept of an "all individuals" focus area. It was determined to be important so that education for one audience can trickle to another audience. The team refreshed on the Vision Principles and discussed them as criteria for evaluating decisions moving forward. This primed the group to then review the draft goals from Workshop 2 and discuss goal breadth and the impact of time horizons. The team discussed what a community-level goal could look like and discussed the importance of metrics focusing on cost savings and leveraging cost-effective improvements and services ("pocketbook" benefits). The planning team as a whole sketched out different metrics for community wide goals and how to stage them over the course of five to ten years.

To help inform specific measurable components of goals, the facilitation team then presented more energy usage and cost data based on the established themes and focus areas. As a last exercise, the team broke into three groups (one per theme) to refine or draft new goals for each focus area based on the conversation around metrics.

Industrial and Institutional Small Group

A phone call was held with those team members who were in the renewable energy theme small group at the end of Workshop 3. The team discussed the definition of "institutional" to provide more clarity to the group at large and also further defined the goals drafted in that workshop.

Workshop 4

The facilitation team summarized back to the team the focus area goals as outlined by small groups in Workshop 4. The team then discussed these draft goals and suggestions for improvement. Questions discussed were: Are the metrics understandable and meaningful to the community? And, what is a measureable goal for education action? Some refinements were recommended and, after reviewing the purpose of strategies, the facilitation team shared examples of programs and public organizing. A strategies brainstorming session was then facilitated followed by a group activity to rank which strategies would be most effective in reaching the outlined goals.

The same small breakout groups (organized by theme) formed again to deep dive into the details of the top ranked strategies that would be implemented, answering: who should be a partner? How should this effort be lead? What are the barriers and opportunities within the community? And, how can Xcel Energy be helpful?

The team then reviewed two example scenarios for how various goals could be met (e.g.



Community Energy Planning Team (not all team members pictured)

different bundles of conservation program participation that would have equal impact but different outreach, cost, and feasibility implications). A final discussion around goals reinforced the desire for "achievable" goals over "aspirational" (as the team also showed in a survey between Workshop 3 and 4), as well as for goals that are exciting and memorable to the community. Due to complications in varied energy use and weather, the team also found that a detailed metric and goal around energy use per resident would be too technical for it to be meaningful to individual community members. Precious metrics such as cost savings and participation were preferred.

Workshop 5

The facilitation team shared an outline of the refined goals including strategies for each as created by the small groups in Workshop 4. There was also data shared about the long-term impacts of these goals regarding energy usage and energy cost savings. Strategy scenarios for conservation were also shared by the facilitation team. The team then discussed if strategies need to be adjusted to be more aggressive or decide if goals should be made less aggressive. Final

discussion of the goals and strategies was captured for input into the draft Energy Action Plan. The team then evaluated the strengths, weaknesses, opportunities, and threats of the plan that they were creating, as considerations for those that would be helpful in implementation. Finally, the team discussed opportunities for them to stay engaged during implementation through on-the-ground support, as well as the desire to have a kick-off meeting to celebrate the planning phase and kick-off implementation with other community members.

Appendix C: Supplemental Baseline Energy Data & Comparison to Other Communities

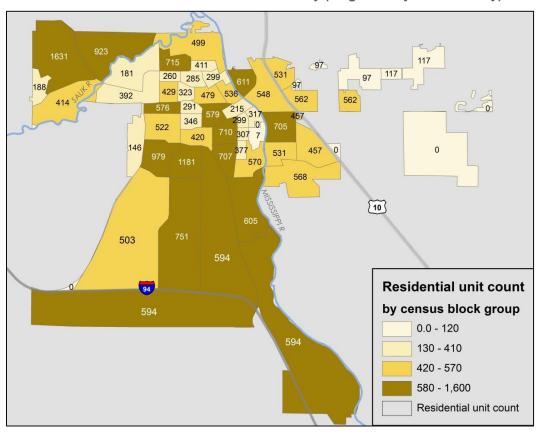
Figure A: Comparison of Communities by Population & Demographics²⁶

These points of comparison are helpful for comparing St. Cloud's average energy use, as a benchmark for improvement and goal setting.

