



Minneapolis Clean Energy Partnership

Annual Report 2015

June 2016



Acknowledgements

Collecting the data for this report relied on the time and expertise of staff from the City of Minneapolis, Xcel Energy, CenterPoint Energy, the Center for Energy and Environment, and the Sustainable Resources Center. Here we acknowledge those who provided assistance and expertise in gathering, completing, and assessing the accuracy of energy, building, and demographic data for the Clean Energy Partnership metrics.

Center for Energy and Environment

Katie Jones Schmitt

Isaac Smith

Judy Thommes

CenterPoint Energy

Nick Mark

Audrey Partridge

City of Minneapolis

Peter Ebnet

Kelly Muellman

Gayle Prest

Siri Simons

Sustainable Resources Center

Dan Roberts

Xcel Energy

Bridget McLaughlin Dockter

Louis Mondale

In remembrance of Kirk Washington Jr, an Energy Vision Advisory Committee member and artist who was passionate about improving the lives of Minneapolis residents

More information on the Clean Energy Partnership is available at:

www.mpls-cleanenergypartnership.org

“For reasonable accommodations or alternative formats please contact (add your information here including: department, contact person, phone and email). People who are deaf or hard of hearing can use a relay service to call 311 at 612-673-3000. TTY users call 612-673-2157 or 612-673-2626. Para asistencia 612-673-2700 - Rau kev pab 612-673-2800 - Hadii aad Caawimaad u baahantahay 612-673-3500.”

Table of Contents

Executive Summary	5
Introduction	9
Metrics	
1. Citywide Greenhouse Gas Emissions	14
2. Commercial Building Energy Use	15
3. Residential Building Energy Use.....	20
4. Local or Directly Purchased Renewable Energy.....	21
5. Home Energy Squad Visits	24
6. Low-income Program Visits	28
7. Air Sealing and Insulation Program Participation	31
8. Multi-family Program Participation	33
Next Steps.....	36
Appendices	
Appendix A: Board, Energy Vision Advisory Committee, Planning Team.	37
Appendix B: Clean Energy Partnership Work Plan.....	38
Appendix C: List of Metrics	75
Appendix D: Demographics Maps.....	76
Appendix E: Energy Design Assistance.....	81
Appendix F: Additional Resources	82

Acronyms

ACEEE—American Council for an Energy-Efficient Economy

ACS—American Community Survey

CEE—Center for Energy and Environment

CIP—Conservation Improvement Program

CNP—CenterPoint Energy

CO₂e—carbon dioxide equivalent for measuring global warming potential

DOE—United States Department of Energy

EDA—Energy Design Assistance

EE—energy efficiency

EVAC—Energy Vision Advisory Committee

HES—Home Energy Squad

kBtu—one thousand British thermal units

kWh—kilowatt hour

LIHEAP— Low-Income Home Energy Assistance Program

MFBE—Multi-Family Building Efficiency program

MWh—megawatt hour

PACE—Property Assessed Clean Energy

MPCA—Minnesota Pollution Control Agency

WAP—Weatherization Assistance Program

XE—Xcel Energy

Executive Summary

The City of Minneapolis, Xcel Energy and CenterPoint Energy formed the Minneapolis Clean Energy Partnership (Partnership) in January 2015. This first-in-the-nation collaboration partners the City of Minneapolis (City) in a unique way with Xcel Energy and CenterPoint Energy, electric and natural gas utility providers, to help the City reach its energy efficiency and renewable energy goals, with the ultimate target of 80 percent greenhouse gas emission reductions by 2050.

This inaugural annual report captures the 2015 efforts in developing the Partnership's structure, relaying its activities, establishing the first two-year work plan and adopting baseline metrics. This report demonstrates a complete picture of the City's greenhouse gas profile related to buildings and energy production, consumption and savings opportunities.

BACKGROUND AND STRUCTURE

The Partnership was formed as a result of utility franchise agreement renewal discussions and how the City could better leverage utility resources to advance the goals outlined in its **Climate Action Plan and Energy Vision for 2040** report. While all three parties have longstanding commitments to the environment and impressive track records, together they realized by combining resources and working together in a more formal arrangement, important strides could be made.

After consideration of other options, including municipalization, the City signed separate franchise agreements with both utilities at the end of 2014. The franchise agreements changed from twenty year terms to five-to-ten year terms, and were contingent upon establishment of, and progress on, the Partnership.

The Partnership functions through its Clean Energy Partnership Board (Board), Energy Vision Advisory Committee (EVAC), and Planning Team. This multi-directional relationship connecting the community, City and utility staff, policymakers and business executives is integral to the success of the Partnership.

Clean Energy Partnership Structure



The Board, which meets quarterly, is comprised of the mayor, two city council members, city coordinator and two representatives from each utility. The Board's duties include review and approval of efforts undertaken by the Partnership, appointment of EVAC members and approval of an annual report.

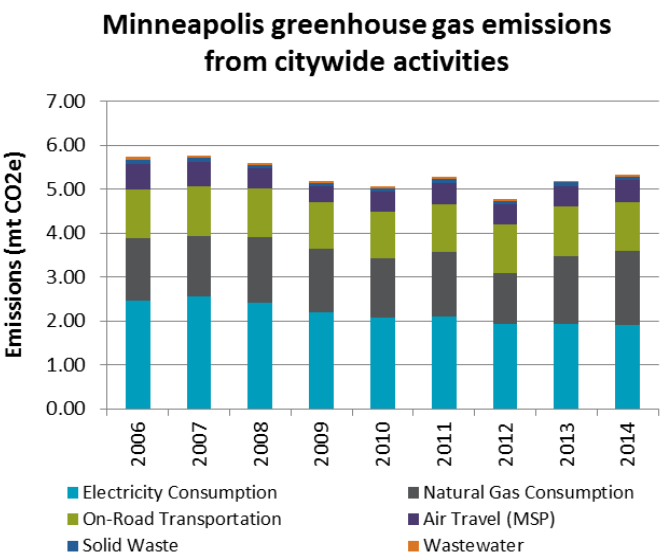
The EVAC is appointed by the Board and is a 15-member clean energy stakeholder group representing Minneapolis. Members come from diverse sectors of the city including environmental justice, academia, business, energy efficiency and renewable energy. This committee serves two-year terms, meets quarterly and provides community

feedback to aid in the Board’s decision-making. Its primary responsibility is to review, provide feedback and recommendations about the two-year work plan, performance reports and metrics.

The Planning Team consists of the City’s Sustainability Office staff, representatives of Minneapolis City Council offices that have members on the Board, staff from the Mayor’s Office, and staff from Xcel Energy and CenterPoint Energy. The Planning Team is responsible for implementing the work of the Partnership.

FIRST YEAR HIGHLIGHTS

Much of the first year focused on establishing the Partnership structure including Board procedures, EVAC appointments and procedures. First year outcomes included the development of the first two-year work plan, establishing eight metrics (which form the basis of the Annual Report), coordinating communications and learning to leverage the resources available at each partner organization to further initiatives.



Greenhouse Gas Emissions Overall, 2014 city-wide greenhouse gas emissions were down 7.5 percent

from 2006 levels (2015 is not yet available). Colder than average weather drove an increase in natural gas consumption in 2014, though weather-normalized use per residential customer has been largely flat since 2007. Overall emissions from electricity were 22.5 percent lower than 2006 levels. In late 2015, Xcel Energy proposed a bold new strategy which will accelerate its transition from coal-based generation while continuing to ensure a reliable energy system and cut carbon emissions 60 percent by 2030.

Commercial Buildings All private commercial buildings larger than 50,000 square feet and public buildings with 25,000 or more square feet reported their natural gas, electricity and water usage as part of the City’s Energy Benchmarking Disclosure Ordinance in 2015. Xcel Energy developed an online tool to automatically upload usage information into the ENERGY STAR benchmarking platform to make it easier to comply. The City launched the Minneapolis Building Energy Challenge for benchmarking buildings to reduce greenhouse gas emissions from commercial building energy use 15 percent by 2020. Utility and City staff collaborated through business customer outreach and focused energy forums to raise awareness of offerings and the related savings opportunities in their buildings, leveraging the Benchmarking Report for outreach.

Residential Buildings Residential natural gas customers use about 950 therms per year, on average, resulting in emissions of about five metric tons of carbon dioxide equivalent (CO₂e). Residential electric customers in Minneapolis use an average of about 5.6 megawatt hours (MWh) per year resulting in about 2.7 tons of CO₂e .

Both utilities offer comprehensive energy efficiency programs to help customers save energy and money, and reduce their carbon footprint. In 2015 Xcel

Energy offered bonus rebates to its residential customers such as point-of-sale lighting rebates, refrigerator recycling and Home Energy Squad (HES) co-pay discounts. HES provides residential customers with direct installations of energy-saving devices such as LED lights, weather-stripping and programmable thermostats along with home energy audits. There were 1,198 HES visits (renter and owner occupied) in 2015 compared with 731 in 2014. The City also offered zero percent financing for residential energy efficiency loans.

Low Income Programs Both Xcel Energy and CenterPoint Energy offer a number of programs to help low-income customers improve the energy efficiency of their homes. The two utilities spent a combined total of more than a million dollars in 2015 on these programs to benefit Minneapolis customers, and leveraged nearly a million additional dollars in federal support for residential weatherization programs. In addition, the City of Minneapolis provided funds to support free HES visits for income-qualified customers.

Air Sealing and Insulation Given Minneapolis's older housing stock, ensuring homes are properly air sealed and insulated is an important aspect of reducing greenhouse gas emissions, in addition to the benefits for resident health and comfort. CenterPoint Energy offers rebates to customers completing air sealing and insulation work. Roughly 335 Minneapolis customers completed home upgrades and received rebates through the program in 2015. CenterPoint Energy continues to work with the Center for Energy and Environment on a pilot (launched in early 2015) aimed at increasing the number of HES participants who pursue air sealing and insulation opportunities.

Multi-Family The multi-family segment is particularly important to the City as 51 percent of its residents

are renters. Both utilities have historically and currently offer Conservation Improvement Programs (CIP) programs to help the multi-family segment. CenterPoint Energy and Xcel Energy jointly launched a unique Multi-Family Building Efficiency program in October 2015. It targets landlords by offering tiered incentives ranging from 15 to 25 percent of upgrade costs for efficiency improvements in market-rate buildings. Landlords with low income buildings are eligible for up to 80 percent rebates for improvements. This program provides a free energy assessment, free direct installation of energy-efficient lighting and other energy-saving measures in common areas and units, an energy usage report with potential energy savings opportunities, implementation support, and education materials for residents and staff.

Solar and Wind Production Xcel Energy currently offers three renewable energy options: Windsources®, Solar*Rewards Community® (gardens) and Solar*Rewards® (rooftop). While a community solar garden program was established in 2015, no gardens were built, operational or available to Minneapolis residential or business customers before year end. Xcel Energy expects more than 250 MW of gardens online by the end of 2016. New solar interconnections within the city increased approximately 40 percent from 2014 to 2015.

RECOGNITION

Partnership representatives have given numerous presentations around the country and received ample media coverage since its formation. In addition:

- At the invitation of the Pope, Mayor Hodges visited the Vatican to discuss the relationship between climate change and human trafficking.

Mayors from 65 cities around the world attended and people were very interested in the work being done by the Partnership.

- The American Council for an Energy-Efficient Economy ranked Minneapolis number seven on a list of the 51 most energy-efficient cities and was one of the most-improved. This recognition is due in part to the Partnership.
- In late 2014, Minneapolis was recognized by the White House as one of 16 Climate Action Champion communities because of the City's leadership in reducing carbon pollution and attempting to structure a new relationship with utilities.

MOVING FORWARD

The first year of the Partnership was challenging as relationships and operational procedures were developed, and synergies identified. The Board's support and engagement has been critical in advancing this work. EVAC has been an important partner as metrics, 2015-2016 Work Plan and community engagement plans were established. The Planning Team is committed to supporting meaningful future joint efforts.

The Partnership will build on the first year learnings and relationships to further advance our clean energy goals in 2016. Anticipated activities:

- Dive deeper into this first annual report using census tract-level demographic, socioeconomic, energy usage and utility program participation data to identify characteristics and geographies of residential populations in Minneapolis who are currently underserved by utility energy efficiency programs. The Partnership will continue to improve on the quality of the data.

- Develop policy and programmatic solutions to increase overall participation. The Board has agreed to fund one to three pilot projects to identify and overcome barriers to participation by contracting with local community-based organizations to engage one or more of the identified underserved communities. The primary goals of the pilot are to increase participation in utility CIP as well as test engagement and outreach approaches that are scalable and replicable.
- Seek applications from the public to serve a two-year term on the EVAC for 2017-2018 (existing EVAC members can reapply).
- Begin drafting 2017-2018 Work Plan using the findings in this annual report to make better informed decisions.
- Seek additional resources and strengthen relationships with other interested parties.

The Partnership has the potential to serve as a model for other cities and utilities to work together to advance both greenhouse gas reduction and equity goals. This is the first time investor-owned utilities have formally partnered with a municipality in this way to achieve a city's energy efficiency and renewable energy goals through a formal collaborative program and policy development. Additionally, this is the first time these utilities have analyzed program participation data down to this geographic scale (census tract level). With the availability of the data mapped by census tract, the Partnership intends to analyze and gain insight into who the underserved communities are and how to better reach them.

Introduction

The City of Minneapolis, Xcel Energy and CenterPoint Energy launched the Minneapolis Clean Energy Partnership (Partnership) in January of 2015. This first-in-the-nation approach partners the City of Minneapolis (City) in a unique way with Xcel Energy and CenterPoint Energy as the electric and gas utility providers to help the City reach its Climate Action Plan and Energy Vision for 2040 goals. The Partnership is a collaborative leadership framework through which the City and utilities study, prioritize, plan, coordinate, implement, market, track, and report progress on clean energy activities within the city. This inaugural annual report captures the 2015 efforts in developing the partnership's structure, relaying its activities, and establishing a work plan and baseline metrics for measuring progress.

BACKGROUND

Minneapolis has a long history of climate action, dating back to the 1993 Minneapolis-St. Paul CO₂ Reduction Project, which established the City's first emissions reduction goals and identified strategies to meet those goals. In 2013, the City adopted the Minneapolis Climate Action Plan, which identifies a roadmap for the city to meet its current greenhouse gas emissions (GHG) reduction goals of 15 percent by 2015, 30 percent by 2025. In early 2015, the City revised its goal to include a GHG reduction goal of 80 percent by 2050¹.

CenterPoint Energy and Xcel Energy also have longstanding commitments to the environment and impressive track records. Xcel Energy is the number one utility wind energy provider in the U.S. for the twelfth year in a row and among the top ten U.S. utilities for the amount of solar power in its portfolio. Both Xcel Energy and CenterPoint Energy are recognized as national leaders in energy efficiency

programs. In particular, CenterPoint Energy has seen more than a 90% increase in energy savings¹ in Minnesota from 2007 to 2013. Both are seeking ways to improve these programs, especially in underserved communities, and achieve additional cost-effective energy savings.

The Partnership arose following discussions about the renewal of the City's utility franchise agreements, and how those renewals could leverage utility resources to better advance the City's goals. Under Minnesota state law, many communities negotiate franchise agreements with utility companies to identify the conditions under which the companies are allowed to use public streets and right of way to provide service to local residents and businesses.

To review available options ranging from traditional franchise renewal to full municipalization of the electric and natural gas utilities, the City commissioned a study by the Center for Energy and Environment called the Energy Pathways Study. The results of the "Key Recommendations" of the study were presented to City Council in February 2014. Those recommendations included; renewal of the current energy franchise agreements while simultaneously negotiating Clean Energy Partnership agreements – a strategy for finding ways to work collaboratively to achieve the City's climate action and energy vision goals.

Following this model, in October of 2014, the City signed separate franchise agreements with both utilities. The franchise agreements changed from twenty-year terms, under the previous arrangement, to five-to-ten-year terms, and were contingent upon progress on and establishment of the Clean Energy Partnership.

¹ Baseline is 2006 levels. ² Energy savings in this report includes only the first year of savings from implemented measures.

PARTNERSHIP STRUCTURE AND DUTIES

The Partnership functions through its Board, EVAC, and Planning Team. This multi-directional relationship connecting the community, city and utility staff, high level policymakers, and business executives is integral to the success of the partnership. See Appendix A for a listing of 2015 Board, EVAC, and Planning Team members.

The Partnership Board is comprised of two city council members, the mayor, city coordinator, and two high-level representatives from each utility. The Board meets quarterly and duties include review and approval of any efforts undertaken by the Partnership such as its two-year work plans focused on helping the City achieve its energy goals, appointment of EVAC members, and approval of an annual report.

The EVAC is a community clean energy stakeholder group representing the diversity that is Minneapolis. Members come from all sectors of the city including environmental justice, academia, business, energy efficiency and renewable energy. This 15-member Board-appointed committee serves two-year terms. It meets quarterly and provides community feedback to aid in the Board's decision-making. Its primary charge is to review and provide feedback and recommendations on the two-year work plan as well as on performance reports and metrics. In addition, EVAC has formed subcommittees that have met frequently to complete significant work on recommendations regarding metrics and a community engagement process for future work.

The Planning Team consists of the City's Sustainability Office staff, representatives of Minneapolis City Council offices that have members on the Board, staff from the Mayor's office, and staff from Xcel Energy and CenterPoint Energy. The

Planning Team is responsible for implementing the work of the Partnership.

By combining the resources of the Partnership, the group is producing, for the first time, an annual report with formerly siloed information from all three partners to create a complete picture of the City's greenhouse gas profile related to buildings and energy production, consumption, and savings opportunities. To this end, the utilities gathered data for customer program participation and energy usage for the City of Minneapolis. Additionally, the utilities are working on new geographically-focused data production methods for the development of baseline metrics and targeted outreach plans. Ultimately, these data will allow the partners to craft goals and milestones in a responsible, data-driven way.

Similarly, the Partnership creates opportunities to collaborate on some of the most stubborn gaps, such as the way that the City and utilities interact with populations that have not historically participated in utility energy efficiency programs. Information sharing about utility program participation, translation and interpretation services, outreach and engagement models, and a host of other topics are a standard part of weekly Planning Team meetings. In addition to geographically-focused outreach, the partners are looking at customer usage, participation, and outreach through an equity lens to understand who the utilities' programs have and have not reached.

FIRST YEAR (2015) PARTNERSHIP WORK

Much of the first year focused on establishing the Partnership structure, including Board procedures, EVAC appointments and procedures, developing the first two-year work plan, establishing metrics,

coordinating communications, and learning to leverage the resources available at each partner organization to further initiatives.

2015-2016 Work Plan The Work Plan (Appendix B) is designed to leverage statewide policies, city municipal regulatory authority, community relationships, utility expertise, and programs to increase the penetration rate of energy efficiency and renewable energy as well as raise awareness and equity of energy services in Minneapolis. Specific engagement tools were identified with each target segment: 1-4 Unit Residential, Multi-family, Small Commercial, Large Commercial, and City Enterprise.

Metrics Following development of the Work Plan, the Board approved metrics based on recommendations of EVAC and the Planning Team (Appendix C). These metrics will inform the Board of progress in the Partnership, helping the partners understand what activities are happening in the community and determine the level of success.

Metrics also form the basis of each Annual Report. Compiling metrics includes significant data collection from all three partners including program participation data combined with data on building types, income, race, or other demographics (Appendix D) to determine which areas of the community are currently being well-served, less-served or under-served.

Key Partnership-Related Activities The partners were highly active in working toward Work Plan goals in the targeted segments and at the utility level. In addition, they were acknowledged for the innovative Partnership by national and global entities. The following bullets provide a list of the activities undertaken during the first year of the Partnership.

Residential and Multi Family Housing

- The City of Minneapolis bought down the customer co-pay for Home Energy Squad visits to income-qualified Minneapolis households during the fall of 2015. The Home Energy Squad visits bring energy efficiency experts to participants' homes to install energy-saving materials and make recommendations on energy-saving upgrades. For a limited time, the City of Minneapolis also offered no-interest financing to participants making insulation and air sealing upgrades recommended by Home Energy Squad.
- CenterPoint Energy and Xcel Energy launched a new joint Multi-Family Building Efficiency program for buildings with five or more units for its combined service territory (including outside of Minneapolis). This whole building gas and electric program is targeted at multi-family building owners, the decision makers. It offers an audit, direct installation of LED's in common areas, CFLs in tenant units, showerheads, faucet aerators and LED's in exit signs and scaled incentives that increase substantially with energy efficiency investment. Building owners receive a report of their energy consumption before the retrofits, consulting support for deeper improvements requiring engineering, retrofitting or equipment. This program is in direct alignment with the 2015-2016 Work Plan. CenterPoint Energy and Xcel Energy noted that they collaborated more deeply on this program than they had in the past, and this has been attributed to the Partnership.
- Working with the Center for Energy and Environment and with the cooperation of Xcel Energy, CenterPoint Energy began a pilot program designed to streamline the process for customers participating in Home Energy Squad to

follow through on recommended air sealing and insulation upgrades throughout Minneapolis. The goal of the pilot is to evaluate whether adding additional customer support, engagement and convenience in a “one-stop” design, can successfully and cost-effectively increase implementation of recommended improvements. Initial results of the pilot are encouraging, and suggest both that the additional services are successful at encouraging customers to follow through on recommendations and that they can be delivered cost-effectively as part of the Home Energy Squad visit. The pilot is ongoing in 2016.

- CenterPoint Energy included an insert in the City’s August utility bills offering up to three free low-flow showerheads and faucet aerators per household or unit that resulted in 1,299 requests for 2,654 shower heads and 3,164 aerators. Calculated energy savings from those requests are about 10,000 dekatherms of energy, which equates to the annual energy use of 111 residential houses in Minneapolis; and a decrease of 500 tons of carbon dioxide annually.
- The City, in conjunction with NRG Energy, Meet Minneapolis, Xcel Energy, and CenterPoint Energy held a free energy fair for residents to learn how to make their home more energy efficient, sign up for money-saving energy programs, and learn about options to go solar.
- In April, Mayor Hodges announced during her State of the City address a year-long challenge to the community to join her in becoming a Minneapolis Climate Champion, challenging the community to commit to doing easy, everyday activities that will reduce individual carbon footprints and contribute to our citywide carbon reduction goals. Where possible, those monthly challenges were aligned with utility program

promotions to further leverage the efforts.

- In August, a group of EVAC members formed an engagement working group with a goal of creating a tool/template that can be used to flesh out more detailed community engagement plans by segment over the life of the Partnership and bring to the Board in January 2016.

Commercial Buildings

- At a fall press event, the City formally challenged large commercial buildings to reduce GHG emissions 15% from 2014 by the year 2020.
- The City received a small Minnesota Pollution Control Agency grant that covers the majority of the costs when applying for an ENERGY STAR® Certification. The goal is to raise awareness among business owners and tenants on energy efficiency.
- 2015 was the third year of the City’s energy benchmarking disclosure ordinance focused on the largest buildings. 429 buildings participated (representing 50% of City’s commercial space) and had an average ENERGY STAR® score of 74.
- In late 2015, as part of the federal Department of Energy’s Better Buildings Initiative Data Accelerator Project, Xcel Energy launched its Energy Benchmarking Tool. This service provides an automatic feed of buildings’ meter readings directly to ENERGY STAR® Portfolio Manager and make the information available to groups to use for organization of different initiatives; targeted outreach and marketing.
- The City approved three Property Assessed Clean Energy (PACE) projects in 2015 (four projects in 2014) – this is an innovative way to finance energy efficiency and renewable energy upgrades to commercial buildings.