Communities	Total Population (2015 est.)	Language Spoken at Home (% other than English)*	Median Household Income (2015 \$'s)	Median Gross Rent, Including utilities (2011-215)	Owner Occupied Housing	Poverty Rate
St. Cloud	65,842	11.40%	\$ 45,437	\$721	52.0%	23.3%
St. Louis Park	48,171	12.50%	\$ 66,432	\$990	56.8%	8.1%
Maplewood	40,567	19.60%	\$ 62,527	\$951	72.9%	9.6%
Mankato	41,044	8.50%	\$ 41,425	\$726	53.2%	26.2%
St. Paul	300,851	27.60%	\$ 48,757	\$838	49.3%	22.3%
Minnesota	5,489,594	11.0%	\$ 61,492	\$848	71.7%	10.2%

^{*}Language spoken is based on individuals age 5 and older (2011-2015)

Figure B: Distribution of Residential Units Across the City (single-family & multifamily)





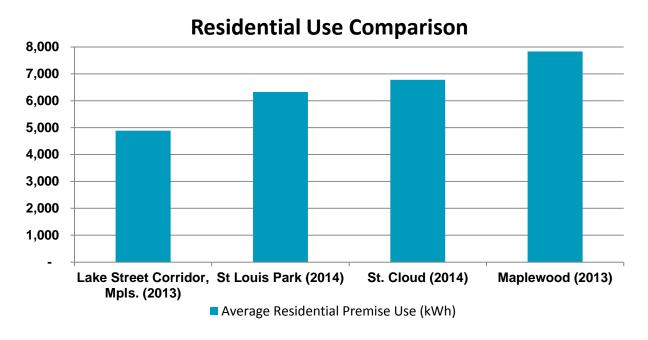


Figure D: Count of Participation in Residential Demand Side Management (conservation) programs or services, by census block group (2015).

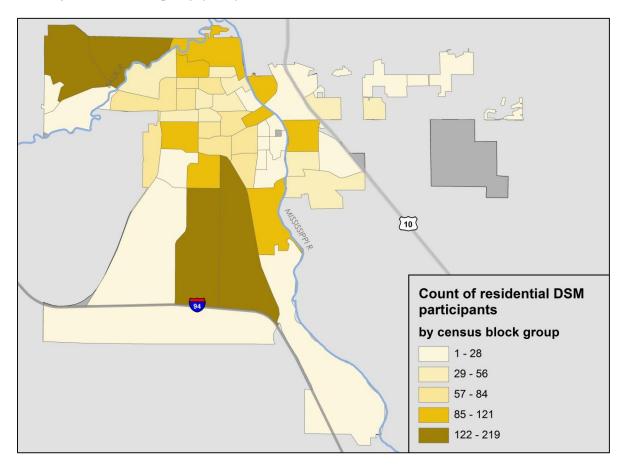


Figure E: Comparison of Average Electricity Consumption (kWh) per premise/meter for Commercial Customers across four communities with shared characteristics.

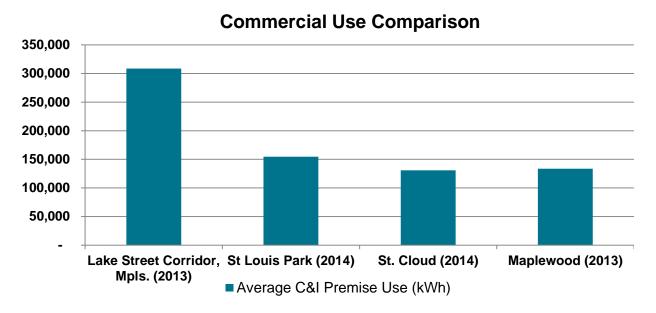


Figure F: Count of Participation in Commercial Demand Side Management (conservation) programs or services, by census block group (2015).