City Enterprise

- The City began rollout of its LED light conversion on city owned streetlights. Xcel Energy filed to add a LED streetlight tariff with the Public Utilities Commission so it could begin rollout in Minnesota. In the spirit of the Partnership, the City and Xcel Energy met numerous times prior to the filing to discuss the program and rate calculations. The City had remaining questions and continues to participate in the proceedings.
- The City 23 subscription agreements with four solar garden operators for 7.5 million kilowatt hours of solar energy. This is about seven percent of the City government's annual electricity use. Community solar gardens are centrally located solar electricity systems that provide clean, renewable electricity for their subscribers.

Power Production

- In October, Xcel Energy announced a bold proposal to the Public Utilities Commission, an accelerated transition from coal energy to renewable energy. The Plan calls for a system portfolio that is 63% carbon free by 2030. This is accomplished by ceasing coal-fired generation at the SHERCO coal plant units 2 and 1 in 2023 and 2026, respectively, and moving up in time substantial new renewable generation to 1,200 megawatts by 2020. By 2030, renewables are proposed to be 35% of Xcel Energy's portfolio. The role of Xcel Energy's generation portfolio is important to the City's ability to reach its GHG reduction goals. This is yet another example of where the City and Xcel Energy could work together in Partnership to leverage common goals.

Recognition

- At the invitation of the Pope, Mayor Hodges visited the Vatican to discuss the relationship between climate change and human trafficking. Mayors from 65 cities around the world attended and people were very interested in the work being done by the Partnership.
- The American Council for an Energy-Efficient Economy (ACEEE) ranked Minneapolis number seven on a list of the fifty-one most energy-efficient cities and was one of the most-improved. This recognition is due in part to the Partnership.
- In late 2014, Minneapolis was recognized by the White House as one of sixteen Climate Action Champion communities. This recognition was due to the City's leadership in reducing carbon pollution and attempting to structure a new relationship with utilities.

Metric 1: Citywide Greenhouse Gas Emissions 2014

	Metric	2014
1.0	Citywide emissions (metric tons CO ₂ e)	5,299,258
1.1	Emissions from electricity use (metric tons CO ₂ e)	1,904,136
1.2	Emissions from natural gas use (metric tons CO ₂ e)	1,691,579

Description: The citywide greenhouse emissions inventory is an accounting of greenhouse gas emissions from Minneapolis, which includes emissions from buildings, transportation (cars, trucks, and airport), and waste.

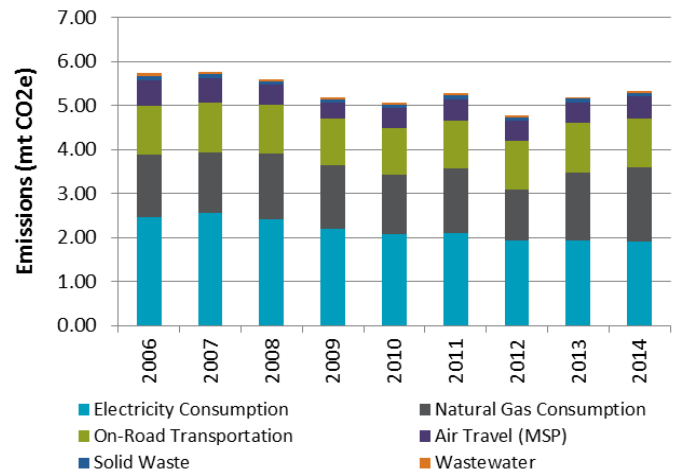
Results: Overall, 2014 citywide greenhouse gas emissions are down 7.5% from 2006 levels.

Colder than average winters are driving an increase in natural gas use. In 2013 and 2014, the Twin Cities experienced 12% and 17.5% more heating degree days than the previous ten year average, respectively. Since 2006, emissions from natural gas consumption in Minneapolis grew 17.5%, representing the largest increase in the emissions inventory. Normalized for weather, natural gas consumption declined 9% per heating degree day over 2006.

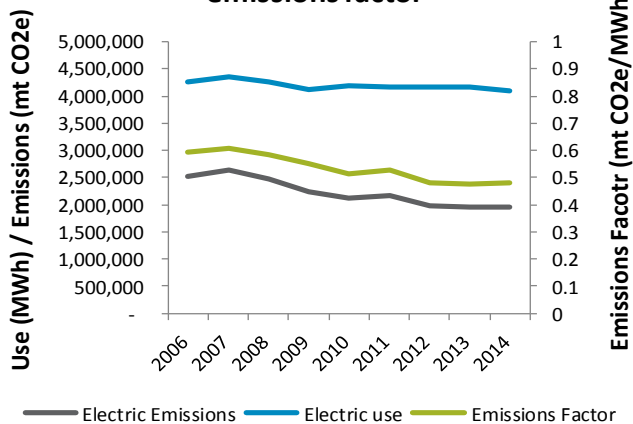
In the last 8 years, Minneapolis building stock grew by 2,953 buildings and 27 million square feet, while electricity consumption declined.

In 2014, emissions from electricity were 22.5% lower than in 2006, representing the largest decline in the emissions inventory. Increases in energy efficiency and reduced carbon intensity led to the change. Carbon intensity has declined 19.1% over the last 10 years due to a cleaner fuel mix. Since 2005, Xcel Energy's Upper Midwest fuel mix replaced coal with 10% more wind and 8% more natural gas.

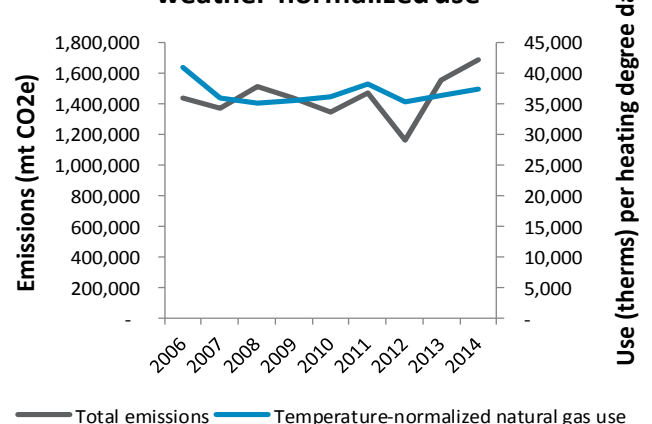
Minneapolis greenhouse gas emissions from citywide activities



Yearly electricity use, emissions, and emissions factor



Yearly natural gas emissions and weather-normalized use



Metric 2.0-2.1: Commercial Buildings, 2014

	Metric	2014
2.0	Commercial/Industrial building electricity use (MWh)	3,088,342
	Commercial building natural gas use (therms)	158,655,415
2.1	Average ENERGY STAR score of benchmarked buildings	74
	Average EUI of benchmarked buildings (kBtu/ft ² /yr)	99
	Total site energy use of benchmarked buildings (kBtu)	8,176,575,652

Description: The City of Minneapolis measures energy use from commercial buildings as part of its greenhouse gas emissions inventory. Electricity data is available for combined commercial and industrial sectors, while natural gas data is available specifically for the commercial sector.

Private commercial buildings greater than 50,000 square feet and public buildings greater than 25,000 square feet benchmark as part of the Commercial Building Benchmarking and Transparency ordinance. These buildings report performance to the City by June 1 for the previous calendar year using the ENERGY STAR Portfolio Manager software tool. As the saying goes, ‘you can’t manage what you don’t measure,’ and thus, the purpose of the benchmarking is to spur building owners and managers to measure building efficiency in order to better manage it. The building performance data is also made publicly available with the aim of giving the marketplace building performance information so that the market can drive higher efficiency.

Initiatives: Since the benchmarking buildings make up 50% of the commercial space in the City, a key part of addressing commercial energy use is to improve efficiency in the benchmarking buildings. To help buildings comply with the benchmarking ordinance, Xcel Energy and CenterPoint Energy worked to provide necessary account and usage information to building owners and managers. Xcel

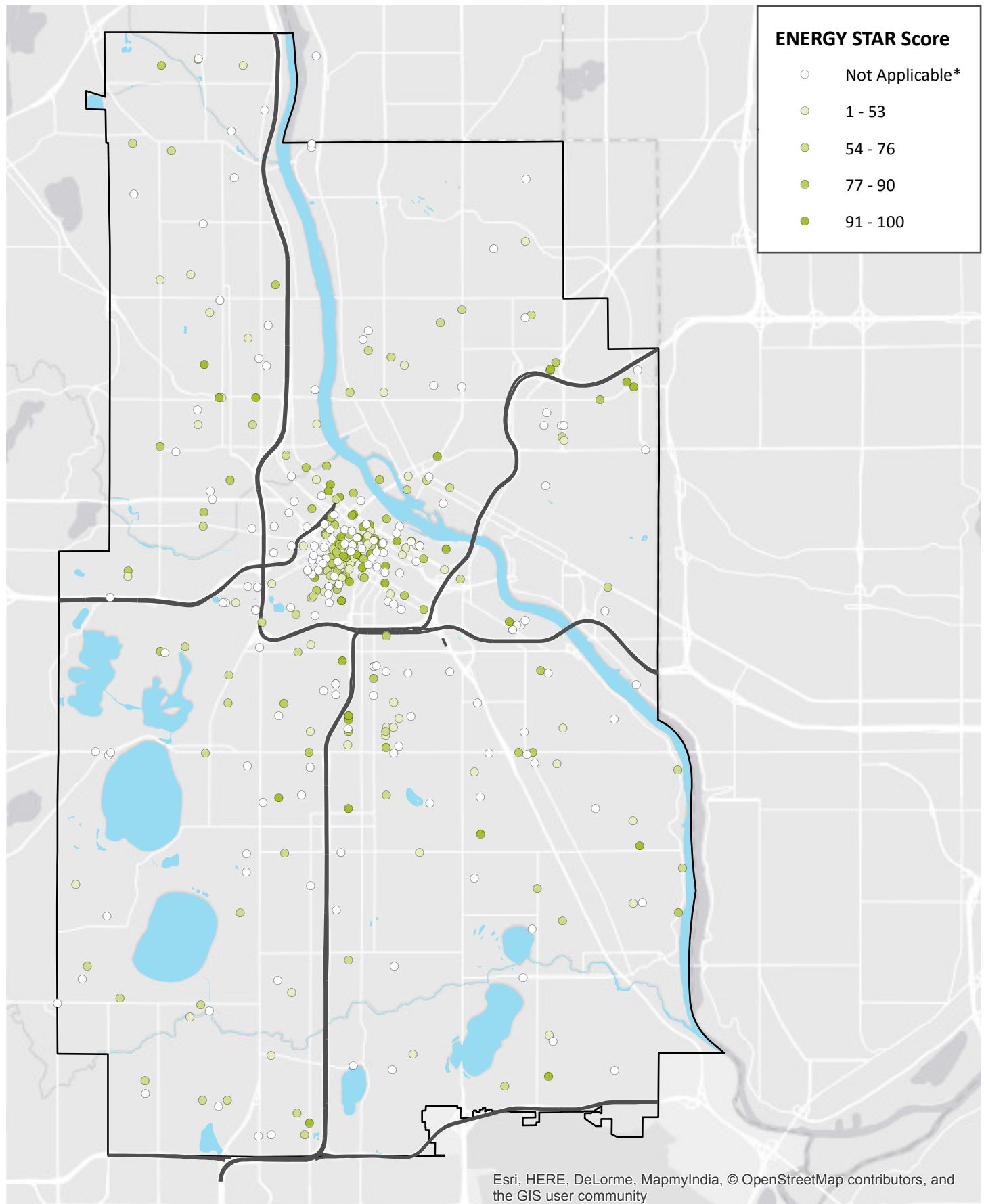
Energy sought to improve customer whole building energy data access by participating in the Department of Energy’s Data Accelerator Program. Through that program, they developed of an online tool to automatically upload usage information into the ENERGY STAR benchmarking platform.

In October, 2015, the City launched the Minneapolis Building Energy Challenge for benchmarking buildings to reduce greenhouse gas emissions from commercial building energy use 15% by 2020. This goal is in step with the City’s Climate Action Plan goal of 30% greenhouse gas reduction by 2025. Mayor Hodges, Council Member Glidden, and Xcel Energy’s Laura McCarten kicked off the challenge by recognizing six high performing buildings in three categories.

Results: Overall, 429 buildings benchmarked and submitted data to the City. Buildings with property types able to earn scores showed a relatively high average score of 74 (50 is the national median and a score of 75+ qualifies for ENERGY STAR certification). Average EUI of 99 includes all buildings. Additional results, context, and analysis are available in the 2014 Energy Benchmarking Report.

Beyond benchmarking, a diverse mix of 15 public and private buildings have committed to the Minneapolis Building Energy Challenge. Progress of participating buildings will be monitored and celebrated as time goes on.

Metric 2.1: Benchmarked Commercial Buildings, 2014



Data source: City of Minneapolis 2014 Energy Benchmarking Report

* 20 common property types (i.e. office, hotel, K-12 school) are eligible for ENERGY STAR scores. All other property types do not receive scores.

Metric 2.2: Commercial Utility EE Program Utilization

	Metric	2014	2015
2.2	Commercial utility energy efficiency program participation	CNP: 1,096 rebates; 311 customers XE: 668 rebates; 653 customers	CNP: 1,219 rebates; 473 customers XE: 1,249 rebates; 757 customers
	Incentive dollars	CNP: \$809,865 XE: \$3,134,393	CNP: \$720,490 XE: \$4,235,490
	Estimated annual energy savings	CNP: 4,343,071 therms XE: 36,160,509 kWh	CNP: 2,668,485 therms XE: 43,204,422 kWh
	Estimated annual cost savings	CNP: \$2,844,873 XE: \$1,952,667	CNP: \$1,280,162 XE: \$4,622,873

Description: CenterPoint Energy and Xcel Energy offer a variety of EE programs to their commercial and industrial customers throughout Minneapolis. These include incentives to pursue EE in heating, cooling, lighting, cooking, manufacturing, and other end uses. Additionally, both utilities provide consultation in the design and construction of new commercial buildings to preemptively improve energy efficiency of that building.

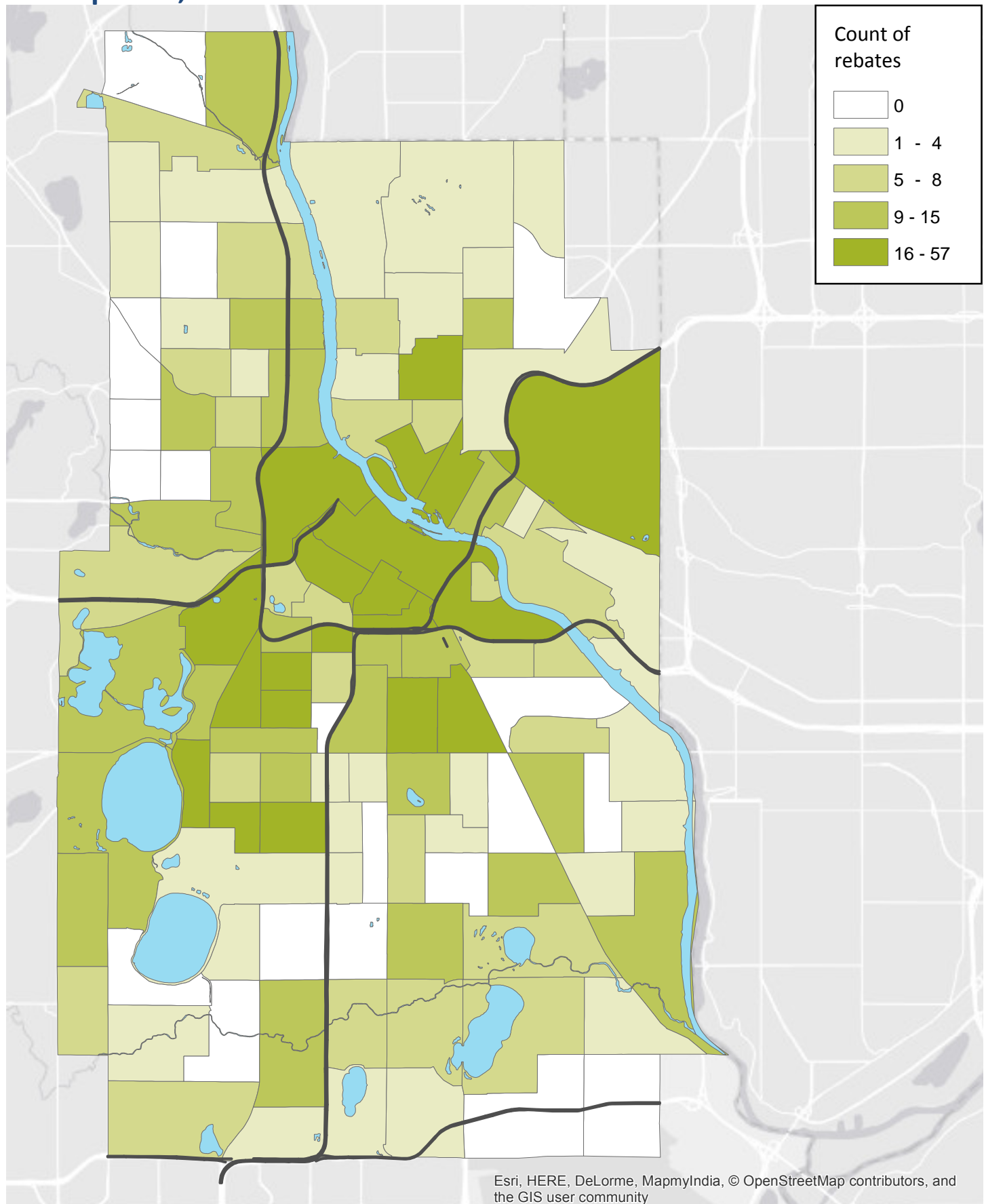
Initiatives: EDA is a joint program offered by both utilities to their shared customers. The program offers two approaches for commercial customers. One is an integrated design approach that utilizes energy modeling to determine whole building energy savings and provides customized rebates. The second is for smaller, less complicated projects. Both approaches seek to meet the needs of commercial customers. EDA was established in the mid 1990's and has been marketed primarily through the design community. Established relationships through trade networks of design teams has made this program very successful. In

2015, utility and City staff collaborated through customer outreach and focused energy forums to make business customers aware of both the utility offerings and the savings opportunities in their buildings, leveraging the Energy Benchmarking Report for outreach.

Results: Using 2014 as a baseline for Commercial Programs offered by both utilities, there were slight fluctuations in usage and participation. While there was a steep uptick in participation for both entities, a perfect correlation between participation and energy savings does not exist. Xcel Energy observed a 78 percent increase in commercial lighting participation from 2014-2015. Participation in CenterPoint Energy's EDA project more than doubled, as did energy savings driven by the program; overall participation increased 52 percent. Of the 24 total EDA projects in 2015, 11 of those 24 were joint CenterPoint Energy and Xcel Energy projects. Note that the data above include some multi-family buildings, also included under Metric 8.

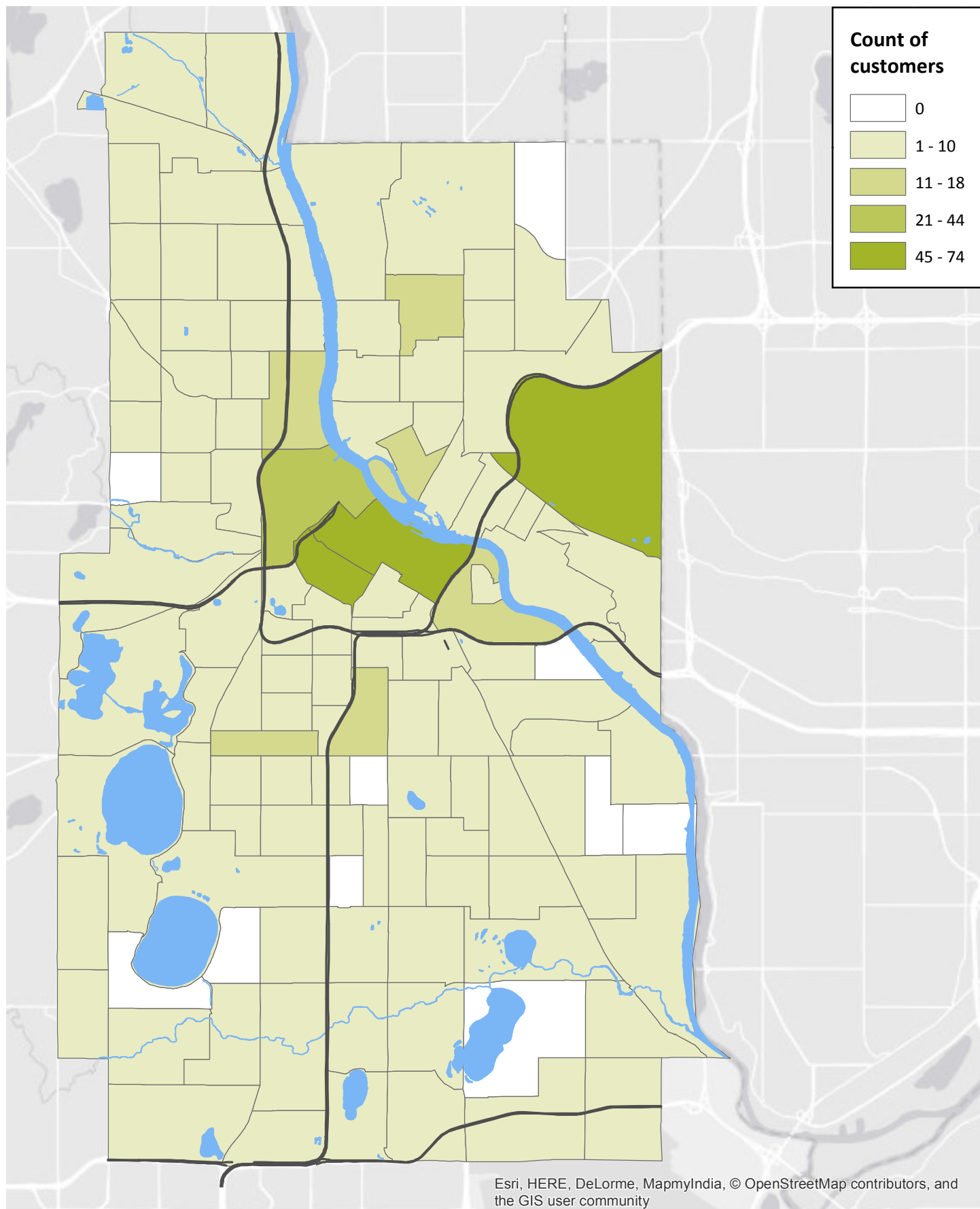
2015 Energy Design Assistance	Participants	Energy Savings	Rebates
Xcel Energy	24	5,847,225 kWh	\$592,603
CenterPoint Energy	11	400,317 therms	\$140,596

Metric 2.2: CenterPoint Energy Commercial EE Program Participation, 2015



Data source: US 2010 Census, CenterPoint Energy

Metric 2.2: Xcel Energy Commercial Program Participation, 2015



Data source: US 2010 Census, Xcel Energy

Metric 3: Residential Building Energy Use

	Metric	2014	2015
3.0	Total electric use by residential customers (kWh)	980,965,000	945,334,750
	Total natural gas use by residential customers (therms)	130,883,472	102,326,656

Description: Residential energy consumption derives primarily from natural gas and electricity. The number of residential customers served by a utility is typically measured by the number of accounts.

Natural Gas: CenterPoint Energy provides natural gas service to Minneapolis residents. Residential natural gas customers in Minneapolis average about 950 therms of usage per year, resulting in just over 4.5 tons of CO₂ emissions annually per customer. There are about 120,000 residential natural gas customers in Minneapolis.²

For most homes, natural gas is used for space heating and domestic hot water. Space heating is significantly influenced by Minnesota's extreme weather (cold winters) and building stock age. In Minneapolis, over 80% of the homes were built before World War II, before basic energy-efficiency features, such as insulation, were required by state building code.¹ The Center for Energy and Environment (CEE) estimates that nearly 40% of Minneapolis's homes built before WWII, or one-third of the city's housing stock, have never upgraded their wall insulation, which can increase a home's heating efficiency by as much as 30% to 50%.²

Electricity: In Minneapolis, Xcel Energy provides electricity. There are over 174,000 residential electric customers in Minneapolis. The average annual electric consumption per household is about 5,624 kWh per year. This results in approximately 2.68 tons of CO₂ emissions per customer per year.

Electricity is used for appliances, air conditioning, lighting, and other plug loads. Air conditioners and refrigerators are often the first and second largest

users of electricity in the home.³ Other major sources of electricity demand include lighting and personal electronic devices, such as cell phones, computers, tablets, etc. Installing insulation, replacing old appliances with energy efficiency models, installing efficiency light bulbs, such as LEDs, and powering off devices or using energy saving power strips can reduce electricity use.

Initiatives: In 2015 Xcel Energy offered bonus rebates to its residential customers such as point of sale lighting rebates, refrigerator recycling and Home Energy Squad co-pay discounts. Xcel Energy communicated these bonuses through City channels, such as City Council Member newsletters and social media, and promoted its energy efficiency, demand response and renewable energy options by sponsoring and attending 19 community events within the City. In addition to its comprehensive rebate offerings to promote residential natural gas efficiency, CenterPoint Energy partnered with the City to promote its low-flow showerhead and faucet aerator program through the City's utility bills.

Results: Overall residential electric use decreased by 4% and natural gas use dropped 22%. Reductions stem from both a more mild heating season as well as energy efficiency improvements. Metrics 4 and 5 discuss the results of participation in residential specific renewable electricity programs and the utilities' combined energy savings program Home Energy Squad, respectively.

¹ Many apartment-dwellers whose buildings are served by a central heating system would not be included in this figure. Minneapolis's residential sector is made up of 51% renters.

² Source: Center for Energy and Environment, Energy Fit Homes Report

³ Source: MN Department of Commerce, Home Energy Guide

Metric 4: Renewable Energy

	Metric	MWh	Customers
4.1	Windsor (Cumulative 2012-2015)	MWhs: 115,435,930	Customers: 13,286
	Metric	2014	2015
4.2	Community Solar Gardens Customers, MWhs	0	0
4.3	Rooftop New Solar Interconnections, MW, MWhs*	Inter: 56 MW: 0.75 MWhs: 930	Inter: 92 MW: 0.912 MWhs: 1050

Description: Xcel Energy currently offers three renewable energy options in Minneapolis: Windsor, Solar*Gardens Community, and Solar*Rewards (rooftop). An additional program, Made in Minnesota, is administered by the Minnesota Department of Commerce via mandated funding from Xcel Energy.

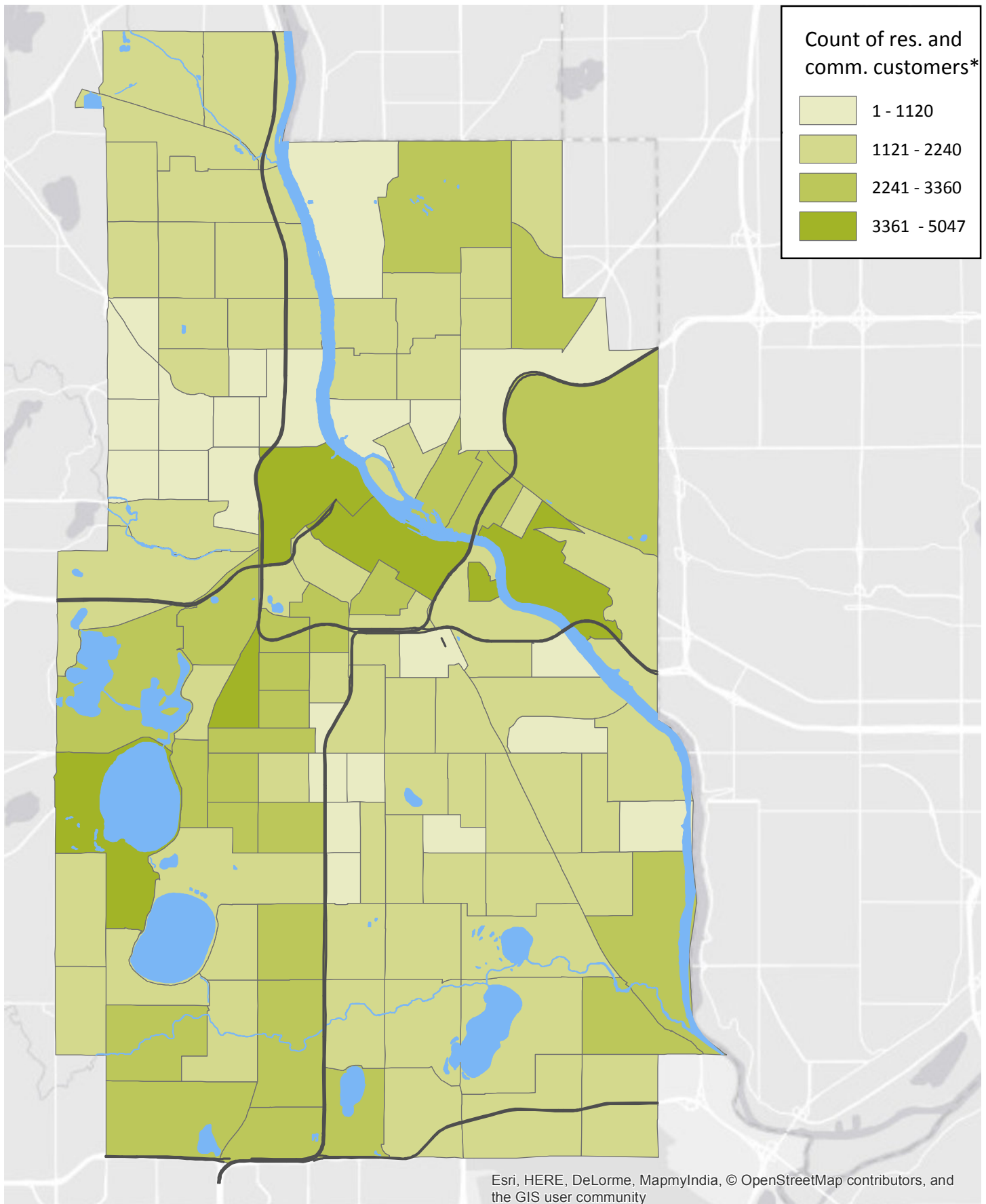
Results: Under Windsor, customers voluntarily sign up to pay slightly more on their electricity bill to receive some or all of their energy from Minnesota generated wind energy, which is beyond the state's renewable energy production requirements for Xcel Energy. Minneapolis customers have consistently made up approximately 20% of Xcel Energy's total Minnesota Windsor subscriptions from 2012-2015.

Community Solar Gardens (CSGs) are centrally-located solar photovoltaic (PV) systems that provide electricity to participating subscribers. Xcel Energy established the Solar* Gardens Community (CSG) program in late 2014. No CSG's were built, operational or available to Minneapolis residential or business customers before 2015 year end. However, Xcel Energy expects over 250 MW of CSGs online by the end of 2016 and up to 400 MW by the end of 2017, making it the largest utility solar program in the country.

Solar*Rewards® offers incentives and rebates for installation of photovoltaic (PV) solar panels for residents and businesses. The program was re-launched in mid 2014 and resulted in 18 installations. 2015 saw an increase with 23 new completed installations. The Minnesota Legislature established the Made in Minnesota (MiM) Solar Incentive Program in 2013 to help our state meet its solar electricity standard and to catalyze the solar industry in the state. In 2015, 69 new solar systems were installed and interconnected using MiM is a solar photovoltaic (PV) and solar thermal cash-back incentive program for consumers who install solar PV and solar thermal systems using solar modules and collectors certified as manufactured in Minnesota compared to 38 in 2014.

*MW installed annually are actuals, while MWh are estimates

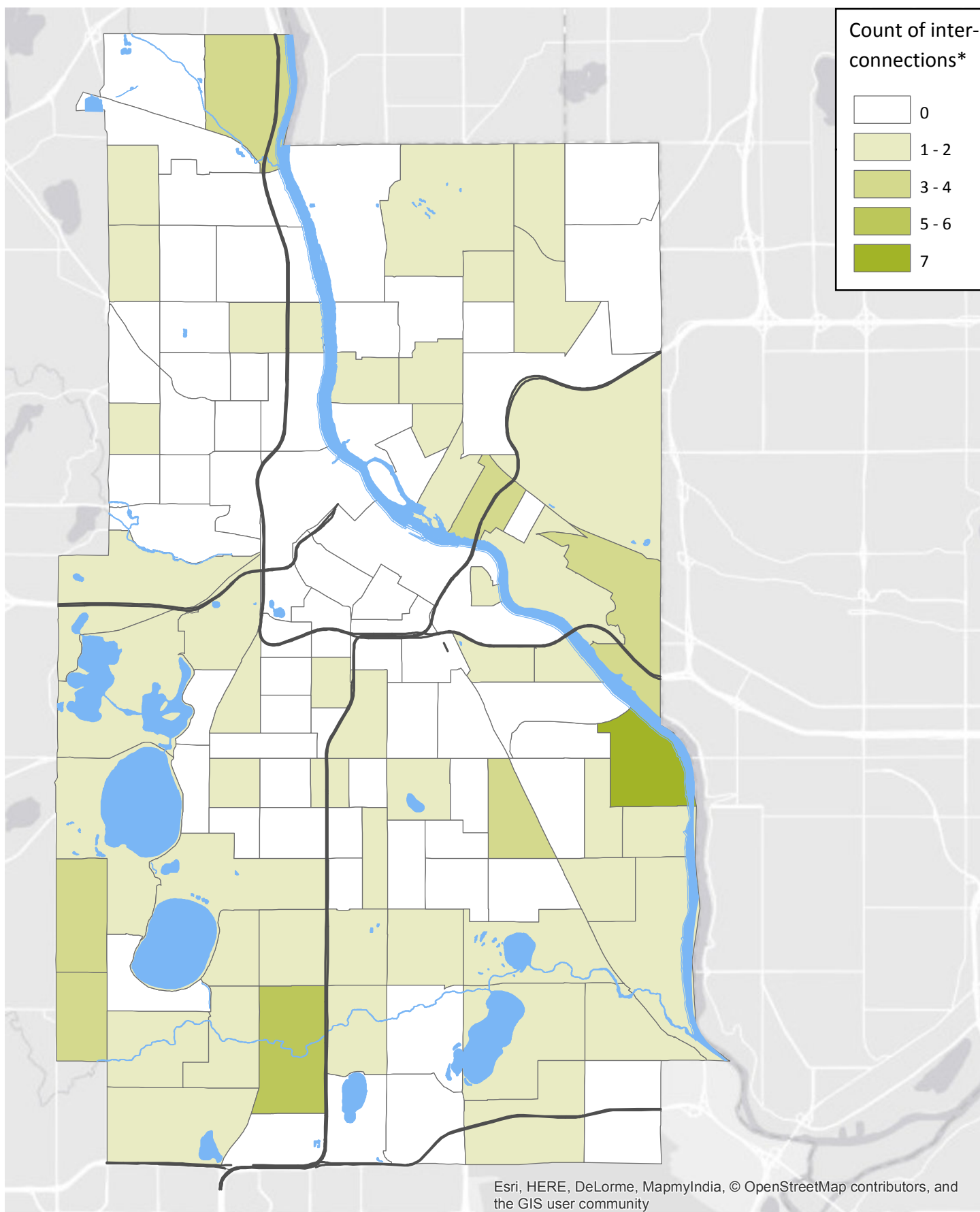
Metric 4.1: Xcel Energy Windsource Program Participation, 2012-2015



Data source: US 2010 Census, Xcel Energy

*The above data is the cumulative participation in Windsource from 2012 through 2015

Metric 4.3: Xcel Energy Rooftop Solar Program Interconnections, 2015



Data source: US 2010 Census, Xcel Energy

*The above data is the cumulative new interconnections within Minneapolis for 2015. The interconnections are a combination of Xcel Energy's Solar Rewards Program, and the Made in Minnesota Program

Metric 5: Home Energy Squad Participation 2014, 2015

	Metric	2014	2015
5.0	Home Energy Squad participation count (rental & owner-occupied)	731	1,198
	Estimated annual energy savings (kBtu)	6,605,790	10,825,904
	Estimated annual cost savings	\$99,031	\$136,161
5.1	Percent of 1-4 unit residences served by HES	0.8%	1.0%
5.2	Energy efficiency loan count	11	47
	Total value of loans	\$72,519	\$279,882

Description: Delivered by the Center for Energy and Environment (CEE) on behalf of the two utilities, the Home Energy Squad (HES) provides residential customers with direct installations of energy saving devices such as CFL lighting, weatherstripping, and programmable thermostats along with an energy audit. This lets customers achieve immediate savings and gives them the information necessary to prioritize potential savings opportunities, such as insulation and heating equipment upgrades, based on cost and energy-reduction effectiveness.

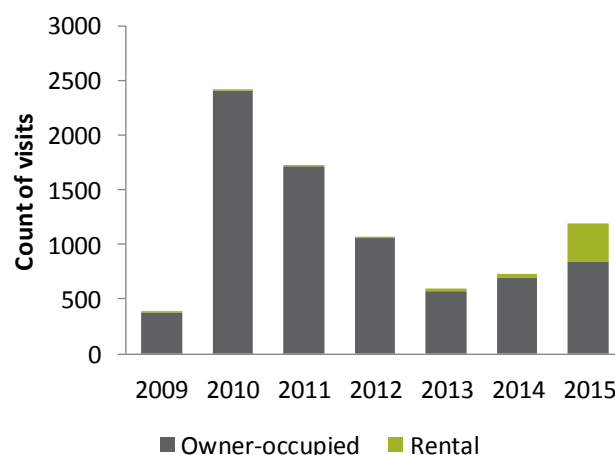
Though any residential customer of both Xcel Energy and CenterPoint Energy may participate in HES, the program was initially developed with 1-4 unit buildings as a focus. Therefore, to understand the potential HES service opportunity only the number of 1-4 unit properties in the city are counted.

Initiatives: To increase participation in the program in 2015, the Xcel Energy and CenterPoint Energy enhanced utility bill insert marketing, while the City bought down the cost of visits to \$0 for income-qualified households. The City also encouraged implementation of audit recommendations by offering no-interest financing on loans provided through CEE. CenterPoint Energy and CEE launched a pilot effort in 2015 aimed at increasing the number of HES participants moving forward with upgrade opportunities; this pilot is discussed further under Metric 7.

Results: From 2014 to 2015, HES participation grew by over 60 percent. A large part of the increase stems from 293 visits completed in four large apartment buildings. Adjusting for these buildings, the count of visits is still up 24% over 2014. Overall, 9.2% of 1-4 unit residences participated between 2009-2015.

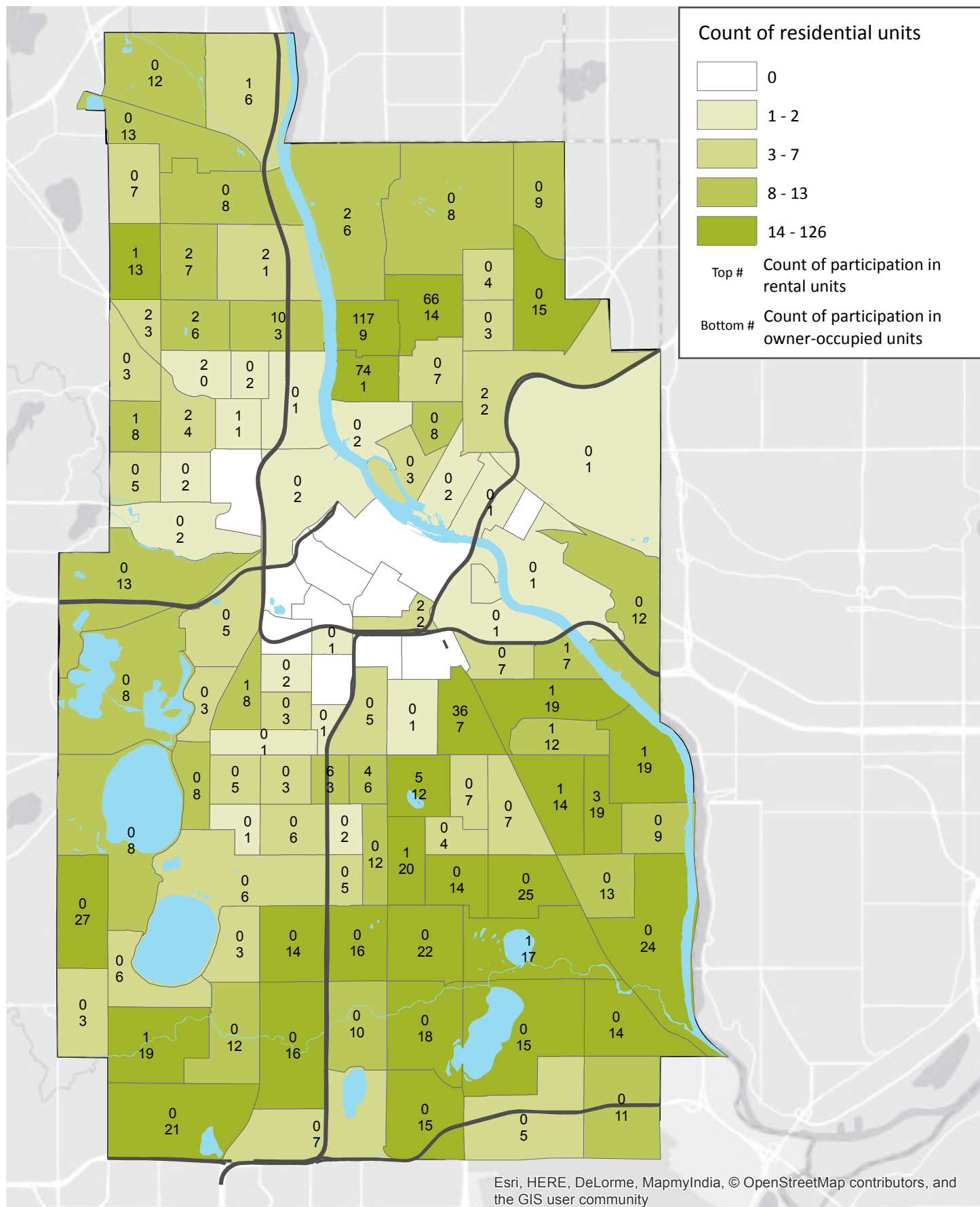
The direct install of energy saving devices resulted in an average savings of 11,000 kBtu annually per household, which is nearly 10% of an average Minnesota household energy use. Although direct installs provide valuable savings, conversions to larger projects provides the most impact. The City's 0% financing initiative successfully drove 31 loans for insulation and increased total loans fourfold.