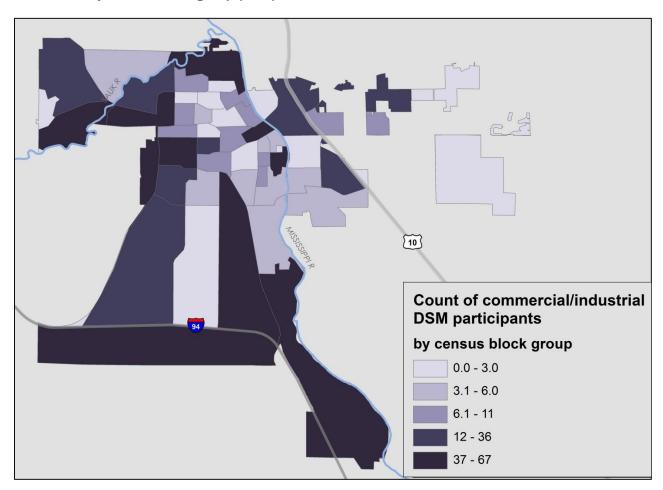
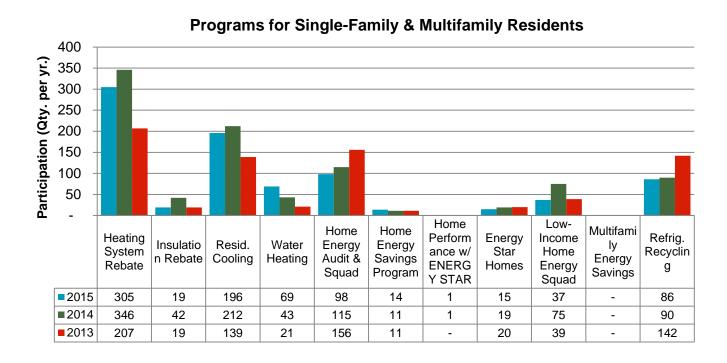
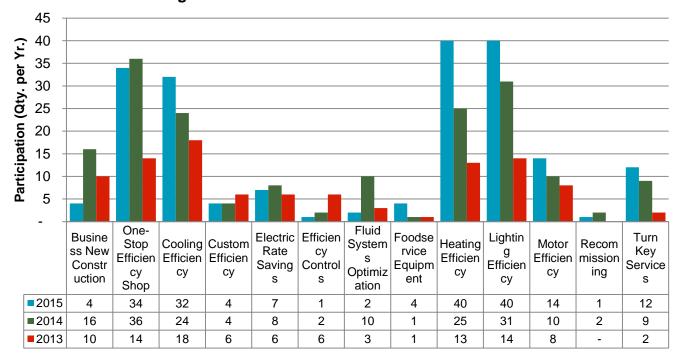


Figure G & H: Participation by Xcel Energy Conservation Service or Rebate Program



Programs for Commercial & Industrial Businesses



Appendix D: Planning Phase Memorandum of Understanding between City of St. Cloud & Xcel Energy



Memorandum of Understanding Phase 1 – Plan Development

Mayor Dave Kleis City of St. Cloud 400 Second Street South St. Cloud. MN 56301

Congratulations on being selected to participate in Xcel Energy's Partners in Energy program. This program is designed to provide your community with the tools and resources necessary to develop and implement an energy action plan that reflects the vision your community has for shaping energy use and supply in its future. Program participation is intended to span 24 months with the initial 4-6 months dedicated to developing of a strategic energy action plan and the remaining time focused on the implementing that plan.

The intent of this Memorandum of Understanding is to confirm the City of St. Cloud's intent to participate in the initial plan development phase of the Partners in Energy program and outline the commitment that your community and Xcel Energy are making to this collaborative initiative. The primary objective of this phase of the program is to develop your energy action plan.

In order to achieve this Xcel Energy will provide:

- Consulting support to assist in identifying potential community stakeholders, and constructing or delivering an invitation or informational announcement regarding the planning process.
- Data analysis of community energy use and Xcel Energy program
 participation to the extent that it is legally and technically prudent and
 feasible. The results can be used to identify potential opportunities to
 implement plan strategies. Xcel Energy will attempt to integrate data
 provided by the City of St. Cloud into the analysis if feasible.

XCEL ENERGY PARTNERS IN ENERGY

Memorandum of Understanding Plan Development Phase

- Professional facilitation of 3-5 plan development work sessions with the community stakeholder group to develop the energy action plan's vision, focus areas, goals and implementation strategies.
- Assistance as needed in synthesizing the community and program data collected with the vision of the community to identify attainable goals that align with suitable strategies and tactics.
- Development of the documented energy action plan that will incorporate inputs from the stakeholder planning team and will be accessible to the community.
- Commitment to delivering an actionable and complete energy action plan within seven months of the City of St. Cloud and Xcel Energy signing this MOU.