Annual count of HES visits by type*



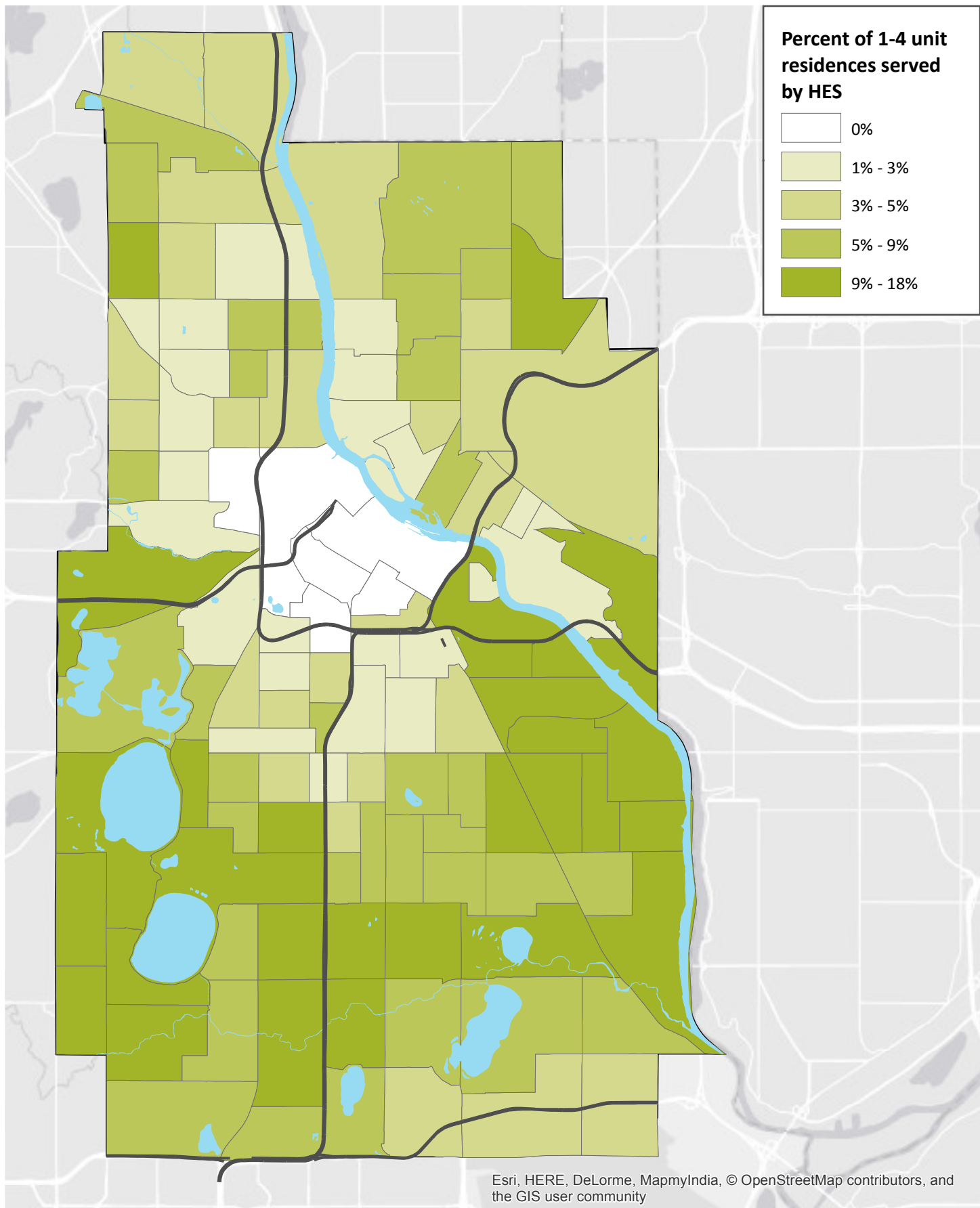
*Including the similar program, Community Energy Services, 2009-2012

Metric 5.0: Home Energy Squad Participation, 2015



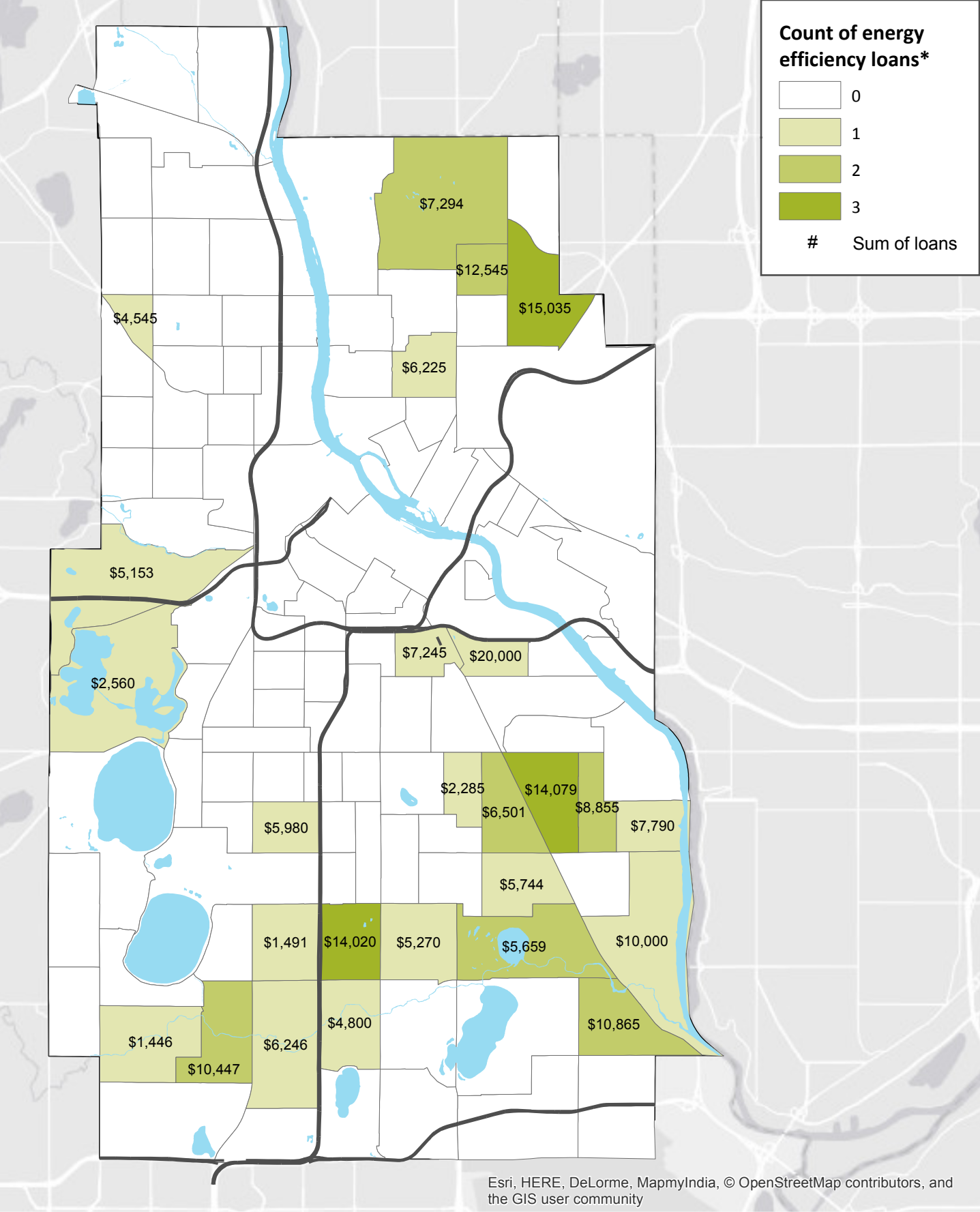
Data source: US 2010 Census, Center for Energy and Environment

Metric 5.1: Percent of 1-4 Unit Residences Served by HES, 2009-2015



Data source: US 2010 Census, Center for Energy and Environment

Metric 5.2: Energy Efficiency Loans, 2015



Metric 6: Low-Income Services

	Metric	2015
6	Number of low-income visits	CNP: 583 participants XE: 661 participants
	CIP low-Income dollars spent	CNP: \$921,832 XE: \$324,360
	Number of Weatherization Assistance Program (WAP) visits	168 participants
	WAP dollars spent	\$916,805
	Estimated annual energy savings (CIP only)	CNP: 231,859 therms; XE: 359,233 kWh
	Estimated annual cost savings (CIP only)	CNP: \$122,208; XE: \$32,331

Description: CenterPoint Energy and Xcel Energy offer a number of energy conservation programs that specifically serve low-income customers. Participants and customer count are synonymous. The utilities measure customers by meter. Therefore, a rental unit that is part of a larger building but is not separately metered is not considered a customer and not counted in the above table.

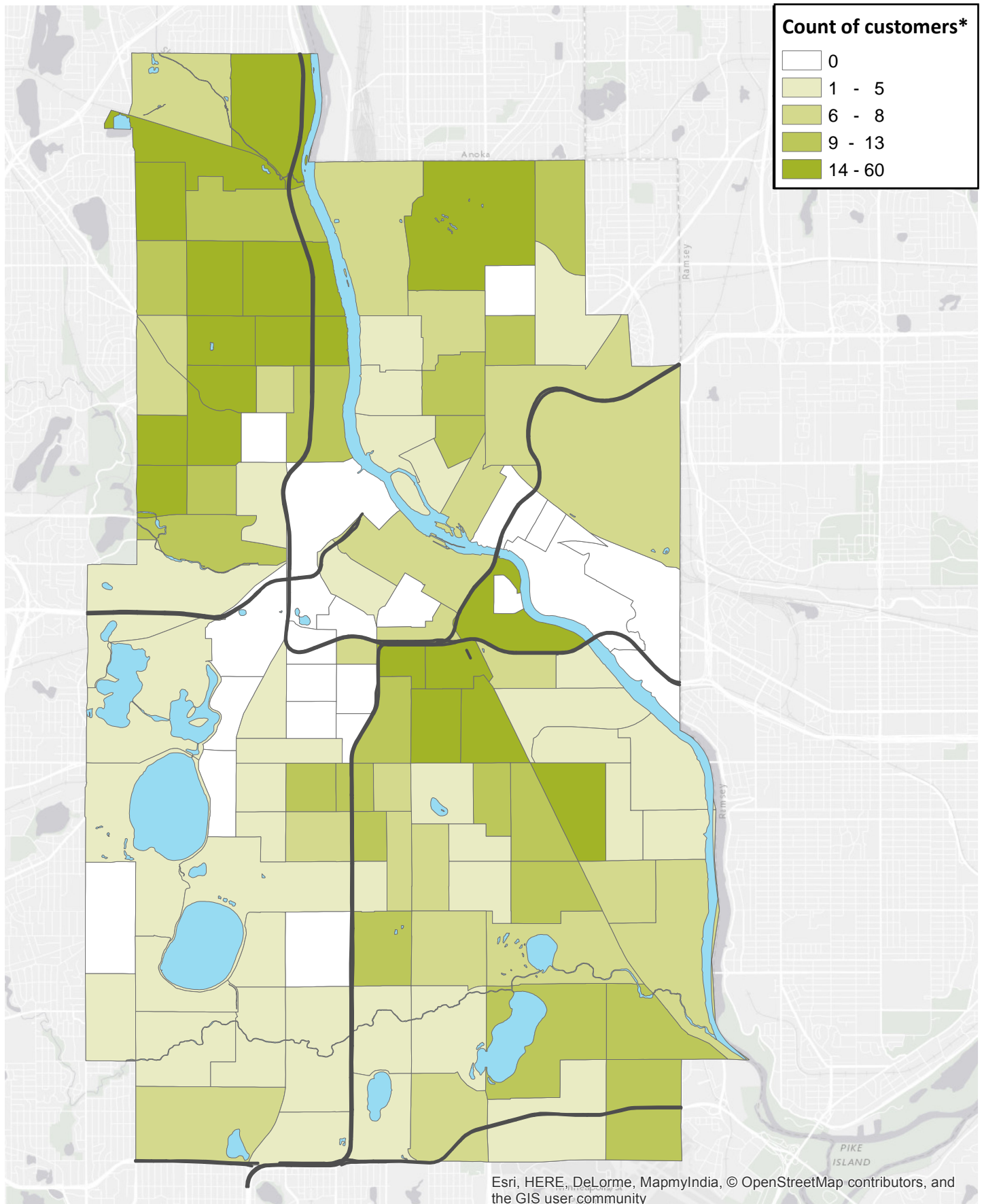
CenterPoint Energy's comprehensive programs for low-income customers include the Non-Profit Affordable Housing program, the Low-Income Rental Efficiency program, and the Low-Income Weatherization program, among others. These programs address mechanical systems as well as the building envelope. The company also provides free heating system tune-ups and safety checks and bonus rebate offerings for affordable multifamily housing buildings.

Xcel Energy's Low-Income segment includes three programs that provide services and products to help income-qualified customers reduce their energy usage and ultimately lower their utility bills, including the Home Energy Savings Program, the Multi-Family Energy Savings Program, and the Low-Income Home Energy Squad. The electric portion of these pro-

grams primarily offer lighting and appliance replacement. Services provided in this low-income portfolio range from small-scale, direct-install programs to comprehensive weatherization and appliance replacement programs. Weatherization services and most other low-income utility energy efficiency services are offered at no cost to the customer. In addition to the utility energy efficiency offerings, the federal Department of Energy (DOE) provides weatherization funding for low-income households through the Weatherization Assistance Program (WAP). WAP funding is often combined with utility program funding in order to leverage available resources.

Results: In addition to the utility energy efficiency programs, which served a combined 1,244 participants, DOE's WAP program served 168 low-income properties. Xcel Energy also provided electric bill pay assistance in the City through its Power On program by reaching 924 low-income residents at an average of \$54 per month as well as the Senior Discount providing an additional \$15 per month to 4790 customers. In 2015, CenterPoint Energy provided monthly gas bill assistance to approximately 4,000 low-income customers for nearly \$2.2 million in Minneapolis through the Gas Affordability Program.

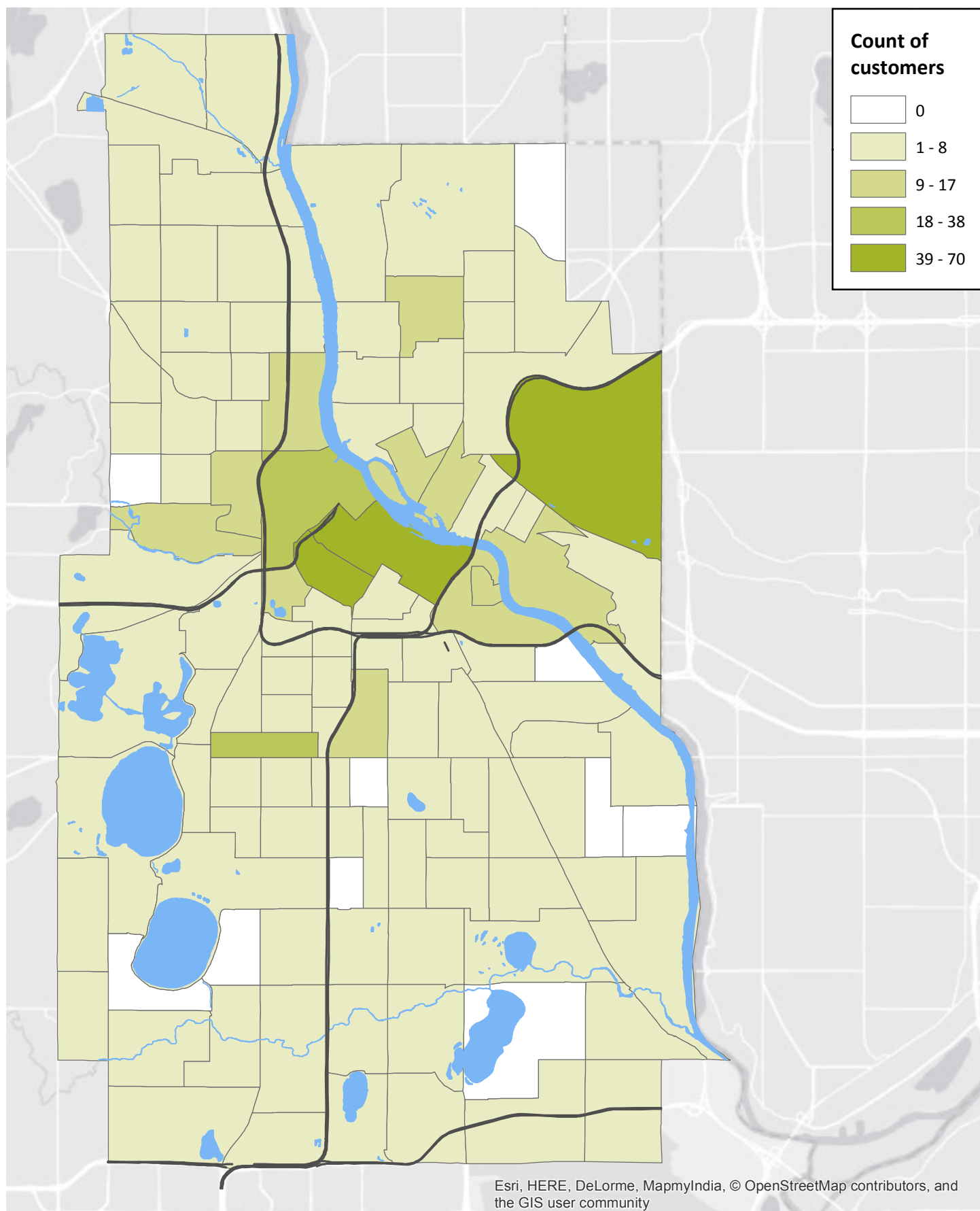
Metric 6: CenterPoint Energy Low-Income Program Participation, 2015



Data source: US 2010 Census, CenterPoint Energy

*Map does not reflect homes weatherized through DOE WAP that did not also receive utility funding.

Metric 6: Xcel Energy Low-Income Program Participation, 2015



Data source: US 2010 Census, Xcel Energy

Metric 7: Air-Sealing and Insulation

	Metric	2015
7.0	Count of participating customers	335
	Estimated annual energy savings (therms)	74,741
	Total estimated annual cost savings	\$42,069

Description: CenterPoint Energy's Residential Weatherization program provides rebates for insulation and air-sealing upgrades in residential customers' homes. For most homes, attic insulation, air sealing, and wall insulation upgrades can provide significant energy savings. The majority of that energy savings comes from reduced heating loads in the winter. The energy savings potential is particularly high for older homes that were subject to former building codes and may have very little, or even no, insulation in the walls and attic. The Minneapolis Assessor's Office estimates that in the city of Minneapolis, over 80% of homes were built before World War II. However, even newer homes can see significant energy efficiency improvements from increased insulation levels and proper air-sealing. CEE estimates that more than 300,000 homes in Minnesota have inadequate attic insulation (less than R-20), and more than 139,000 homes have no wall insulation.

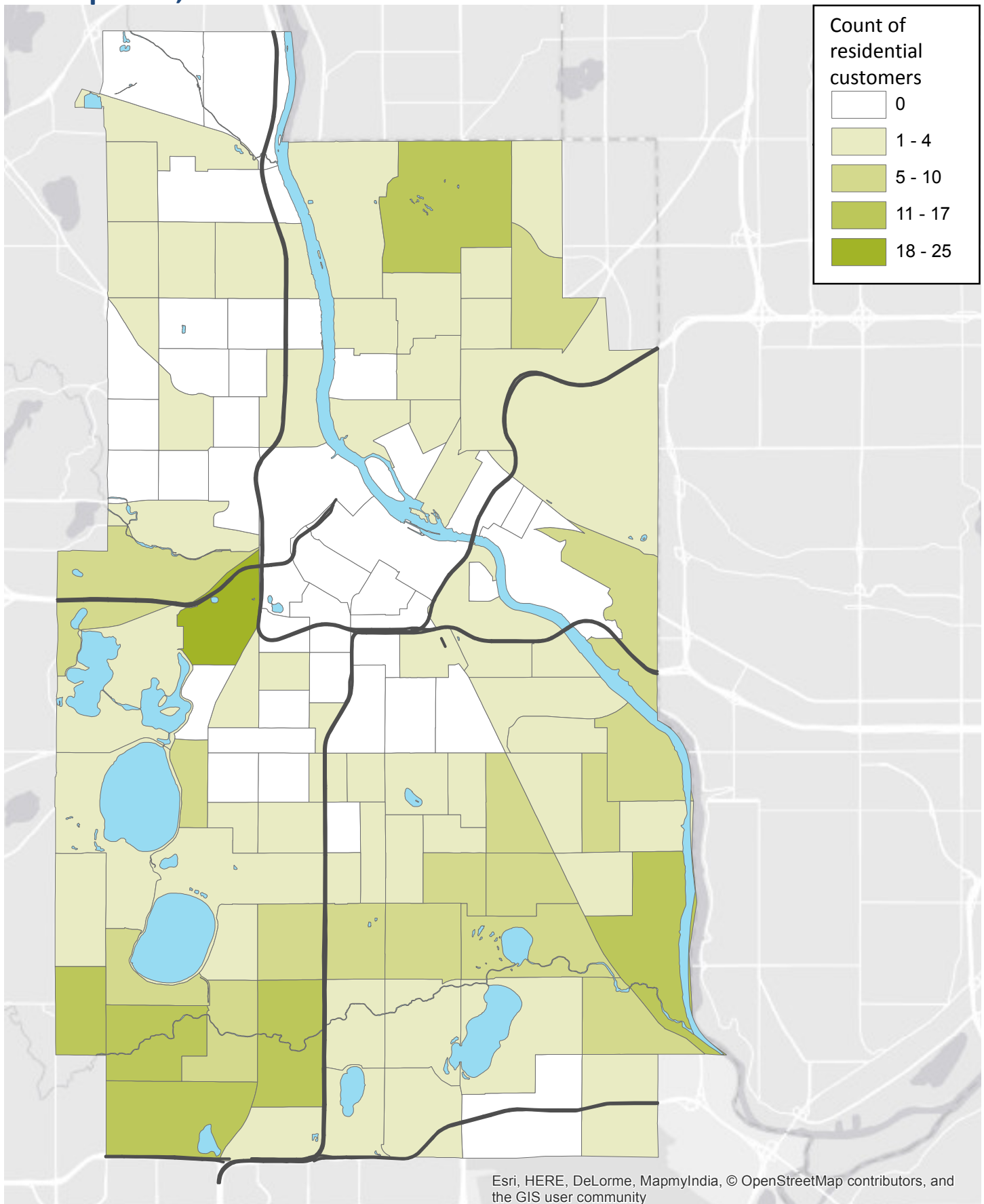
CenterPoint Energy's air-sealing and insulation rebate program requires that a customer contract with a skilled and certified installer. It also includes quality assurance inspections for participating installers to ensure that customers receive high-quality, effective air-sealing and insulation services. Participation in the project is measured as a count of residential customers receiving rebates for completed upgrades on their properties.

Initiatives: In 2015, CenterPoint Energy partnered with the Center for Energy and Environment to add additional residential engagement services to Home Energy Squad visits in the city of Minneapolis only. While the pilot is ongoing, initial data suggest the effort has been successful, resulting in a 13 percentage-point increase in the number of customers moving forward with recommended air-sealing and insulation upgrades compared to those not receiving the pilot services. Those customers who installed upgrades were eligible for rebates through the Residential Weatherization project.

In addition, the City of Minneapolis made funds available to provide zero-interest financing to residential customers who received Home Energy Squad visits; 31 customers took advantage of this offer to weatherize their homes.

Results: The 2015 program year was the first full year for CenterPoint Energy's new Residential Weatherization Rebate project. In 2015, this project provided approximately \$168,000 in rebates for 335 homes in Minneapolis. Of those homes, 313 received both attic insulation and attic air-sealing work. Sixty-seven of the homes received wall insulation. This work resulted in approximately \$42,000 of savings annually on heating bills for the participating customers.

Metric 7: CenterPoint Energy Air Sealing and Insulation Program Participation, 2015



Data source: US 2010 Census, CenterPoint Energy

Metric 8: Multi-Family Program Participation in CIP

	Metric	2015
8.0	Multifamily program participation*	CNP: 136 MF buildings XE: 623 Customers
	Estimated annual energy savings	CNP: 709,335 therms XE: 3,282,658 kWh
	Estimated annual cost savings	CNP: \$364,661 XE: \$294,576
	Rebate dollars spent	CNP: \$245,840 XE: \$468,587

Description: Multi-Family Energy Efficiency programs are offered by both CenterPoint Energy and Xcel Energy. Xcel Energy currently offers multi-family and tenant energy efficiency options through the following programs: Multi-Family Building Efficiency, Energy Design Assistance, Multi-Family Energy Savings Program (MESP) and One Stop Efficiency Shop.

CenterPoint Energy serves multi-family housing buildings through a number of general conservation programs as well as two multifamily housing-specific conservation program offerings: the Multi-Family Building Efficiency and the Low-Income Multifamily Housing Rebate programs. The general conservation programs include rebates, design assistance, and custom rebates. The Low-Income Multifamily Rebate program provides bonus rebates for qualifying affordable housing providers.

Generally, a program participant is a customer. The utilities measure customers by meter. Therefore a rental unit that is part of a larger building but is not separately metered is not considered a customer and not counted in the above table.

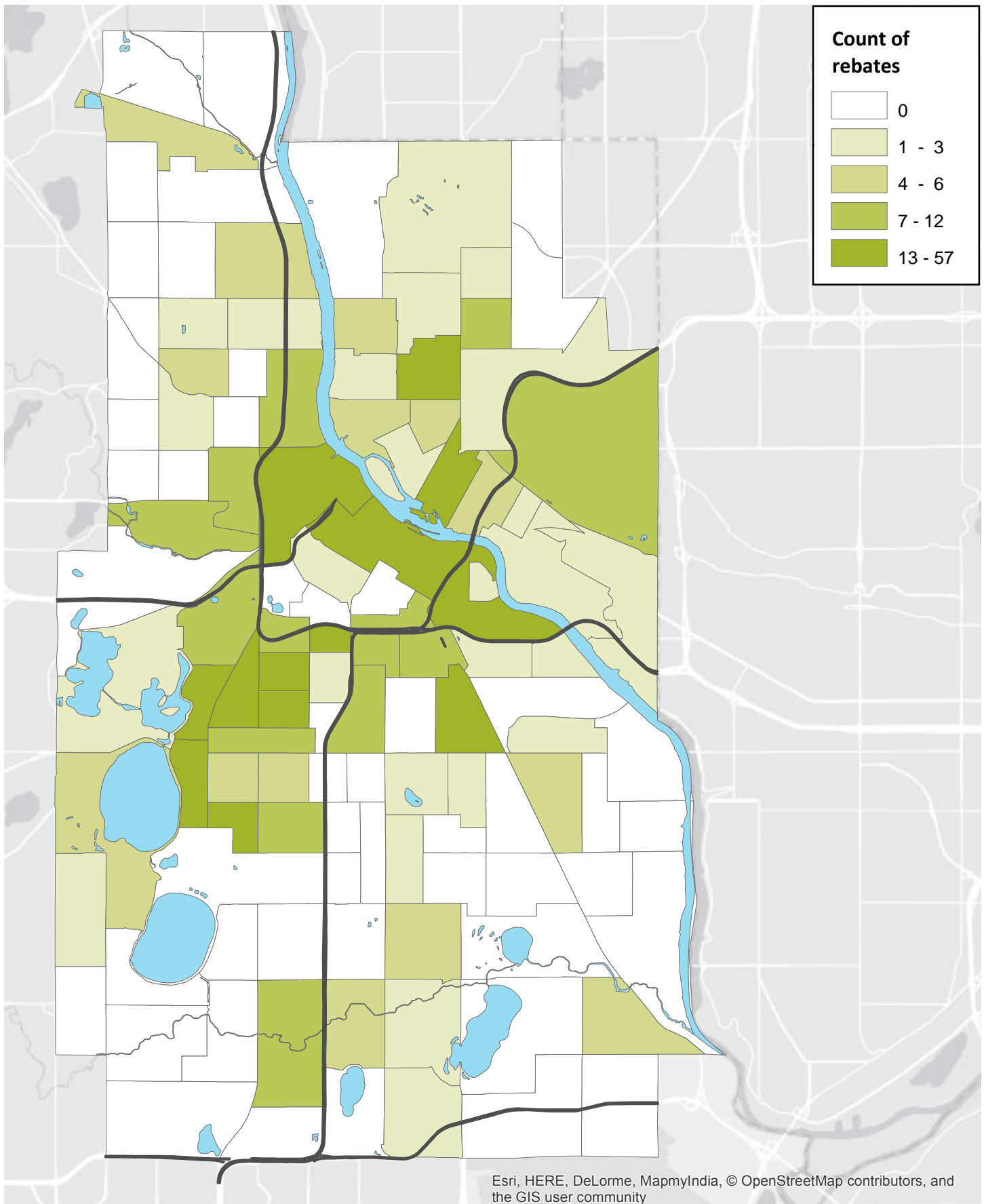
Initiatives: In October 2015, CenterPoint Energy and Xcel Energy jointly launched the Multi-Family Building Efficiency program. This program markets to landlords with tiered incentives ranging from 25-40% of program costs for efficiency improvements in

market rate buildings. Low Income buildings are eligible for up to 80% rebates for improvements. This program offers a free energy assessment, free direct installation of energy efficient lighting in common areas and units, high-efficiency showerheads and faucet aerators, water heater blanket, implementation support, an energy usage report with potential energy savings opportunities and education materials for residents and staff. The program launched late in 2015; no buildings in Minneapolis received services before the end of the year. As a result there is no data to report for Metrics 8.1 and 8.2.

Results: Some of the participation, savings, and utility spending reflected above is also included in the data for low-income programs, as affordable housing providers may be included in both categories. It is also important to note that in many cases services provided are valued at twice the amount of the actual rebate. For example, every multi-family building receives an energy assessment or audit. That audit helps to spur action and program participation but its cost is not counted in rebate dollars spent.

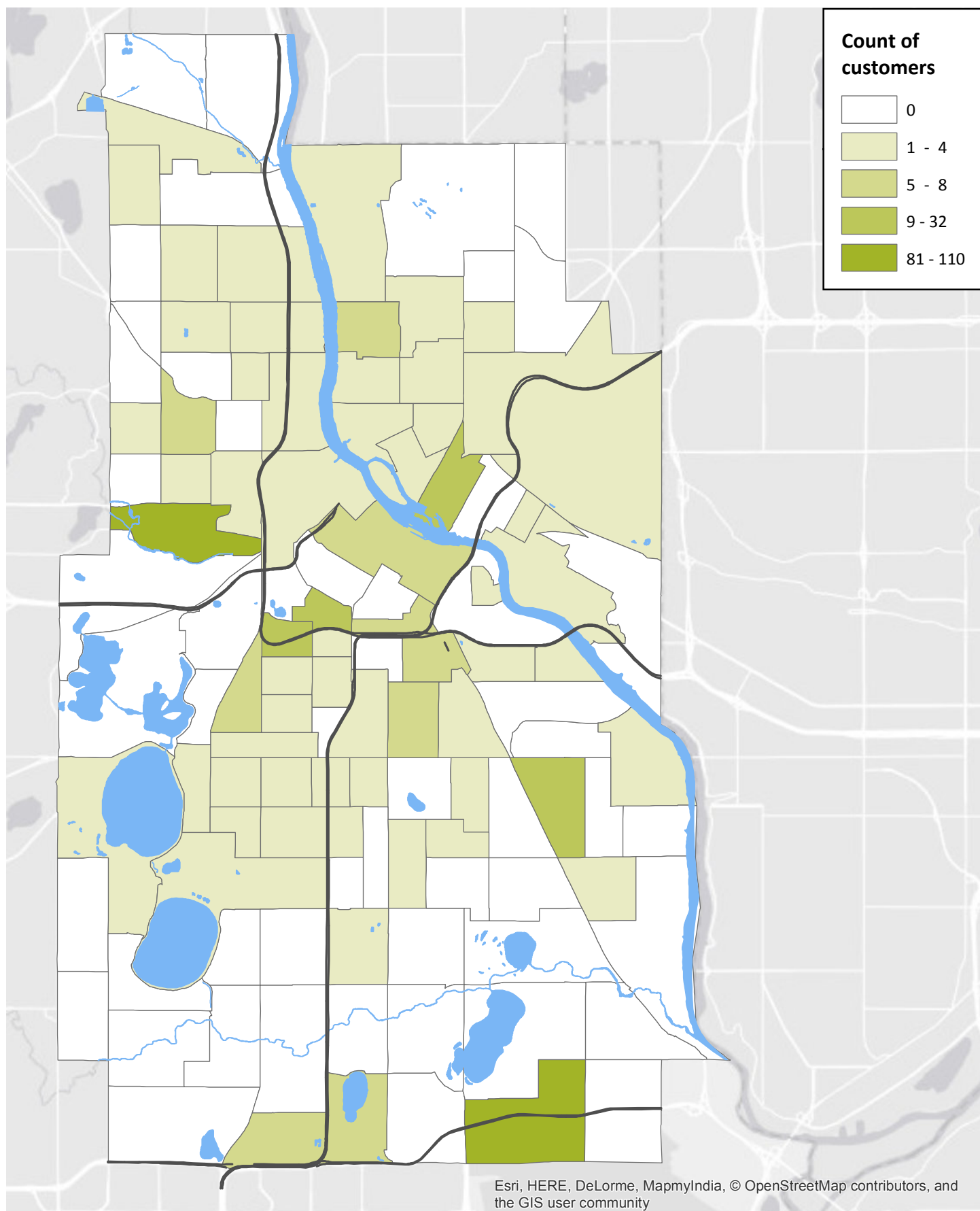
*Utilities define multi-family properties as 5 or more dwelling units. The savings and spending noted above is primarily made up of these larger properties (the low income Multi-Family Energy Savings Program includes some 1-4 unit buildings).

Metric 8: CenterPoint Energy Multi-Family Participation in CIP, 2015



Data source: US 2010 Census, CenterPoint Energy

Metric 8: Xcel Energy Multi-Family Participation in CIP, 2015



Data source: US 2010 Census, Xcel Energy

Next Steps

The structure of Partnership Board, EVAC, and Planning Team has created opportunities for each body to contribute in different ways to the Partnership. By combining and overlaying the resident and business census and demographic information held by the City (Appendix D) with energy efficiency program participation data held by the CEP is identifying areas of strong program participation as well as under-represented segments of the population. These segments can then be targeted for specific engagement initiatives. EVAC has also leveraged its community engagement expertise to develop an innovative engagement process, involving direct engagement with the communities the Partnership is seeking to reach. This unique approach was developed by members of EVAC and adopted and will ultimately be executed by the formal structures of the Partnership. Finally, the daily interaction and collaboration of the Planning

Team allows for quick progress and problem solving. In 2016, the Partnership will be taking the learnings and relationships from this first year to further advance our clean energy goals. Anticipated activities include:

- Develop an RFP and execute an energy efficiency community engagement pilot in 1-3 underserved areas within the City.
- Seek applications from the public to serve a two-year term on the Energy Vision Advisory Committee for 2017-2018 (existing EVAC members can reapply).
- Begin drafting 2017-2018 Work Plan using the findings in this annual report to make better informed decisions.
- Seek additional resources and strengthen relationships with other interested parties.



Appendix A

Board, Energy Vision Advisory Committee & Planning Team

Board, Energy Vision Advisory Committee & Planning Team

Clean Energy Partnership Board

Mayor Betsy Hodges, Chair	City of Minneapolis
Laura McCarten, Vice Chair	Xcel Energy
Spencer Cronk	City of Minneapolis
Jeff Daugherty	CenterPoint Energy
Lee Gabler	Xcel Energy
Council Member Elizabeth Glidden	City of Minneapolis
Council Member Kevin Reich	City of Minneapolis
Joe Vorthers	CenterPoint Energy

Energy Vision Advisory Committee

Jamez Staples, Co-Chair
William Weber, Co-Chair
Ross Abbey
Louis Alemayehu
Cameron Bailey
Trevor Drake
Chris Duffrin
John Farrell
Janne Flisrand
Timothy Gaetz
Sydney Jordan
Matt Kazinka
Annie Levenson-Falk
Kevin Lewis
Karen Monahan
Julia Silvis
Kirk Washington

Planning Team

Ani Backa	Xcel Energy
Peter Ebnet	City of Minneapolis
Robin Garwood	City of Minneapolis
Nick Mark	CenterPoint Energy
Shannon McDonough	City of Minneapolis
Bridget McLaughlin Dockter	Xcel Energy
Kelly Muellman	City of Minneapolis
Sara Lopez	City of Minneapolis
Gayle Prest	City of Minneapolis
Brendon Slotterback	City of Minneapolis
Al Swintek	CenterPoint Energy
Stephanie Zawistowski	City of Minneapolis

Appendix B

Clean Energy Partnership Work Plan

Minneapolis Clean Energy Partnership

2015-2016 Work Plan



Prepared: May, 2015

By: Clean Energy Partnership Planning Team

Table of Contents

Introduction	4
EVAC Process & Feedback Summary	9
Clean Energy Partnership 2015-2016 Work Plan Items	11
Tracking Progress	17
Timeline.....	19
Appendix A: Original List of Potential Work Plan Items.....	21
Appendix B: Summary of EVAC survey results.....	25
Appendix C: Summary of EVAC discussion on potential additional Work Plan Items	33
Appendix D: Link to all survey responses from EVAC members	37

Introduction

The City of Minneapolis, Xcel Energy and CenterPoint Energy have been partnering for decades on energy-related initiatives. However, the Minneapolis Clean Energy Partnership (“CEP” or “Partnership”) is a new approach that brings together the City of Minneapolis in a unique way with Xcel Energy and CenterPoint Energy, its electric and gas utilities, to help the City reach its Climate Action goals and Energy Vision for 2040 goals. The CEP is a collaborative leadership framework through which the City and utilities will study, prioritize, plan, coordinate, implement, market, track, and report progress on clean energy activities in the city.

The Clean Energy Partnership is led by a joint City/Utility Board that will review and approve on going two-year work plans focused on helping the City achieve its energy goals. The work plans are designed to leverage statewide policies, city municipal regulatory authority, community relationships, and utility expertise and programs to increase the penetration rate of energy efficiency and renewable energy as well as education and focus on reliability and equity of energy services in Minneapolis. The CEP Board is also collecting community feedback on all work plans through the Energy Vision Advisory Committee (EVAC). The role of EVAC is stated in the Memorandum of Understanding as:

The Board shall arrange opportunities for advocates and advisors, including representatives from critical communities within the City, such as business, neighborhoods, environmental justice, technical, and City staff, to provide information and materials to the Board. In order to facilitate the transmittal of such information to the Board, the Board shall appoint members representing these critical communities to a standing advisory committee which shall be charged with reviewing and providing feedback on the biennial work plan and measurement and performance reports; researching special initiatives as requested by the Board; and, providing outreach and promotion of Board initiatives as directed by the Board. Ad hoc advisory committees may be established by the Board at its discretion.

Many of the ideas presented in this document are based on the Clean Energy Partnership Memorandum of Understanding (MOU) signed by the three partners in the fall of 2014. Some ideas also originate from the City’s Climate Action Plan and the Minneapolis Energy Pathways Study, completed in February of 2014. The Minneapolis Energy Pathways study identified programs and policies that could be most appropriate for consideration in the CEP, and drive progress towards City and utility goals. Additional ideas are the result of extensive discussions between the partners, based on known issues and emerging topics.

Since the first Clean Energy Partnership Board meeting in February of 2015, the Energy Vision Advisory Committee was formed, at the direction of the Board. This Committee is charged with reviewing and providing feedback on the work plans of the Clean Energy Partnership. During their first two meetings in 2015, EVAC focused on reviewing the list of Potential Work Plan Items that were previously reviewed and approved by the Board, and providing feedback. This process, and the feedback is summarized in this document.

This first work plan is a significant accomplishment for the partners. It lays the groundwork for collaborative work to reduce Minneapolis greenhouse gas emissions, and advance equity in the energy

system. It should be recognized that this first two-year period will be a learning experience – for the City, the utilities and the community. Along with developing new approaches for climate action in the city, participants will be discovering barriers and learning how best to work together. This work plan should be viewed as a living and learning document, which can adapt as progress is made or as circumstances change.

Goals of the Clean Energy Partnership

While developing the first two-year work plan, the Planning Team found it useful to organize the work plan program concepts under a framework of goals, strategies and segment-based work plan activities. This framework is shown in Figure 1 below.

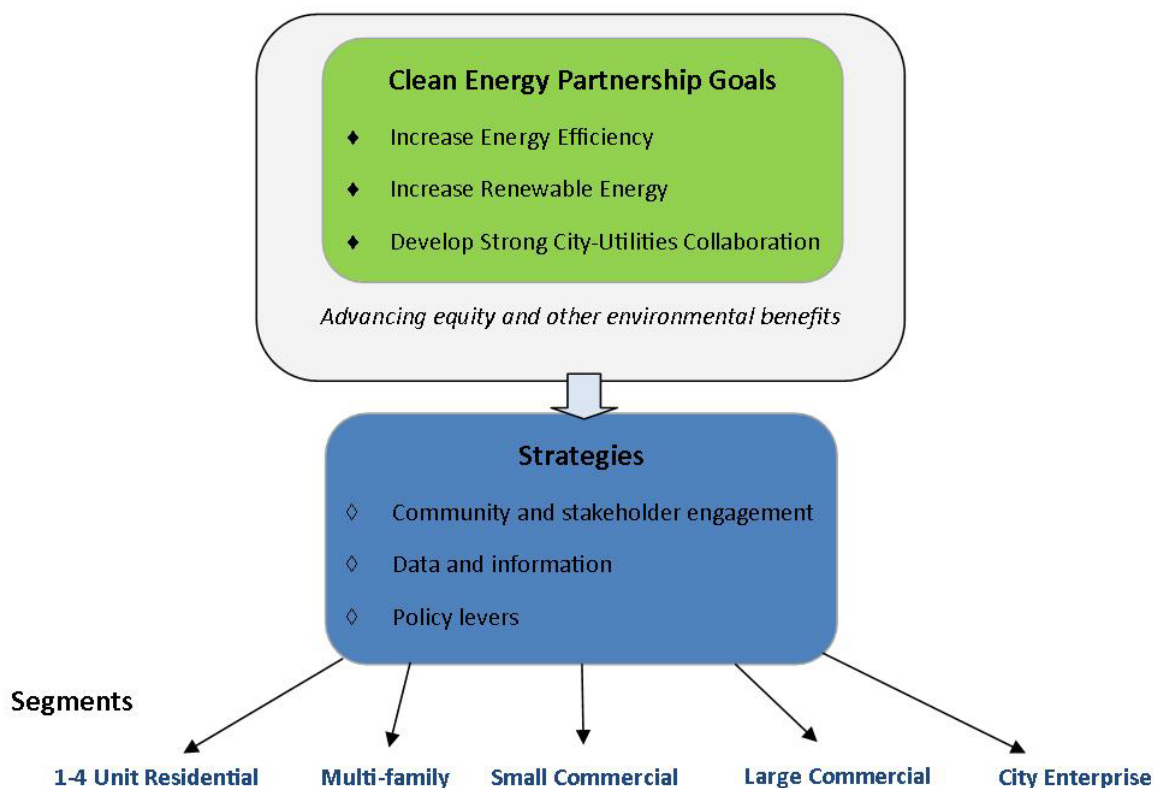


Figure 1. Clean Energy Partnership Goals, Strategies and Segments

In general, the goals of the Partnership are to:

- Reduce greenhouse gas emissions from the energy sector in Minneapolis by:
 - Making utility customers in Minneapolis more energy-efficient
 - Expanding access to and use of clean and renewable energy by Minneapolis utility customers
- Increase the effective collaboration between the City of Minneapolis and the two utilities to address energy and climate-related issues

These goals should be pursued in a way that advances equity and other environmental benefits.

The three key strategies the Partnership will use to meet the goals include Community Engagement, Access to Information, and City Policy Tools. Within each of the five segments, these strategies will be implemented through different plan activities. The specific activities are discussed in detail in the Work Plan section below.

Key Strategies

As the Planning Team worked with EVAC to collect feedback, and began generating the final Work Plan, some key strategies began to immerge that will be especially important for the work of the Partnership in 2015 and 2016. These strategies are identified below.

Enhancing and coordinating community engagement. A significant focus of the work in 2015 and 2016 will be identifying new and effective community engagement strategies to drive participation in energy efficiency and renewable energy programs. This applies to many segments described below (1-4 unit residential, multi-family residential, and large commercial), and may vary depending on the segment. Methods to connect with Minneapolis residents and businesses, especially groups or geographies that are underrepresented in the usage of utility programs, will need to be generated, analyzed and vetted by EVAC and other stakeholders. The success of the Partnership in the long-term depends on identifying and implementing engagement strategies that can move Minneapolis beyond the historic levels of participation in energy efficiency and renewable energy programs.

Using data on program participation to aide decision-making and develop metrics. A key to developing effective engagement strategies will be understanding how well utility programs are already serving Minneapolis, what areas are underrepresented, and what programs are most effective. These types of data will also be essential for developing metrics to track the progress of the Partnership going forward. The Planning Team, EVAC and the Board will be engaged in accessing, analyzing and using program participation information to design outreach strategies and generate metrics to track progress.

Exploring City policy levers. Many of the utility programs to be used by the Partnership in 2015-2016 are fairly well defined, if not yet fully implemented. However, the Partnership was designed from the beginning to pair utility programs and resources with City communication channels and regulatory authority. A key theme of the work in 2015-2016 will be exploring the most impactful uses of City networks, communication tools and possible regulatory tools that can drive more uptake of energy efficiency measures and renewable energy programs.

The strategies described above will be implemented through specific Partnership activities, which are categorized in this Work Plan according to the following segments:

- Residential (1-4 unit) Buildings
- Multi-family Buildings (5 or more dwelling units)
- Small Commercial Buildings¹
- Large Commercial Buildings
- City Enterprise

The approach to organizing the Work Plan described here – identifying goals, strategies to meet them, and grouping activities by segment – is a change in organizational format from the list of potential work plan items which was initially presented to the Board and to EVAC. That list was divided simply into

¹ “Commercial” is used here to simply mean non-residential buildings. Buildings are considered to be small or large based on where they fall relative to the City’s 50,000 square foot threshold for the benchmarking ordinance.

Community Initiatives and City Enterprise Initiatives; many of the individual items were fairly broad and the proposed activity was not always clearly defined.

As the Planning Team worked to consider the feedback received and refine the Work Plan, the organization described above seemed to better facilitate the inclusion of the broader context of the Partnership's work and demonstrate how the proposed activities will fit into that context. The new format also lends itself better to communicating the specific activities to be undertaken by the Partnership, as well as the timing of those efforts.

It is important to note that while the organization of the Work Plan is significantly different from the initial document, all of the individual Potential Work Plan items that were presented to the Board and considered by EVAC remain. In the sections that follow, the Potential Work Plan items that pertain to specific segments are identified, in order to better illustrate the continuity of content from the previous document.

EVAC Process & Feedback Summary

At their February 2015 meeting, the Minneapolis Clean Energy Partnership (CEP) Board adopted a set of Potential Work Plan Items for the Planning Team to bring to the Energy Vision Advisory Committee (EVAC) for review. This list of potential items included high-priority items that were the result of an intensive City stakeholder process while developing the Minneapolis Climate Action Plan, as well as the recommendations of the [Energy Pathways Study](#) and the [Memoranda of Understanding](#) between the City and Xcel Energy and CenterPoint Energy.