Although participation in the Plan Development phase of Partners in Energy program requires no monetary contribution, the community, the City of St. Cloud, does agree to provide:

- A single contact point to work with recruiting stakeholders, coordinating planning meeting logistics, and coordinate distribution of deliverables and lead participation of the community.
- Meeting facilities to host the stakeholder group during development of the plan.
- Identification of existing community energy plans or programs that could be leveraged in successful development and delivery of this plan.
- Good-faith evaluation of the recommendations and analysis provided and fair consideration of the potential strategies and tactics identified that align with the community's goals.
- Commitment to delivering an actionable and complete energy plan within six months of the City of St. Cloud and Xcel Energy signing this MOU,
- Public distribution of the work products developed with the support of the Xcel Energy's Partners in Energy program.

Memorandum of Understanding Plan Development Phase

Resource Commitment Summary Plan Development Phase

	City of St. Cloud	Xcel Energy	
	Single point of contact	Assistance identifying and recruiting	g
	Meeting facilities	stakeholders	
•	Access to existing energy-related plans and programs	 Analysis of community energy use and program participation 	į
	Involvement in developing	 Facilitation of planning sessions 	
	implementation strategies	Training and guidance developing	
•	Commitment to completing the	goals and strategies	
	plan development	 Documentation and delivery of the 	•
	Agreement that the energy plan	energy action plan	
	resulting from this work will be available to the public	 Commitment to completing the pla development 	an

The Memorandum of Understanding for the Implementation Phase of the Partners in Energy program will be developed upon completion of your energy action plan and will outline your goals and the resource commitment from Xcel Energy and the City of St. Cloud.

All communications pertaining to this agreement shall be directed to Tracy Hodel, on behalf of the City of St. Cloud, and Tami Gunderzik on behalf of Xcel Energy.

Thank you again for your continued interest in Xcel Energy's Partner in Energy program. We look forward to assisting the City of St. Cloud in the development of an action energy plan.

	For the City of St. Cloud:	For Xcel∕Energly:
5	Van Klew	Yatrich Chi
`	Date: 5516	Date: 9/16/16

Appendix E: Xcel Energy Programs & Rebate Summary



Xcel Energy Program Offerings

Minnesota residential studies, audits and services					
Efficiency type	Deliverable	Description	Gas or electric	Study rebate service	
Billing and payment	My Account with eBill	My Account is Xcel Energy's online account management service that provides customers with a personalized summary of their account. Features include eBill, eBill payment, usage history, account info, product/program offers, energy efficiency info, and the customer preference center.	E G	Service	
Fuel conversions	Switch from propane or fuel oil to natural gas	Convert your primary fuel in your home and save. Potential construction charge for distances from distribution gas line greater than 75 ft and one-time account set-up charge.	G (in area)	Service	
	Home Energy Savings Program	After an in-home evaluation, qualifying residents may be eligible for services and equipment that include CFL bulb upgrades, insulation and weather stripping, appliance replacements and other equipment and appliances,	E G	Service	
Home audits	Low-Cost Home Energy Audits	Home Walkthrough — Whole-house visual inspection and basic energy bill analysis for \$30. Standard Audit — Home Walkthrough plus blower door test for \$60. Standard audit with Infrared — Standard Audit plus an infrared camera scan for \$100 (where available).	E G	Audits	
	Home Energy Squad®	Low-cost service to provide and install efficient items such as compact fluorescent light bulbs, programmable thermostats, weather stripping and more. Must have natural gas service from Xcel Energy or CenterPoint Energy (\$70).	E G (CenterPoint Energy gas)	Service	
Home services	Home Performance with ENERGY STAR®	By installing multiple measures after a \$60 energy audit, natural gas customers are eligible for cash rebates.	E G	Audits	
	Saver's Switch®	During peak air conditioning use days, participating residents can save 15% off of their electric energy use June through Septemberby allowing a lowering of energy use from their AC units.	E G	Services Rebates	
New home construction	ENERGY STAR Homes	Free home performance testing, inspections and consulting services to help meet the ENERGY STAR guidelines set by the U.S. Environmental Protection Agency. We conduct regular site inspections and arrange an independent inspection at completion to ensure homes meet all required builder rebates.	E G	Study	