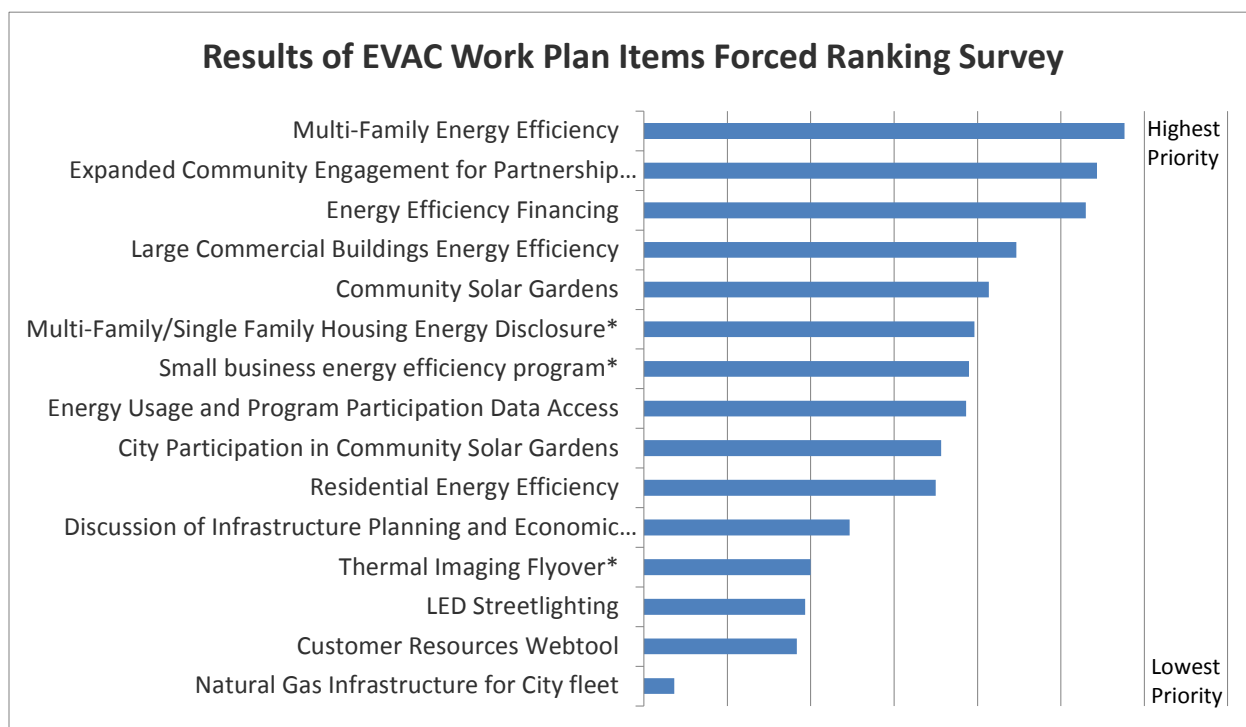
EVAC Process

EVAC's 15 member committee is charged with reviewing the Potential Work Plan items and providing feedback to the CEP Board before the adoption of a final 2015-2016 work plan. The full list of Potential Work Plan Items that EVAC provided feedback on is available in Appendix A.

The Planning Team convened two EVAC meetings following the Board's approval to review the Potential Work Plan items. The first meeting was held on April 16 where the committee's structure, timeline and co-chair roles were discussed. Between the first and the second meetings, each committee member was asked to complete a survey to prioritize the comprehensive list of work plan items, recommend new concepts, and provide specific recommendations on the Potential Work Plan items. EVAC rated most of the Potential Work Plan items as medium to high priority. Each item was rated on a 1 to 4 scale, 1 being low priority and 4 being high priority. The lowest average score was 2.15, demonstrating that no item was thought of as not a priority. EVAC's recommendations for the Potential Work Plan items included identifying what CEP's role should be for each item, what elements were missing from program designs, and what challenges could come up with each item and how might the challenges be overcome. A summary of the feedback is included in Appendix B. The Planning Team asked EVAC to recommend additional work plan items the committee could discuss at the second meeting. EVAC came up with seven potential new Work Plan items that were appropriate for inclusion as a new program or concept.

The second EVAC meeting was held on May 6th which started with the election of the committee appointed co-chair. The co-chairs of the first two year CEP EVAC committee are Billy Weber and Jamez Staples. The second meeting focused on the results of the Work Plan item prioritization the committee completed between meetings, as well as breakout sessions to discuss the new Work Plan concepts. During the breakout meetings, EVAC members were asked to join a breakout group on each of the proposed new Work Plan items. If a breakout group did not receive more than three interested persons, it would not move forward. The three new Work Plan items that gained enough interest to move forward included: multi-family/single family energy housing disclosure, small business energy coaching program and thermal imaging flyover. A summary of the discussion of new Work Plan items that occurred at the May 6th meeting is included as Appendix C.

At the conclusion of the second meeting, EVAC members requested to take a second survey and rank each of the 13 Potential Work Plan items from 1 to 13 (highest to lowest priority) and also indicate what items could be removed from the Work Plan if necessary. The results of the prioritization are shown in Figure 2 below.



*New items developed by EVAC during their second meeting

Figure 2. Results of survey of EVAC members on the ranking of work plan items

The Planning Team considered all feedback from EVAC when developing the final Work Plan. Of the three items EVAC suggested that the Planning Team add to the Work Plan, two are shown in this document. The third – a Thermal Imaging Flyover, was not included in the Work Plan, but will be considered for future two-year work plans. The Planning Team recognized that this item scored relatively low in the prioritization done by EVAC members, and felt that given limited staff resources, time would be more effectively spent on other items during the 2015-2016 time period. The flyover concept is a method to help target outreach related to energy efficiency programs, something the Planning Team felt could also be accomplished by understanding existing program participation, a pre-existing work plan item.

It should be noted that a significant portion of the feedback from EVAC after the first meeting dealt with *how* the Partnership completed its work, rather than the specific work plan items. This feedback will be especially valuable as the Planning Team begins to review potential metrics with EVAC. A summary of this feedback can be found in Appendix B.

Clean Energy Partnership 2015-2016 Work Plan Items

What follows is a description of the 2015-2016 Work Plan for the Minneapolis Clean Energy Partnership. Items in the Work Plan are organized under energy user “segments”, including:

1. Residential, 1-4 unit
2. Multi-family (5+ unit)
3. Large commercial
4. Small commercial
5. City enterprise

Each segment below includes a description of the activities relevant to each segment, a list of the work plan items previously presented to the Board and reviewed by EVAC that are relevant to the segment, and a list of specific deliverables the Partnership hopes to complete in 2015-2016. The Planning Team will be working with EVAC over the next year to produce a final list of metrics to track progress made in this and future work plans (see [Tracking Progress](#), page 16).

1. Residential, 1-4 Unit

Many successful energy efficiency and renewable energy programs are currently available that can be utilized by customers in 1-4 unit residential structures. Xcel Energy and CenterPoint Energy have invested considerably in developing these programs and spend millions of dollars on them for the benefit of Minneapolis customers each year. These programs include home visit and assessment offerings, rebates for a wide variety of energy efficiency upgrades, new construction programs, Solar*Rewards, Community Solar Gardens, WindSource and others.

A key focus of the Partnership in 2015-2016 should be the development of new community engagement strategies, designed to increase the number of 1-4 unit residential properties participating in the existing energy efficiency and renewable energy programs. New engagement strategies will be informed by utility program participation information and energy usage data. The City will also begin to explore what policy levers it can exercise to drive participation of 1-4 unit properties in these programs.

The Partnership will also be developing at least one new option for financing energy efficiency improvements in 1-4 unit buildings in 2016.

This segment includes the following Work Plan items previously considered by the Board and reviewed by EVAC and a new item suggested by EVAC:

- Residential Energy Efficiency
- Energy Efficiency Financing
- Community Solar Gardens
- Energy Usage and Program Participation Data Access
- Expanded Community Engagement
- Multi-family/Single-Family Housing Energy Transparency

The original list of Potential Work Plan items is available in Appendix A. A summary of EVACs discussion of new work plan items is in Appendix C.

2015-2016 Activities

- Analysis and mapping of current and historic participation in utility programs by customers in 1-4 unit properties to help target outreach efforts and inform residents and policymakers about progress. This analysis should identify areas previously under-served by 1-4 unit programs.
- Develop a community engagement strategy for 1-4 unit properties. Strategies could include engaging community-based organizations to conduct outreach, developing a citywide challenge or other innovative approaches. The Planning Team will be working with EVAC to gather feedback on potential approaches. Strategies effective at driving participation in areas of the City previously underserved by programs will be a priority; as such the analysis and mapping described above will be key to informing the work in this effort.
- CenterPoint Energy intends to develop an on-bill repayment offering for customers who need financing for energy efficiency improvements; the offering will be submitted for regulatory approval in mid-2016.² The Partnership will work to identify additional lending sources to finance energy efficiency and renewable energy projects.
- Explore potential City policy levers to drive energy efficiency and renewables in 1-4 unit properties. EVAC identified multi-family/single-family housing energy transparency as a priority. They identified the use of a time-of-sale or time-of-rent energy metric, like an asset rating, which could be used for this purpose.

2. Multi-family Residential

Multi-family buildings are eligible to participate in a number of existing energy efficiency programs offered separately by each utility. In addition, CenterPoint Energy and Xcel Energy have recently collaborated to develop a dedicated, jointly-delivered energy efficiency program that specifically targets multi-family buildings. The program draws on national best practices to encourage building owners to invest in energy-saving measures in both resident and common spaces. The program has been filed with regulators, and is pending approval. The utilities plan to begin implementation later this year.

Customers in multi-family buildings can also utilize programs to access renewable energy, such as Community Solar Gardens and WindSource.

A key focus of the Partnership in 2015-2016 should be the development of new community engagement strategies, designed to increase the number of multi-family residential properties participating in energy efficiency and renewable energy programs. New engagement strategies will be informed by utility program participation and energy usage information. The City will begin to explore what policy levers it can exercise to drive participation of multi-family properties in these programs.

This segment includes the following Work Plan items previously considered by the Board and reviewed by EVAC and a new item suggested by EVAC:

² The on-bill repayment option could apply to a variety of segments, not simply residential 1-4 unit buildings, but is included in this section as residential customers are probably the most likely to participate.

- Multi-family Energy Efficiency
- Community Solar Gardens
- Energy Usage and Program Participation Data Access
- Expanded Community Engagement
- Multi-family/Single-Family Housing Energy Transparency

The original list of Potential Work Plan items is available in Appendix A. A summary of EVACs discussion of new work plan items is in Appendix C.

2015-2016 Activities

- Analysis and mapping of current and historic participation in utility programs by customers in multi-family properties to help target outreach efforts and inform residents and policymakers about progress. This analysis should identify areas previously under-served by multi-family programs.
- Develop a community engagement strategy for multi-family properties. Strategies could include engaging community-based organizations to conduct outreach, developing a citywide challenge or other innovative approaches. The Planning Team will be working with EVAC to gather feedback on potential approaches. Strategies effective at driving participation in areas of the City previously underserved by programs will be a priority; as such the analysis and mapping described above will be key to informing the work in this effort.
- Explore potential City policy levers to drive energy efficiency and renewables. EVAC identified multi-family/single-family housing energy transparency as a priority. They identified the use of a time-of-sale or time-of-rent energy metric, like an asset rating, which could be used for this purpose.

3. Large Commercial

Information gained through the City's Commercial Building Benchmarking & Transparency ordinance, combined with utility program data and utility expertise, will be leveraged to enhance outreach to large commercial buildings and drive energy efficiency improvements. The City and utilities will work on developing targeted marketing approaches, new data access tools for building owners/managers, educational efforts and enhanced utility energy efficiency programs.

This segment includes the following Work Plan items previously considered by the Board and reviewed by EVAC:

- Large Commercial Buildings Energy Efficiency
- Energy Usage and Program Participation Data Access
- Expanded Community Engagement

The original list of Potential Work Plan items is available in Appendix A.

2015-2016 Activities

- Analysis and mapping of current and historic participation in utility programs by customers in commercial properties, as well as analysis of benchmarking scores, to help target outreach efforts and inform residents and policymakers about progress. This analysis should identify areas previously under-served by utility programs, or buildings with the greatest potential to improve their benchmarking scores.
- Deploy a tool to allow owners/managers of multi-metered buildings to easily access whole building data for the purposes of benchmarking. Xcel Energy and the City have been working as part of the DOE's Data Accelerator Program to develop such a tool, and it will be ready for use by customers by the end of 2015. This tool has the potential to significantly reduce one barrier to benchmarking in multi-metered buildings.
- Develop and launch a recognition and/or challenge program to promote and encourage energy efficiency improvements in multiple segments of the commercial building segment. This recognition will launch in fall of 2015.
- Develop and launch resource workshops targeted at specific segments of commercial buildings (office, retail/hospitality, health care, non-profit, etc) to connect them with technical assistance, financing, and other resources to drive energy efficiency improvements.

4. Small Commercial

EVAC identified small business/small commercial as a potential new work plan item during discussions. In this concept, the City and utilities would develop a program that collaborates with business-serving organizations in targeted small business districts that help businesses (particularly small, immigrant/minority-owned businesses) make energy-efficient improvements. This program could be modeled on the work occurring in the Lake Street corridor around energy efficiency outreach to small businesses. While small businesses are eligible to participate in a variety of existing energy efficiency programs, these customers tend to be “difficult to reach” for traditional utility offerings for a variety of reasons.³

Outreach to small commercial properties has been identified by the Partners in Energy Program as a top priority for their work. Partners In Energy is a new offering from Xcel Energy to support the development and implementation of energy action plans at the local level. Currently, this program is focused on the Lake Street corridor, and overseen by the Midtown Community Works Partnership.

The role of the Minneapolis Clean Energy Partnership in 2015-2016 will be to monitor the progress of the small business outreach occurring through the Partners in Energy Program, glean best practices, and collect potential program design ideas for the 2017-2018 Work Plan.

This segment includes the following Work Plan item previously considered by the Board and reviewed by EVAC and a new item suggested by EVAC:

- Energy Usage and Program Participation Data Access

³ These reasons can include language barriers, lack of available time and financial resources for small business owners, limited energy expertise among small business owners, and others.

- Small business energy efficiency program

The original list of Potential Work Plan items is available in Appendix A. A summary of EVACs discussion of new work plan items is in Appendix C.

2015-2016 Activities

- Analysis and mapping of current and historic participation in utility programs by customers in small commercial properties.
- Monitor progress of the implementation of small business programs through the PIE program in the Lake Street corridor. This may include updates to EVAC or the Board on activities or program designs presented by leaders of the PIE program.

5. City Enterprise & Coordination

The original list of Potential Work Plan Items reviewed by the Board and EVAC contained four items: a City RFP for a Community Solar Garden Subscription, continued discussion of Infrastructure Planning and Economic Development, LED streetlighting, and Natural Gas Infrastructure for City fleet.

Although some of these items were ranked as low priority by EVAC (namely Natural Gas Infrastructure for City Fleet), the Planning Team feels that the 2015-2016 Work Plan should include all four items. Some of these items are already underway (LED streetlighting, exploration of City fleet alternatives, and the development of the solar garden RFP), and thus the Planning Team feels they should remain on the Work Plan. Continued discussion of infrastructure planning, which was ranked as a high priority by EVAC, is ongoing work that the City and utilities think should now become “business as usual” as the partners work together on a range of issues.

2015-2016 Activities

- Begin the roll-out of LED streetlights citywide. Xcel Energy is developing a strategic system wide plan to replace all their existing fixtures with LED’s over the next five years. The plan for Xcel-managed lights in Minnesota will be filed with the Minnesota Public Utilities Commission in the fall of 2015. Energy efficiency rebates are already available for the purchase of LED fixtures for use in city-maintained streetlights. In 2015-2016 the City and Xcel will work together to determine an implementation schedule for streetlight retrofits in Minneapolis, identify priority areas for retrofit, and begin the retrofit process. It should be noted that the conversion to LED streetlights could result in a significant cost savings for the City on its electricity consumption, as well as a corresponding reduction in greenhouse gas emissions.
- The City is currently engaged in a study of future fleet vehicle needs and fueling options, including the potential for the use of natural gas. In 2015-2016, the City will finish this study, and identify options for new fueling infrastructure and vehicles.
- The City will release and analyze results of an RFP (or RFPs) for one or more subscriptions to Community Solar Garden or other renewable energy projects. Factors that should be considered in the RFP include local workforce development, especially for communities of color, the competitiveness of projects that are located within city boundaries, support of communitybased institutions/organizations through project development, and the ability of a City

subscription to support access to renewables to low income or groups who may not otherwise be able to access renewable energy programs.

- The City and utilities will continue conversations on items of interest related to infrastructure, including plans for specific sites (for example, design options for distribution infrastructure at Hiawatha and 46th Street), distribution planning, aligning capital improvement cycles, pilot projects, and long-range carbon reduction planning.

Tracking Progress

This document contains the programs, concepts and initiatives that the Clean Energy Partnership will work to advance in the 2015-2016 time period. To understand how effective these initiatives may be at meeting City and utility goals, the Partnership will need to adopt a set of performance metrics to track progress. Below are suggestions for potential metrics relevant to the Work Plan developed by the Planning Team.

To effectively measure progress towards City goals, some metrics will need to be broken down to geographic areas smaller than the city as a whole, such as census block groups or neighborhood boundaries. This is to enable the partners and the public to understand whether the impact of CEP initiatives differs across Minneapolis communities, and to plan approaches which work equitably. Discussions currently ongoing on the Minnesota Public Utilities Commission, as well as utility information technology systems, may impact the specific geographies for which data is available. The Partnership will identify desired geographies, and identify barriers and potential solutions to accessing data necessary for metrics.

The Planning Team will continue working with EVAC in 2015 and early 2016 to finalize a set of metrics for review by the Partnership Board. These metrics will be used for annual reports on progress to EVAC and the Board, as well as analysis of the effectiveness of segment-specific strategies.

Suggested Metrics

- **Citywide Greenhouse Gas Emissions**
 - Energy usage by customer type
 - Greenhouse gas emissions
- **Home Energy Squad visits**
 - Participant Count (with geographic breakdown)
 - Conversion rate: How many squad visits caused the customer to complete energy efficiency upgrades?
 - What actions were taken/What was installed?
 - Energy/carbon savings
- **Xcel Energy & CenterPoint Energy audits**
 - Participant Count (with geographic breakdown)
 - Conversion Rates
- **Energy usage access**
 - Geographic breakdown of customer energy usage data
 - Develop a list of data access needs and limitations
- **Community Solar Garden subscriptions**
 - Number of subscribers (with geographic breakdown)
 - kW subscribed and annual energy production
 - Locations of gardens subscribed to by Minneapolis customers
- **Distributed solar PV and solar thermal interconnections/installations**
 - Number of installations (with geographic breakdown)

- kW and annual energy production
- **WindSource**
 - Number of subscribers (with geographic breakdown) and percent of subscribers in MN
 - Total kWh

Timeline

Below is a timeline that the Planning Team has developed as an illustrative guide for the specific 2015-2016 activities identified under each segment in the Work Plan above. This timeline is subject to change, as details develop related to each segment and item. Items that include a regulatory change or approval may need to be modified based on the schedule dictated by the Public Utilities Commission.

Additionally, items that might include City policy change, additional stakeholder engagement, and/or City Council approval may need to change based on the circumstances of each item.

As outlined in the [Key Strategies](#) section (see page 6), the Partnership will be working on some foundational items in 2015 and 2016. This includes a more detailed understanding of utility program participation and energy usage by Minneapolis customers, which can inform outreach strategies for new and existing programs. This work will set the stage for items in this and future work plans. The Planning Team intends to proceed by presenting the most detailed information that is available as soon as possible, while working towards more a detailed understanding of program participation, including finer geographic breakdowns. Given the potential changes to utility IT infrastructure, and ongoing discussions about data policy at the Public Utilities Commission, some of this more detailed information may not be available until later in 2016. The Planning Team intends to communicate with EVAC and the Board on an ongoing basis about progress, barriers, and the updated timeline.

The colors used in the timeline serve no other purpose than as a visual aid as one task is estimated to end and another to begin.

05/22/15	2015												
	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	
Residential 1-4 Units													
Analyze and map current and historic CIP participation						Develop high-level reports					Review and analyze		
Develop community engagement strategies to increase EE and RE participation, particularly in historically underserved areas and populations within the city								Develop engagement and outreach strategies					
Develop on-bill repayment mechanism for financing EE improvements for inclusion in CNP's Triennial CIP filing; and explore other sources to finance EE and RE projects											2016 action item		
Explore potential City policy levers to drive EE and encourage energy usage transparency									Study options and feasibility				
Multi-Family													
Analyze and map current and historic CIP participation						Develop high-level reports					Review and analyze		
Develop community engagement strategies to increase EE and RE participation, particularly in historically underserved areas and populations within the city								Develop engagement and outreach strategies					
Explore potential City policy levers to drive EE and encourage energy usage transparency									Study options and feasibility				
Small Commercial													
Analyze and map current and historic CIP participation									Develop reports	Review and analyze			
Monitor and assess progress of small business programs of the Partners In Energy (PIE) program in the Lake Street corridor	Midtown Community Works Partners In Energy Program Ongoing												
Large Commercial													
Analyze and map current and historic CIP participation and benchmarking scores, to identify buildings with the greatest potential for improved EE								Develop Benchmarking Report			Review Historic Data		
Develop and deploy tool to allow owners/managers of multi-metered buildings to more easily access whole building data for the purpose benchmarking energy consumption	Development and testing (Xcel project)										Prepare to Launch		
Develop and launch a recognition/challenge program to promote and encourage EE improvements in multiple commercial building sectors							Plan for implementation			Launch			
Develop and launch resource workshops to connect commercial building sectors to technical assistance, financing and other resources to help drive EE improvements					Plan for Implementation			Launch		Workshops ongoing			
City Enterprise and Coordination													
Roll-out LED streetlight plan to replace all existing fixtures within the next five years										Filing and Regulatory Review			
Explore the potential use of natural gas for use in city fleet vehicles; and identify options for new fueling infrastructure and vehicle purchases.				City Fleet Study					Concept Refinement				
Release and analyze the results of a City RFP for one or more subscriptions to Community Solar Garden projects within the city, to help support access to RE to low income groups who may not otherwise have access							Release RFP, analyze results						
Explore opportunities to increase communication and collaboration between Partners to ensure city and utility infrastructure improvements are planned, designed and coordinated to the mutual benefit of all concerned	Ongoing												
05/22/15	2016												
	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	
Residential 1-4 Units													
Analyze and map current and historic CIP participation	Review Historic Data				Review and communicate 2015 results				Develop neighborhood-scale reports		Communicate results		
Develop community engagement strategies to increase EE and RE participation, particularly in historically underserved areas and populations within the city			Begin implementation										
Develop on-bill repayment mechanism for financing EE improvements for inclusion in CNP's Triennial CIP filing; and explore other sources to finance EE and RE projects	Concept definition and refinement							Approvals and early implementation					
Explore potential City policy levers to drive EE and encourage energy usage transparency	Stakeholder engagement						Policy discussion and potential approval						
Multi-Family													
Analyze and map current and historic CIP participation	Review Historic Data				Review and communicate 2015 results				Develop neighborhood-scale reports		Communicate results		
Develop community engagement strategies to increase EE and RE participation, particularly in historically underserved areas and populations within the city			Begin implementation										
Explore potential City policy levers to drive EE and encourage energy usage transparency	Stakeholder engagement						Policy discussion and potential approval						
Small Commercial													
Analyze and map current and historic CIP participation	Review Historic Data				Review and communicate 2015 results				Develop neighborhood-scale reports		Communicate results		
Monitor and assess progress of small business programs of the Partners In Energy (PIE) program in the Lake Street corridor	Midtown Community Works Partners In Energy Program Ongoing												
Large Commercial													
Analyze and map current and historic CIP participation and benchmarking scores, to identify buildings with the greatest potential for improved EE	Review Historic Data				Review and communicate 2015 results								
Develop and deploy tool to allow owners/managers of multi-metered buildings to more easily access whole building data for the purpose benchmarking energy consumption	Launch tool and monitor results						Stakeholder feedback and potential tool refinement if necessary						
Develop and launch a recognition/challenge program to promote and encourage EE improvements in multiple commercial building sectors	Stakeholder engagement and program communication									Year 2 event			
Develop and launch resource workshops to connect commercial building sectors to technical assistance, financing and other resources to help drive EE improvements	Ongoing implementation												
City Enterprise and Coordination													
Roll-out LED streetlight plan to replace all existing fixtures within the next five years	Regulatory Approval		Implementation										
Explore the potential use of natural gas for use in city fleet vehicles; and identify options for new fueling infrastructure and vehicle purchases.	Feasibility analysis and policy discussion					Potential item for inclusion in 2017 budget cycle							
Release and analyze the results of a City RFP for one or more subscriptions to Community Solar Garden projects within the city, to help support access to RE to low income groups who may not otherwise have access	Implementation												
Explore opportunities to increase communication and collaboration between Partners to ensure city and utility infrastructure improvements are planned, designed and coordinated to the mutual benefit of all concerned	Regularly scheduled meetings to communicate and coordinte infrastructure improvement work - ongoing												

Appendix A: Original List of Potential Work Plan Items

Community Initiatives

Community Solar Gardens

The Partnership may explore a number of options for encouraging participation in Community Solar Gardens (CSGs) by Minneapolis customers. These could include City government participating as a customer of one or more CSGs for City-purchased electricity, providing information and training to neighborhoods and communities about participating in CSGs, developing a “one-stop” location for information on CSGs available to Minneapolis customers, or expanded outreach to customers to drive participation.

Xcel Energy customers can subscribe to solar gardens – solar panel arrays constructed by third-party developers at centralized locations – and receive credits on their electricity bills for their portion of energy produced. The program is called Solar*Rewards Community and is designed for customers who cannot participate in other solar programs because they rent, live in multi-family dwellings, their homes or businesses are not suitable for solar installations, or rooftop solar installations are not right for them for other reasons.

Xcel Energy’s Solar*Rewards® Community® program launched on 12/12/2014.

Energy Usage and Program Participation Data Access

The City and the utilities will work together to understand energy usage and program participation information at smaller geographic level than city-wide. The City may be able to produce reports for use by neighborhoods and community initiatives, such as energy savings competitions. Energy usage and program participation data will be used to establish metrics to gauge the success of CEP activities.

The (MPUC) is currently reviewing how utilities can manage the aggregation and dissemination of community and building level data. Depending on their decision, more data may be available from utilities on energy usage and energy efficiency program participation in Minneapolis. This information can help identify high energy usage areas to target for energy efficiency outreach and education as well give perspective on what type of energy efficiency programs residents and businesses are currently participating in.

Large Commercial Buildings Energy Efficiency

Information gained through the City’s Commercial Building Benchmarking & Transparency ordinance, combined with utility program data and utility expertise, will be leveraged to enhance outreach to large commercial buildings and drive energy efficiency improvements. The City and utilities may work on developing targeted marketing approaches, new data access tools for building owners/managers, educational efforts and enhanced utility energy efficiency programs.

Multi-Family Energy Efficiency

There is much interest in programs that reach the multi-family sector. As a result, CenterPoint Energy and Xcel Energy are collaborating to develop a, jointly-delivered energy efficiency program dedicated to

multifamily buildings. The program will draw on national best practices to encourage building owners to invest in energy-saving measures in both resident and common spaces.

The program is expected to be filed with regulators in early 2015 and pending approval, begin implementation later that year.

The CEP will work collaboratively for regulatory approval of the program and explore targeted outreach and marketing opportunities to engage Minneapolis customers. The CEP may also explore expanding or existing financing options for program participants to further reduce barriers to implementation of efficiency measures.

Residential Energy Efficiency

The CEP will leverage the availability of an expanded residential energy efficiency program and explore targeted outreach and marketing opportunities to engage Minneapolis customers. The CEP may also explore expanding or existing financing options for program participants to further reduce barriers to implementation of efficiency measures.

CenterPoint Energy has proposed a pilot program called the *Residential Engagement Pilot* in the City of Minneapolis to test the effectiveness of enhanced natural gas engagement strategies intended to increase the number of residential customers (in 1-4 unit properties) that follow up on and install recommendations made at home visits.

The Pilot has been approved by the Department of Commerce; Division of Energy Resources and launch is scheduled for February of 2015.

Energy Efficiency Financing

The CEP could engage in work including enhanced marketing of existing financing options available through private lenders and public lenders. The CEP may also explore other innovative models for delivering financing options with low barriers to participation.

CenterPoint Energy is developing a tool that will provide customers the opportunity to finance energy efficiency upgrades and repay the loans for via their utility bills. Capital would be provided by one or more third-party lending partners and the utility would service the loan. Customers benefit by the enhanced convenience.

Prior to implementation, the company's IT systems must be upgraded and capital partners identified and secured. Funding for the IT upgrades would require regulatory approval. CenterPoint Energy currently expects to request approval for the system upgrades in their 2017-2019 CIP Triennial Plan filing.

Partners in Energy

Partners in Energy is a new offering from Xcel Energy to support the development and implementation of energy action plans at the local level. Although the objectives will reflect the unique needs of the community, Xcel Energy anticipates that by working with communities the planning process they will be

better able to match their services and offerings to customer needs and inform the marketplace about existing programs and resources that can support their plans. The intent is to provide a unique custom package of Xcel Energy's current services and offerings, identify third party resources, and leverage local distribution channels, to meet community objectives.

The Midtown Community Works Corridor in Minneapolis is the first participant in Partners in Energy in Minnesota and is serving as a testing ground for concept. Feedback from this community and others that participate will be used to improve the Partners in Energy offering, and support identification of potential future resources to aid in the development and delivery of community based energy plans. Future concept development may be directed by the CEP.

Expanded Community Engagement for Partnership Initiatives

The CEP will explore expanded engagement strategies to drive participation in utility and City energy efficiency and renewable energy programs such as the multifamily energy efficiency program, Home Energy Squad, Solar*Rewards® Community®, financing tools and others. Strategies could include engaging community-based organizations to conduct outreach, developing a citywide challenge or other innovative approaches to engage Minneapolis residents and businesses in pursuing the goals of the CEP.

Customer Resources Webtool

The CEP will explore the development of a comprehensive webtool to help Minneapolis customers easily navigate the resources available to them. These resources could include energy efficiency or renewable energy programs. The webtool could work as a resource for any expanded community engagement initiative.

City Enterprise Initiatives

City Participation in Community Solar Gardens

Xcel Energy customers can subscribe to solar gardens – solar panel arrays constructed by third-party developers at centralized locations – and receive credits on their electricity bills for their portion of energy produced.

The City will explore the possibility for direct participation in one or more community solar gardens, for example as a subscriber. The Energy Vision Advisory Committee, Partnership Board or Planning Team can provide valuable input on the City's potential role or the design of the RFP.

Discussion of Infrastructure Planning and Economic Development

The City, CenterPoint Energy and Xcel Energy will engage in periodic discussions regarding planned utility and city infrastructure changes to create efficiencies and maximize opportunities for infrastructure enhancements and economic development.

LED Streetlighting

The CEP will review the City's plans for retrofit of its streetlights, and explore options for the retrofit of Xcel-owned lights.

Xcel Energy now offers energy efficiency for customer-owned street-lights. The City owns approximately half of the lights within city limits and currently is developing plans to replace the existing bulbs with high efficiency and low maintenance LED bulbs. Concurrently, Xcel Energy is developing a strategic system wide plan to replace their existing fixtures with LED's.

Natural Gas Infrastructure for City fleet

Investments in new natural gas infrastructure could help create opportunities to reduce emissions. For example, with adequate fueling infrastructure, natural gas vehicles could help achieve reductions in both greenhouse gas and criteria pollutant emissions. Anaerobic digestion of city-collected organic waste could provide a renewable fuel source for vehicles and/or buildings or facilities.

The City and CenterPoint Energy will use the CEP to explore options for new infrastructure to serve city facilities or fleet.

Appendix B: Summary of EVAC survey results

Community Initiatives

Community initiatives include non-City projects with the opportunity for community engagement such as helping to define the role of the Clean Energy Partnership, program design elements, challenges to implementation and what role community engagement plays in that implementation for enhanced outcomes.

Multi-Family Energy Efficiency

What is the best role of the Clean Energy Partnership in relation to this item?

- Aggregating knowledge around implementing increased energy-efficient practices
- Focus on intersection of city policies and utility programs
- Engage community groups to recruit buildings into the program
- Require transparency on EUI or another similar metric
- Promotion and education
- Engage/aid both residents and landlords
- Monitor development of jointly-filed CIP; report on successes and challenges
- Work with community groups, credit unions and others to find way to include low-income renters

Are there any elements missing from the program design?

- Renters should know upfront the building's energy profile and consumption
 - Landlords should be required to disclose and post publicly total cost of housing (rent + utilities)
 - Landlords should be required to have an energy audit for licensure
- Renters should benefit from energy savings

What challenges come with this program concept? How should they be overcome?

- Landlords are stretched thin; should take advantage of energy saving programs
- Utilities should seek feedback from city and community partners on initial CIP program before filing an updated request for future years

Expanded Community Engagement for Partnership Initiatives)

What is the best role of the Clean Energy Partnership in relation to this item?

- Identify funding and enable coordination
- Actively partner with community organizations and neighborhood associations
 - Equip organizations and community leaders with correct information and support networks

Are there any elements missing from the program design?

- Target areas that have high per capita energy use and poverty rates, low past participation in programs

What challenges come with this program concept? How should they be overcome?

- Utilities have siloed programs that do not integrate with city or community-based organizing

- Identify and financially support an organizing effort that has sophistication on energy issues and experience reaching city residents/businesses
- Too many programs can be confusing to the public
 - Create a catchy phrase, such as “My Minneapolis”, that would encompass all energy initiatives
 - Involve local artist community to provide inspiration to make community engage cool

Large Commercial Buildings Energy Efficiency

What is the best role of the Clean Energy Partnership in relation to this item?

- Identify ways to combine/package multiple EE programs and financing tools
- Provide best data and clean energy strategies to:
 - Help save energy dollars
 - Adapt to their infrastructure
 - Incentivize/support/facilitate improving EE practices and technologies
- Use city disclosure data to target inefficient buildings to help (not shame) them into improving EE
- Encourage participation by showing how much money can be saved
- Encourage them to pursue deep level retrofits/upgrade existing inefficient systems

Are there any elements missing from the program design?

- Encourage deep level retrofits
- Encourage or require large commercial entities to meet goals for hiring women and people of color

What challenges come with this program concept? How should they be overcome?

- Funding to:
 - Research to locate best practices, case studies, implementation and monitoring methods
 - Supplement technologies and systems needed to increase energy efficiencies in commercial sector
- New program design and resources to reach customers
- Code requirement for new construction to meet more stringent energy efficient requirements
- Ensure that commercial sites have concrete incentives to save energy

Energy Usage and Program Participation Data Access

What is the best role of the Clean Energy Partnership in relation to this item?

- Aggregating, interpreting and disseminating data to various institutions/maximizing data sharing
- Make energy usage data as public and accessible as possible
- City and utilities approach and engage PUC as a united front
- Require transparency in all real estate transactions

Are there any elements missing from the program design?

- Building-specific data (where there are multiple rate payers)
- Tool to allow citizens to explore public energy data/use in their neighborhood
- Data should be made public; transparency

What challenges come with this program concept? How should they be overcome?

- Willingness to propose and advocate for the change to the PUC
- Translate data collection into positive chance for residents of all income levels
- Ensure data is as accessible and easily understandable as possible

Residential Energy Efficiency

What is the best role of the Clean Energy Partnership in relation to this item?

- Track and evaluation appropriateness of pilot
- Coordinate city outreach and utility outreach
- Actively market/promote program with neighborhood groups and community partners
 - Advertise in monthly utility statements
 - Advertise online
- Implement first in low-income and underserved neighborhoods/communities

Are there any elements missing from the program design?

- Measures to determine acceptable/unacceptable outcomes
- Provide free energy audits to qualified low-income residents
- Specific strategies to serve those who have historically been under-served (i.e., inefficient, low-income) by residential programs
- Description of “natural gas engagement strategies”
- Clear and transparent language

What challenges come with this program concept? How should they be overcome?

- Program too complicated
 - Provide simple, easy-to-understand examples that customers can relate to
 - Partner with Menards, Home Depot, others to give demonstrations on home improvements to make homes more efficient and that would qualify for utility rebates
- Utilities should collaborate on residential energy efficiency CIP filings
- Tracking data

Energy Efficiency Financing

What is the best role of the Clean Energy Partnership in relation to this item?

- On-bill financing/repayment
- Focus on financing programs that fall at the intersection of city policies and the utilities
- Show leadership and commitment to move this forward in a timely manner

Are there any elements missing from the program design?

- On-bill financing/repayment; funding sources available for all types of rate payers and types of properties
- Marketing plan rooted in equity and fairness, considering existing disparities (especially economic gap)

What challenges come with this program concept? How should they be overcome?

- City should be first organization considered as a possible lender for on-bill financing

- Other funding sources: credit unions, other groups

Community Solar Gardens

What is the best role of the Clean Energy Partnership in relation to this item?

- Make it accessible and affordable
- Work with community organizations
- Target residents
 - Who are not homeowners
 - Especially low-income
- Educate and market to general public and businesses
 - Incentivize community, neighborhood groups and businesses to participate
- City should be anchor tenant/primary subscriber
- Use program to meet the city's 10% local energy goal
- Create and advocate for consumer protections

Are there any elements missing from the program design?

- Support local ownership
- Subscription/buy-in rates – not prohibitive
- On-bill financing
- Required to meet workforce hiring and training goals to ensure that low-income and minority workers have a chance to benefit from economic development created by CSGs
- Clear language, easy to understand diagrams and graphics
- Multiple citywide initiatives designed by competent agencies and organizations
- Clear articulation of next steps
- Clear articulation of impact initiative has on overall reduction targets

What challenges come with this program concept? How should they be overcome?

- Developing a plan/subscription options affordable for all
- Ensuring awareness of residents who qualify for the program
- Make it easy to take advantage of solar energy

Customer Resources Webtool

What is the best role of the Clean Energy Partnership in relation to this item?

- Update and expand resources frequently
- Ensure webtool:
 - Works properly, is easy to navigate, is readily accessible, and is being used
 - Can be used on mobile devices

Are there any elements missing from the program design?

- Offer the webtool in multiple languages
- Accessible by mobile devices

What challenges come with this program concept? How should they be overcome?

- Making webtool as broadly accessible and usable as possible
- Keeping up with changing technology and programs

- Website might not get enough traffic
 - Include with Xcel and CenterPoint bills
- Many city residents are not computer-literate or don't have good access to online resources

City Enterprise Initiatives

These initiatives are City and Utility focused. While they do not have a specific community engagement element, committee members were asked for feedback on all potential work plan items.

Discussion of Infrastructure Planning and Economic Development

What is the best role of the Clean Energy Partnership in relation to this item?

- Use infrastructure outreach endeavors as opportunities to update residents about other programs
- Ensure that when the City digs up a street or redevelops a property, infrastructure is laid to enable substantial energy savings and GHG reductions
- Coordinate discussions and identifying/directing staff to coordinate
 - Determine priorities in negotiation where utility and City priorities conflict
- Promote meetings outside of same group of people who tend to participate in civic engagement and neighborhood activities
- Work with community organizations who work in city planning and infrastructure in an equitable way
- Ensure city infrastructure are models of conservatism, and that all departments are charged with a mandate for reduction

Are there any elements missing from the program design?

- Public needs a better understanding of the needs of our aging infrastructure, as well as the promise that grid modernization can bring
- Community engagement to determine priorities
- Discussions on infrastructure, planning and economic development should be highly-publicized, open and transparent

What challenges come with this program concept? How should they be overcome?

- Public education
 - Might best be done by outside organization that understands these issues
 - City council members will also be important to adequately fund mandates
- Reluctance by utilities to embrace new infrastructure, training programs

City Participation in Community Solar Gardens (Prioritization score: 3.15)

What is the best role of the Clean Energy Partnership in relation to this item?

- Utilities and City work together to select developers that propose to City's RFP(s)
- Educate general public and businesses on benefits of CSGs and how to participate
- City should promote Xcel projects that increase community usage of solar and other renewable
- Collaborate to make City's CSG effort as big and innovative as possible
- Mandatory inclusionary practices as pertains to MBE/WBI and Vets on both contracting and employment side of developer
- City should lead on community solar gardens

Are there any elements missing from the program design?

- Focus on equity hiring for construction, project development, and potential subscribers
- Simple, easy to understand diagrams and graphics depicting what CSGs look like and explaining how they work
- Easy to access opportunities to become CSG subscribers at a low or no upfront cost
- Plan that will make sure that there is local workforce, included along with MBE/WBE/Vet participation

What challenges come with this program concept? How should they be overcome?

- CSG subscription outreach in multiple languages and focus on low-income communities
- City should require a portion of city-subscribed solar gardens be located in the City

LED Street lighting

What is the best role of the Clean Energy Partnership in relation to this item?

- Getting it accomplished in a short time frame/by the end of 2016

Are there any elements missing from the program design?

- Speed

What challenges come with this program concept? How should they be overcome?

- [no identifiable common theme]

Natural Gas Infrastructure for City Fleet

What is the best role of the Clean Energy Partnership in relation to this item?

- Researching best practices, case studies and other technologies
- Convert their fleets first as a test pilot program to determine viability
- Confirm cost benefit of a natural gas infrastructure/fleet with dollar amounts for an estimated GHG and other pollutant reductions per ton

Are there any elements missing from the program design?

- Supporting scientific data

What challenges come with this program concept? How should they be overcome?

- Cost difficult to justify
- Lack of understanding regarding the technology and potential for an alternative solution

Potential new ideas for the '15-'16 Work Plan

EVAC members were given the opportunity as part of the first survey to submit ideas for new programs or concepts that were not included in the Potential Work Plan Items adopted by the Board.

The responses received were organized into three groups:

1. Responses that included items appropriate for inclusion as new programs or concepts in '15-'16

2. Responses that dealt with how the Clean Energy Partnership carries out its work, or metrics that could be used to track progress
3. Responses that included items that were deemed by the Planning Team as beyond the scope of the Partnership. For each of these items, the planning team has provided a brief description of why they made this determination in parentheses.

Items that could be appropriate for inclusion as a new program or concept

1. Electric vehicle adoption and charging infrastructure
2. Small Commercial Energy Efficiency program, possibly modeled on Lake Street Coaching Program
3. Pass-through tariff for municipal electricity purchases & RFP for projects if necessary
4. District energy program for large redevelopment/infill – consider using Prospect North redevelopment as a pilot
5. Capturing more energy through small hydro on the Mississippi
6. Thermal imaging flyover of the city to aid targeting of community organizing
7. Residential asset rating/benchmarking score made available to buyers at time of sale

Items related to how the Partnership works/metrics to measure progress

1. Explore policy levers/city regulatory authority
2. Shrink disparities
3. Clean up pollution in EJ neighborhoods
4. Work towards equitable participation in programs
5. Workforce development in energy efficiency/climate action industries, especially target unemployed, underemployed, women, and communities of color
6. Metrics, benchmarks and targets by sector
7. City should use local developers for acquisition of community solar
8. Green Zones concept
9. Clear evaluation and communication of initiatives (reporting?)
10. Possible metrics (from one respondent):
 - a. Track energy (kWh or therms)
 - b. Track GHG emissions
 - c. Track dollars (bills, wages, within/outside Minneapolis)
 - d. Track employment
 - e. Track participation rate, touches, how reached across city, utility, and all contractors. Something as robust as the Voter Activation Network
 - f. By Ward, income, ethnicity, RCI, age of building, per capita
 - g. % renewable energy and MW equivalent served for municipal use and all userseconomic activity generated by partnership activities, dollars, WHERE,
 - h. energy savings generated by partnership activities, by geography
 - i. Track % and \$ of energy dollars, e.g. what percent of \$1 spent on energy by a Minneapolis resident stays within the city
 - j. Implementation rate for recommendations/workplan

Items that are beyond the scope of the Partnership

1. Creating a tiered utility pricing structure based on household income (This is a major change to utility rate structures and would likely require state legislation as well as significant action by the Public Utilities Commission.)
2. Energy non-use incentives paid for avoiding energy-consuming appliances altogether. Example: people who do not have air conditioning at all versus those who purchase slightly more efficient versions. (This would entail a wholly new approach to the State's Conservation Improvement Program. It would likely require legislative action as well as significant action by the Public Utilities Commission.)

Appendix C: Summary of EVAC discussion on potential additional Work Plan Items

Generated at the May 6, 2015 EVAC meeting

Group #1: Small Business Energy Efficiency Program

Members: Leader: Matt Kazinka; Jamez Staples, Sidney Jordan, Trevor Drake

Description: The city and utilities will create a program that collaborates with business-serving organizations in targeted small business districts that help businesses (particularly small, immigrant/minority-owned businesses) make energy-efficient improvements.

Matt: Support business associations and neighborhood organizations to reach and incentivize businesses in their districts (focused on small businesses who face barriers) to make energy efficiency programs.

Jamez: Energy efficiency for small business financing; financial support for the work, incentivize.

Sydney: Small businesses, potential to partner with neighborhoods to create “promise neighborhoods” similar to President Obama’s “promise neighborhoods/districts.”

Role of CEP?

1. The CEP will oversee development of a program model (based on improved-upon Lake Street model) for partnering with small business organizations across the city.
2. Identify internal and external sources of funding (city, utility, foundation, corporate grants, etc.) that can flow to organizations to pay outreach staff (or “coaches”).
3. Bring together various resources and partners (such as financing agencies and efficiency experts) to make the program more robust.

Matt: (1) Oversee development of a city-wide model for partnering with small business districts; (2) Identify internal (city and utility) and external (foundation, donors, corporate, etc.) funding sources; (3) Bring together various partners (CIP programs, financiers, etc.) to make the program more robust.

Jamez: (1) Discuss financing mechanisms; (2) Identify targeted areas.

Sydney: (1) Create incentives; (2) Communicate/facilitate communication between Xcel and CenterPoint and small businesses; (3) Analyze and create models to replicate success.

Outcomes?	<ol style="list-style-type: none"> 1. Create a program housed in the city (or another central body) that has funding to pass through to small business organizations. 2. Select districts to target based on data and need. Focus on high-barrier businesses. 3. Create a model that can be expanded throughout the city and to other cities in Xcel/CenterPoint territory. <p>Matt: (1) Create a program housed in the city (or somewhere else central) that partners with existing business-serving organizations; (2) Identify and select districts to target; (3) Create a model for future development.</p> <p>Jamez: (1) Community-building, lower bills, more economic for business owners; (2) More efficient buildings.</p> <p>Sidney: (1) Small businesses save money and become more energy efficient; (2) CEP has guidelines to be replicated; (3) Utilities have greater community engagement.</p>
Impacts?	<ul style="list-style-type: none"> - More support to keep costs low for small, family-owned and minority-owned businesses. - Achieving Climate Action goals for commercial energy efficiency: reduced 20% by 2025. <p>Sidney: Economic development and equity. Investing in small businesses stimulates local economy. Small business owners live and spend money in area of their small business. Focus on areas with many business owners of color as well.</p>
Metrics?	<ul style="list-style-type: none"> - Number of businesses implementing efficiency upgrade - Number of organizations participating in outreach - Number of energy kWh saved and dollars saved - Increase in conversion rate in the city for small businesses efficiency; very low traditionally.
Other Notes:	Will help small businesses stay in business through gentrification and other issues that they face in the City.