Minnesota residential rebate programs					
Efficiency type	Deliverable	Description	Gas or electric	Study rebate service	
Cooling efficiencies	Central air conditioning and air source heat pumps	Our Central AC Rebate program is designed to generate maximum energy savings for residents by focusing on proper installation practices. Qualifying equipment and installations may earn up to \$450 cash rebates. Must be installed by a contractor registered in Xcel Energy's Cooling program.	E	Rebate	
	Ground source heat pumps	Qualifying ENERGY STAR ground source heat pumps are eligible for a cash rebate of \$150 per ton (five ton limit). Must be installed by a contractor registered in Xcel Energy's Cooling program.	E	Rebate	
	Refrigerator/freezer recycling	We pick up resident's old working, second fridge or freezer and recycle it free of charge as well as give a \$50 cash rebate and two compact fluorescent light bulbs.	E	Rebate Service	
Environmental	CFL bulb recycling	Compact fluorescent lights (CFLs) contain small amounts of mercury that are harmful to the environment. Because of this, they should not be disposed in household trash receptacles. Xcel Energy provides free CFL recycling at participating retailers and Minnesota county recycling centers.		Service	
	Heating/ECM rebates	Qualifying natural gas boiler, gas furnace or factory installed Electronically Commutated Motor (ECM) are eligible for cash rebates.	E G	Rebate	
	Water heating rebates	Qualifying energy-efficient water heaters can earn rebates.	G	Rebate	
Heating efficiencies	Insulation rebates	Well-insulated homes can save up to 20% on heating and cooling costs. Rebates for 20% of project cost with a \$300 annual cap. Insulation upgrades existing single-family and multi-unit homes, up to four units, that professionally install insulation. Additional restrictions may apply.	G E (electric heat)	Rebate	
Lighting efficiencies	Home lighting	Energy-efficient compact fluorescent light bulbs and light-emitting diodes can be purchased at a discount at participating retailers.	E	Rebate	

Some restrictions apply; programs and rebates are subject to change. Please see program application forms official program details, terms and conditions.

Minnesota residential renewable options					
Deliverable	Description	Fuel type	Existing or new	Study rebate service	
Solar*Rewards®Community®	A developer or a community installs a solar garden. Residents purchase or lease shares and receive credit on their monthly Xcel Energy electricity bills for their portion of solar energy produced by the solar gardens.	E	E N	Service	
Solar*Rewards®	Residents receive incentives for installation of photovoltaic (PV) solar panels. The state of Minnesota may offer an additional rebate if you buy solar panels from Minnesota manufacturers.	E	E N	Service	
Windsource®	Residents can purchase renewable, wind energy through Windsource. Subscriptions start at less than \$1 per month for one, 100-kilowatt-hour block*.	E	E N	Service	

Some restrictions apply; programs and rebates are subject to change. Please see program application forms official program details, terms and conditions.

Deliverable	Description	Gas or electric	Study rebate service
Business new construction energy design assistance*	An integrated design process that includes whole building computer modeling and verification of measures for new buildings, additions or major renovations. Finished space 20,000 sq. ft. or larger	G E	Study Rebates
Business new construction energy efficient buildings*	Free design review to identify potential rebates and energy-saving opportunities, plus rebates for making efficiency improvements to your new building, addition or major renovation. Finished space smaller than 20,000 sq. ft.	E G	Study Rebates
Commercial efficiency*	Operations and facilities analysis and support to help large commercial operations create a long-term energy management plan. (Designed for energy conservation potential of 1 GWh or 4,000 Dth)	E G	Study Rebate
Data center efficiency study*	Data center energy efficiency analysis and identification of opportunities to improve IT equipment and/or facility systems to run at peak efficiency	E G	Study Rebate
Free online assessment	For businesses unsure of investing in an on-site energy audit, we have a FREE online energy assessment tool that offers a basic report on hidden energy-savings potential: xcelenergy.com/OnlineAssessment	E G	Tool
Fluid system optimization* (compressed air, pumps, fans, blowers, vacuums)	Rebates for a study to analyze your fluid systems to discover no-cost/low-cost improvements as well as identify capital projects to increase your system's efficiency, reliability and performance	E	Study Rebate
Heating efficiency steam trap audits and rebates	Identify failed traps and benefit from cost-saving rebates to repair or replace traps	G	Study Rebate
Heating efficiency system optimization study*	Analyze all or part of heating system to uncover and/or assess natural gas savings opportunities, including no-/low-cost adjustments and/or equipment improvements	G	Study
Lighting redesign study*	A complete lighting analysis to identify ways to Improve your lighting efficiency in over-lit or wrongly-lit spaces. (Not for 1-to-1 lighting retrofits; must be performed by a certified lighting professional)	E	Study Rebate
Process efficiency*	Operations and facilities analysis to help create a long-term energy management plan. Industrial manufacturing customers must have cumulative energy conservation potential of 1 GWh or 4,000 Dth	E G	Study Rebate
Recommissioning*	Energy experts conduct a Recommissioning study and provide recommendations for building tune-ups. Many measures have simple paybacks of less than one year. Choose what to implement and get rebates on both the study and implementation measure(s)	E G	Study Rebate
Refrigeration recommissioning*	Rebates for tuning up existing commercial refrigeration systems in grocery outlets, convenience stores and other facilities with refrigerated cases	E	Study Rebate
Turn key services	Low-cost, on-site assessments that identify energy-saving opportunities for community businesses. Includes free project implementation services and 30% bonus rebates on rebate-eligible improvements made within 12 months from assessment date. If businesses already have energy-saving projects identified, they can still take advantage of our free implementation services	E G	Study Service Rebate
My Account with eBill	My Account is Xcel Energy's online account management service that provides business customers with a summary of their account to help manage energy. Features include eBill, eBill payment, usage history, account info, product/program offers, energy efficiency info, and the customer preference center	E G	Service
PERSONALIZED BUSINESS ACCOUNT SERVICES	Our efficiency specialists are your go-to support for your businesses' energy needs, available to: • Answer questions • Suggest energy recommendations tailored to your business • Help you navigate program options, requirements and documentation • Discuss different ways to get started Contact your Xcel Energy account manager, or our energy efficiency specialists at 1-855-839-4362 or energyefficiency@xcelenergy.com.		Service
Trillion BTU financing	Loan program that leverages public and private money to help businesses make improvements that lower energy costs. Delivered by St. Paul Port Authority.		Servic

^{*}Requires preapproval prior to starting the project or study.

Some restrictions apply; programs and rebates are subject to change. Please see program application forms official program details, terms and conditions.

Minnesota Business Rebate Programs					
Deliverable	Description	Gas or Electric	Study Rebate Service		
Cooling Efficiency	Rebates for energy-efficient air conditioning equipment including rooftops, chillers, water source heat pumps, zero-loss energy doors, PTACs and more	Е	Rebate		
ComputerEfficiency	Rebates available for virtual desktop infrastructure (VDI) or PC power management software	Е	Rebate		
Custom Efficiency*	Rebates for energy-efficient technologies or process improvements not covered under our prescriptive programs	E G	Rebate		
Data Center Efficiency Equipment Rebates*	Custom rebates for opportunities identified through a Data Center study	Е	Rebate		
Efficiency Controls*	Rebates for control systems that save energy by automating building systems such as lighting, HVAC and others	Е	Rebate		
Fluid System Optimization*	Rebates for efficiency improvements from upgraded equipment identified in a fluid system optimization study	Е	Rebate		
Foodservice Equipment	Cash-back rebates for purchasing and installing qualifying energy-efficient foodservice equipment such as convection ovens, broilers, demand controlled ventilation, ENERGY STAR dishwashers and more	E G	Rebate		
Heating Efficiency	Prescriptive rebates for qualifying commercial heating systems used for space heating, domestic water heating and up to 30% additional process load	E G	Rebate		
Lighting Efficiency Retrofit Rebates	Rebates for purchasing and installing energy-efficient lighting in an existing building	Е	Rebate		
Lighting Efficiency New Construction Rebates	Rebates for purchasing and installing energy-efficient lighting for new or significantly renovated facilities	Е	Rebate		
Motor and Drive Efficiency	Prescriptive and custom rebates for installing variable frequency drives (VFD), adjustable speed drives (ASD) and Constant Speed Motor Controllers. Motor rebates are available for NEMA Premium® enhanced new, upgrade and enhanced upgrade motors	E	Rebate		

^{*}Requires preapproval prior to starting the project or study.

Some restrictions apply; programs and rebates are subject to change. Please see program application forms official program details, terms and conditions.

Minnesota Business Renewable Options				
Deliverable	Description	Fuel Type	Existing or New	Study Rebate Service
Solar*Rewards	Rebates based on energy production for installing solar panels on your business. Participation is limited. Additional incentive may be available through the Made in Minnesota program. Additional payment available for excess energy produced.	E	E N	Service
Windsource	Businesses can purchase renewable energy through Windsource. Subscriptions start at less than \$1 per month, for one, 100 kilowatt-hour block.*	E	E N	Service



Appendix F: Energy Action Plan Overview & Infographic

OUR COMMUNITY ENERGY ACTION PLAN

A Tradition of Sustainability Leadership. A Path to Impact.

To enhance the livibility and sustainability of the community, and to build on the City's own 80% renewable by 2018 goals, we – a group of community leaders, business owners, and institutions convened by the City – developed a Community Energy Action Plan. This 2017-2026 plan envisions how we want to live in the future. This overview outlines the specific actions that will get us there.

2017-2018 GOALS

- 1. **Get Smart:** Increase energy awareness for students and adults around actions and behaviors that reduce energy use and benefit future generations.
- 2. **Take Targeted Action**: Double residential and small/medium business participation in conservation programs.
- 3. **Deliver Economic Benefit**: Save the community \$638,000 in energy costs.

2019-2026 GOALS

- 4. **Challenge a Friend:** Maintain participation in conservation programs that is 70% above average participation levels in the years 2013-2015.
- 5. **Support a Business**: Help institutions and industrial businesses use 25 million kWh of renewable electricity by 2016 via installation, purchase, or subscription.

A CALL TO ACTION FOR ALL

Reducing our energy impact will require action from thousands of individuals. Here are some ways that you can contribute:

All Community Members:

 Call the City to learn how you can attend events or support community lead efforts to help fulfill your St. Cloud. Community Energy Vision.

Kids and Parents:

• Call the City to get involved in shaping a student program that will teach kids about energy and impact school energy use.

Institutional & Industrial Businesses:

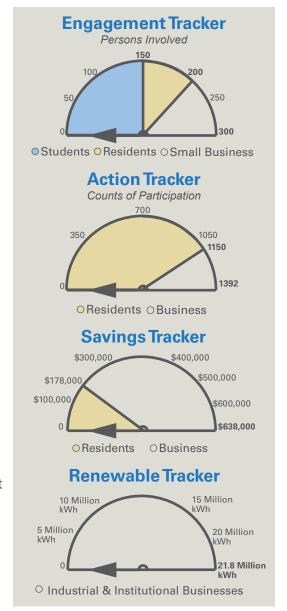
- Attend a business leaders renewable energy workshop.
- Pledge to reach 5% renewable energy by 2025.

Residents:

- Make home energy improvements and earn rebates.
- Get a Home Energy Squad visit to learn how to make your home more efficient.
- Attend a neighborhood workshop to hear personal stories about home energy conservation.

Small & Medium Businesses:

- Host or attend an educational workshop with Xcel Energy.
- Make an efficiency improvement and earn a utility rebate.





St. Cloud ENERGY ACTION PLAN

Community Vision Statement

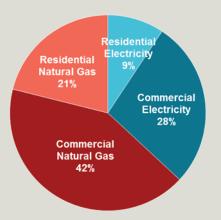
We are energy leaders through voluntary, inclusive, and sustainable approaches that result in measurable, environmental, and economic benefits.

Our Current Costs

Dollars Spent on Energy

\$87
MILLION/YR

Our Current Use



Our Future Actions



Action Plan Impacts

With individual action, by 2026 the community will:



Save 205,011 more MMBtu of energy



Use 21,800,000 more kWh of renewables



Save \$9.2 Million in energy costs