Group #2: Multi-Family/Single Family Housing Energy Transparency

Members: Leaders: Chris Duffrin & Janne Flisrand; Louis Alemayehu, Tim Gaetz, Cameran Bailey

Description: At time of marketing a single family house or an apartment, a consistent energy metric would be required in advertising or on MLS, including a unit and (if different) a whole building metric.

Janne: [Residential, broadly with multi-family] At time of transactions (advertisement) consistent metric is advertised to create market benefit for efficiency. Unit and whole building.

Louis: Residential housing energy efficiency.

Cameran: Who: Residential (MF/SF). What: Bring transparency and monitoring of energy usage f home/building to the rental/purchasing process and occupation.

Role of CEP?

1. Select a task force, or have staff confer with experts, to develop a metric or metrics. Identify best practices for implementation.
2. Aggregate data of ratings/benchmarking to measure effectiveness.
3. Ensure a trained workforce/infrastructure to get the work done.
4. Education/marketing.

Janne: (1) Regulatory – require publication, work with realtor; (2) Identify metric for owner/rental sections; (3) Aggregate data/use to target programs, identify obstacles and solutions.

Louis: (1) Identify any public policy changes they would facilitate addressing this energy-efficiency issue; (2) Identify what changes should happen in energy production and distribution; (3) energy consumption disclosed at time of sale or rental.

Cameran: (1) Identifying case studies/best practices for the (a) technology, (b) implementation, (c) monitoring effectiveness of rate of implementation; (2) Working with realtors as well.

Outcomes?

1. A market incentive to do EE for SF owners/landlords.
2. Greater fairness for renters and buyers and sellers.
3. Good data collection that can inform future decisions.

Janne: (1) Market incentives; (2) Honest/fairness for renters and buyers, especially low-income.

Louis: (1) Lowering energy consumption; (2) Facilitate lowering of carbon footprint.

Cameran: Better budgeting/more accurate budget of true costs of occupancy.

Impacts?

- Equity for renters and for those who have made EE investments to realize the value of their investment.
- Significant economic development in the retrofit market.

Metrics? The effect the policy has on the retrofit market. The effect on housing prices and on rental demand.

Janne: EUI, quarterly benchmarks.

Other Notes: Retrofit market might be able to market to utilities' programs. People will demand more efficient housing and rental units.

Group #3: Thermal Imaging Flyover

Members:	Leader: John Farrell; Kirk Washington Jr., Kevin Lewis, Karen Monahan
Description:	Aerial imaging with an infrared camera of all buildings in Minneapolis, as Cedar Falls, Iowa has done.
Role of CEP?	<ol style="list-style-type: none">1. Identify financing for aerial imaging, e.g. all partners contribute and share data or city pays and sells to utilities (and third parties?).2. MAP IT. GIS overlay so individual properties can be viewed by public and by CEP.3. Do a pre- and post-image to capture change (e.g., 5 years). <p>Karen: Finance the project.</p>
Outcomes?	<ol style="list-style-type: none">1. Have data on energy use for all buildings in the city → used to target partnership programs toward low-hanging fruit and traditionally disadvantaged neighborhoods.2. GHG reductions, energy savings, job creation from EE retrofits solution to racial/economic disparities in energy costs/jobs.
Impacts?	<ul style="list-style-type: none">- Sales of MN/Minneapolis EE products and services.- Health. <p>Karen: I would like to gather information from data and prioritize Environmental Justice neighborhoods.</p>
Metrics?	Less red, reduce heat loss and energy savings.
Other Notes:	Residents would be able to type in their address to see their energy use. The Partnership and utilities would have the data to use in concert with other programs: CIP, multi-family/single-family.

Appendix D: Link to all survey responses from EVAC members

The full text of the survey presented to EVAC, along with all individual responses to survey questions, can be found at the Clean Energy Partnership website at the following link:

<http://bit.ly/1Szn6c4>

Appendix C

List of Metrics

List of Metrics

	ScoreCard Metrics	Unit(s)	Geography
1	Citywide GHG emissions	metric tons of CO ₂ e	citywide
1.1	GHG emissions from electricity use	metric tons of CO ₂ e	citywide
1.2	GHG emissions from natural gas use	metric tons of CO ₂ e	citywide
2	Commercial building energy use	kWh, therms	citywide
2.1	Commercial building benchmarking results	average ENERGY STAR score, average EUI, Total EUI	buildings covered by ordinance
2.2	Commercial utility EE program utilization	participation, incentive dollars, estimated energy savings, estimated cost savings	citywide
3	Residential building energy use	kWh, therms	citywide
4	Local or directly purchased renewable energy	mWhs	census tract
4.1	Windsource customers	count of customers, mWhs	census tract
4.2	Community solar garden subscribers	count of customers, mWhs	census tract
4.3	Rooftop solar	interconnections, MW, mWhs	census tract
5	Home Energy Squad visits	count of HES visits (rental and owner-occupied), estimated energy savings, estimated cost savings	census tract
5.1	Percent of eligible properties served by HES	percentage of eligible properties	census tract
5.2	HES-driven loans	count of loans, loan value	census tract
6	Low-income visits	count of CIP low-income and WAP visits, estimated energy savings, estimated cost savings	census tract
7	Air sealing/insulation	participation, estimated energy savings, estimated cost savings	census tract
8	Multi-family program participation	count of visits, count of dwelling units served, estimated cost and energy savings	census tract
8.1	Percent of eligible multi-family properties served by MFBE	percentage of eligible properties	census tract
8.2	Percent of properties participating in MFBE that engaged in activity beyond audit & direct install (conversion rate)	Percent of properties	census tract

Appendix D

Demographics Maps

Demographics Maps

In 2015, the Energy Vision Advisory Committee (EVAC) created a subcommittee to develop a community engagement process to a) identify communities that may be under-represented in utility efficiency program participation and b) develop strategies to increase participation among those communities. During the first phase of the EVAC Engagement Subcommittee's work, maps were developed looking at demographic and socioeconomic data from the United States Census Bureau. These maps can then be analyzed in tandem with utility program participation data to understand whether there are correlations between program participation and certain socioeconomic or demographic variables. Additionally, these factors help meet the goals of the Clean Energy Partnership by ensuring that its work moves forward "in a way that advances equity."

Four socioeconomic and demographic maps are included in this Appendix:

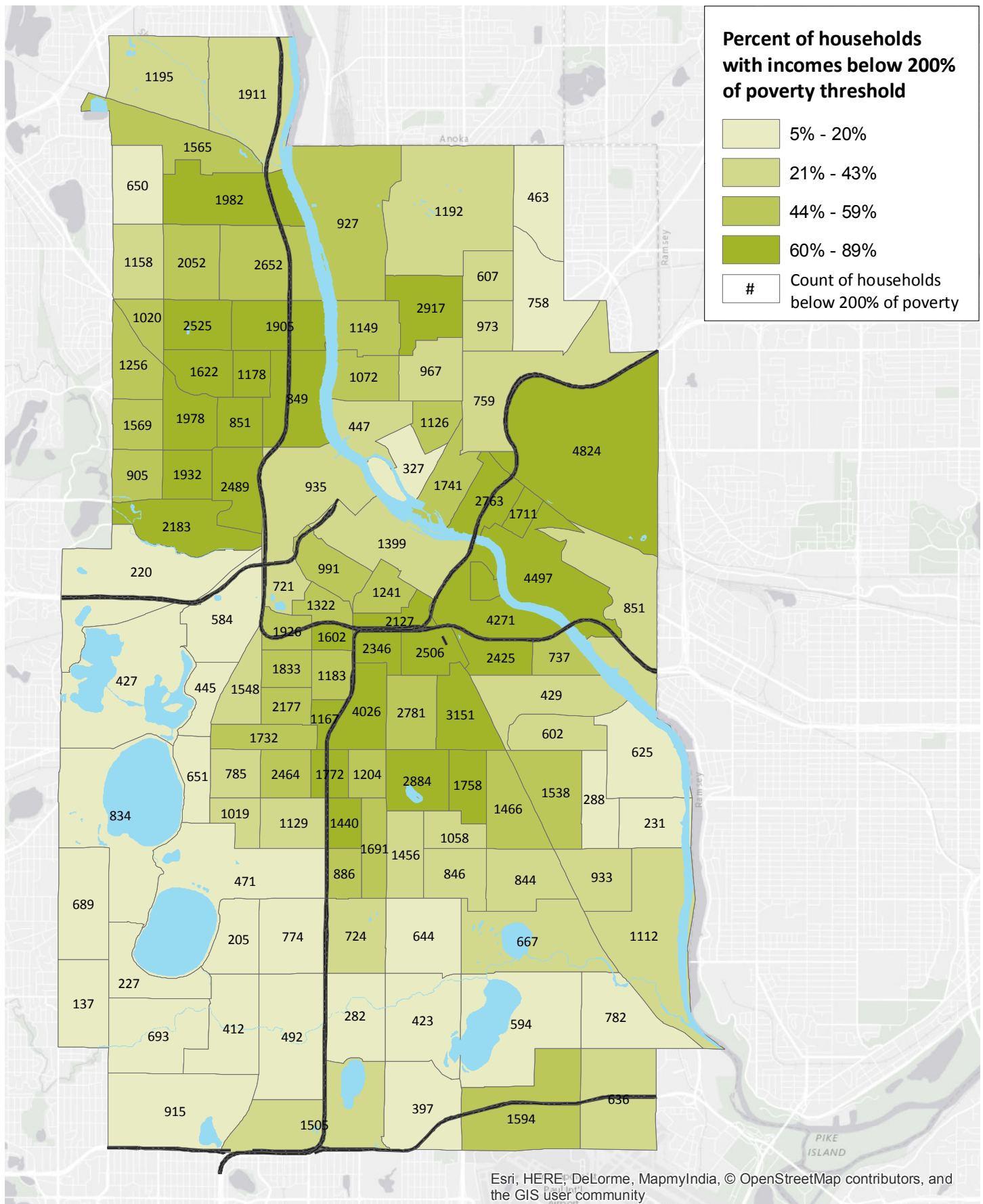
1. **Income (percent of households with income below 200% of poverty threshold).** This measure was chosen because households that earn less than 200% of the poverty threshold are more likely to experience energy cost burdens (defined as spending more than a given percentage of income on energy bills) and also qualify for federal and state energy support services.
2. **Race (percent of people of color, American Indians and Latinos).** This measure was chosen because of the correlation between income and people of color, especially in Minneapolis where income and racial disparities are particularly high.
3. **Tenure (percent of households that are renter-occupied).** Tenants in rental households tend to have less control over their energy costs and may be less able to take advantage of available

programs, because they have less ability to impellent upgrades than homeowners. Renters often tend to be lower income and may be more vulnerable to energy costs.

4. **Limited English proficiency (ability to speak English less than "very well").** Most, if not all, outreach and communication around utility programs are done in English. Immigrant communities that are not proficient in English may be less likely to be aware of or participate in programs if information is not provided in their native languages.

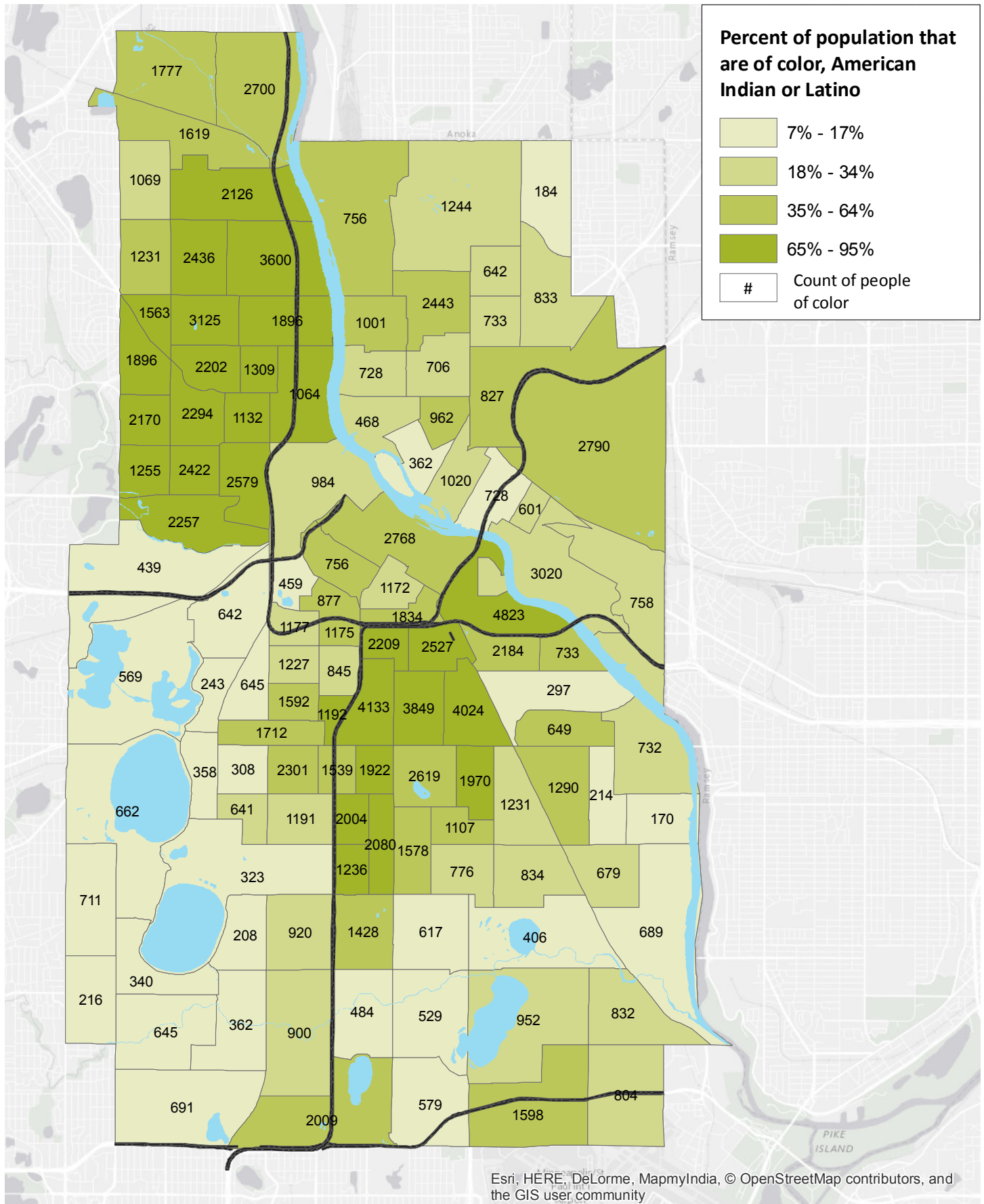
The program participation maps in the body of the report show that certain census tracts had higher densities of participation in 2015. The Clean Energy Partnership hopes to learn more about the distribution of participation in utility efficiency programs through continued data gathering.

Households with Income Below 200% of Poverty Threshold



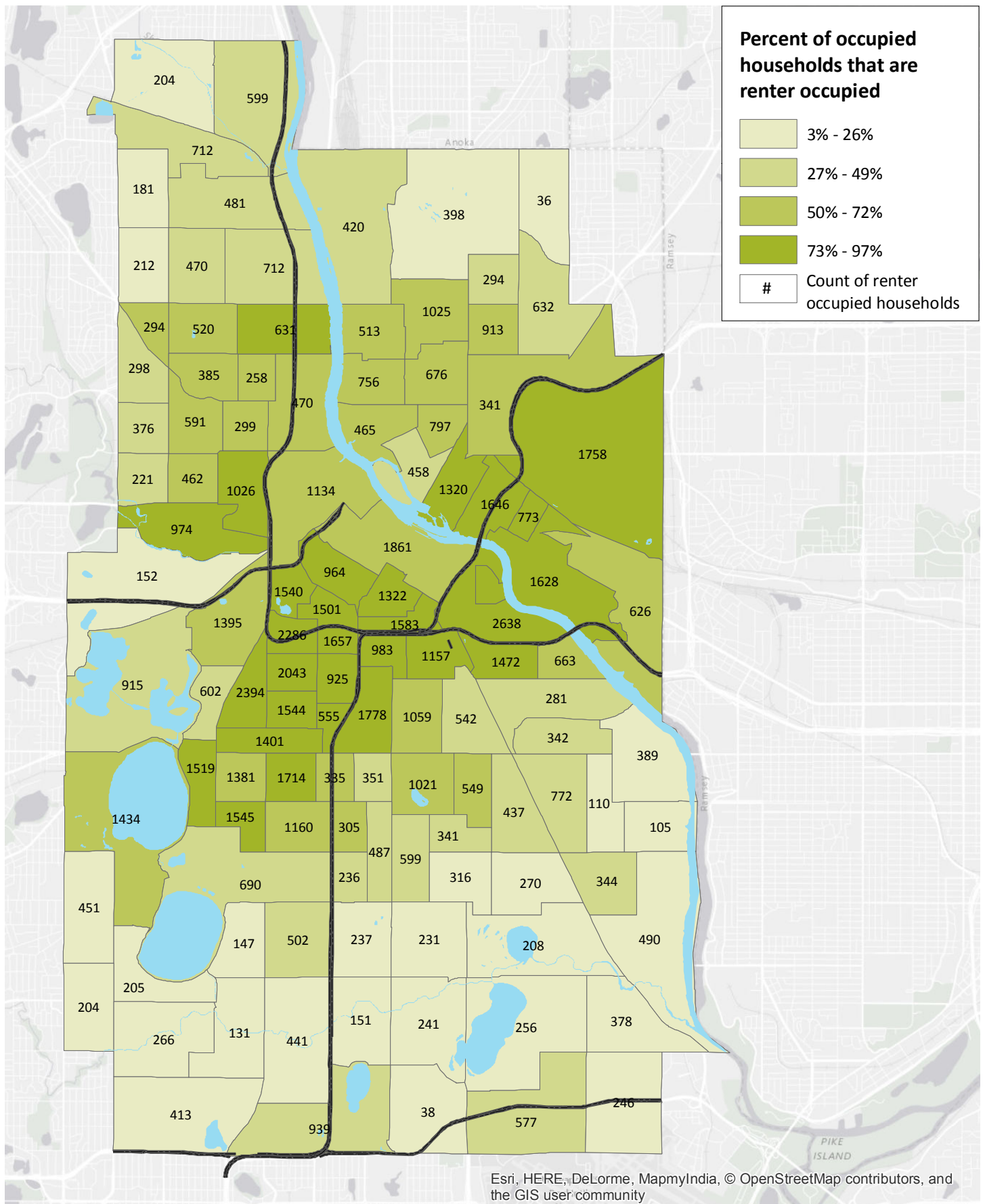
Data Source: U.S. Census Bureau, 2014 ACS 5-Year Estimates

People of Color, American Indians and Latinos



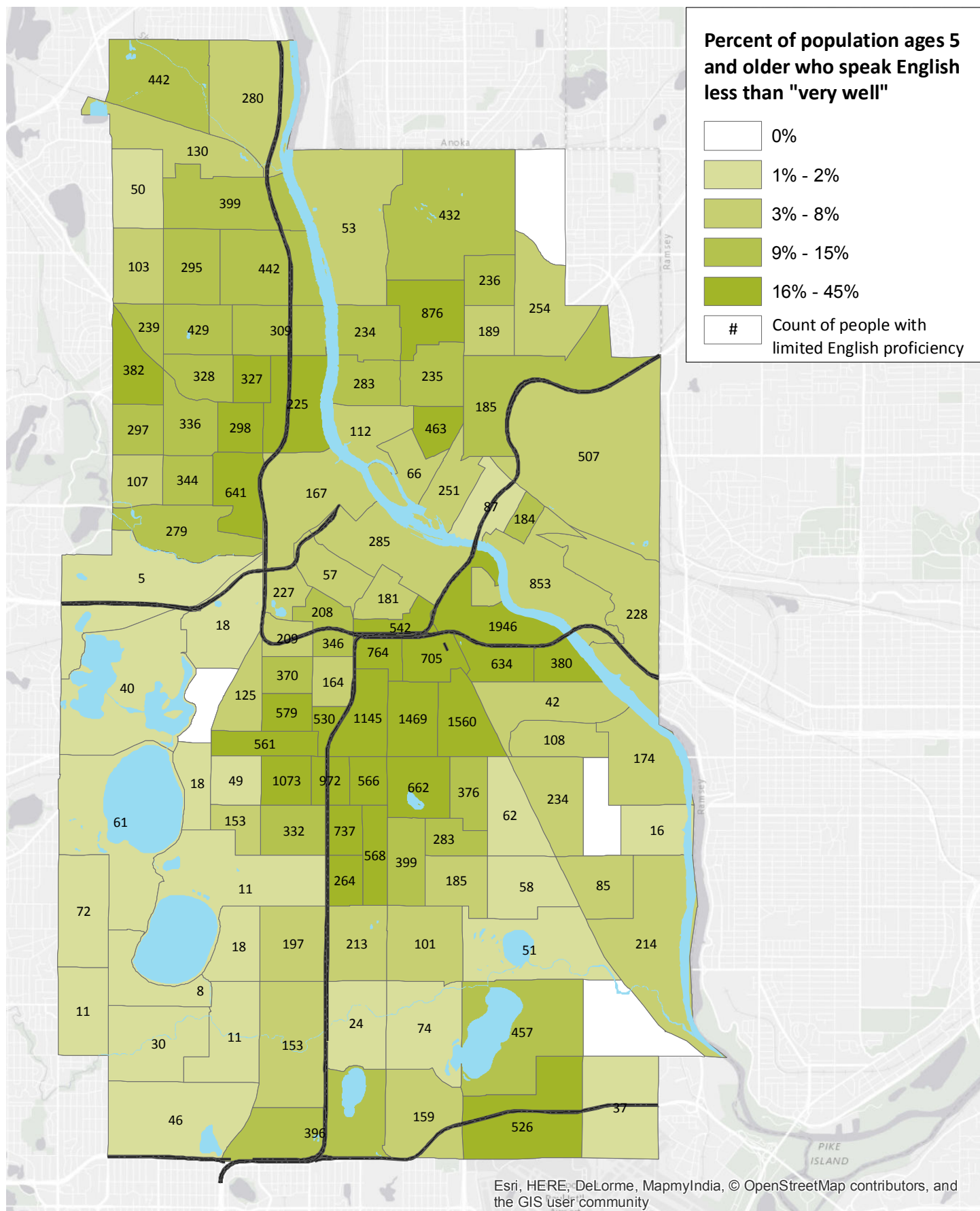
Data Source: U.S. Census Bureau, 2014 ACS 5-Year Estimates

Renter Occupied Households



Data Source: U.S. Census Bureau, 2014 ACS 5-Year Estimates

Limited English Proficiency

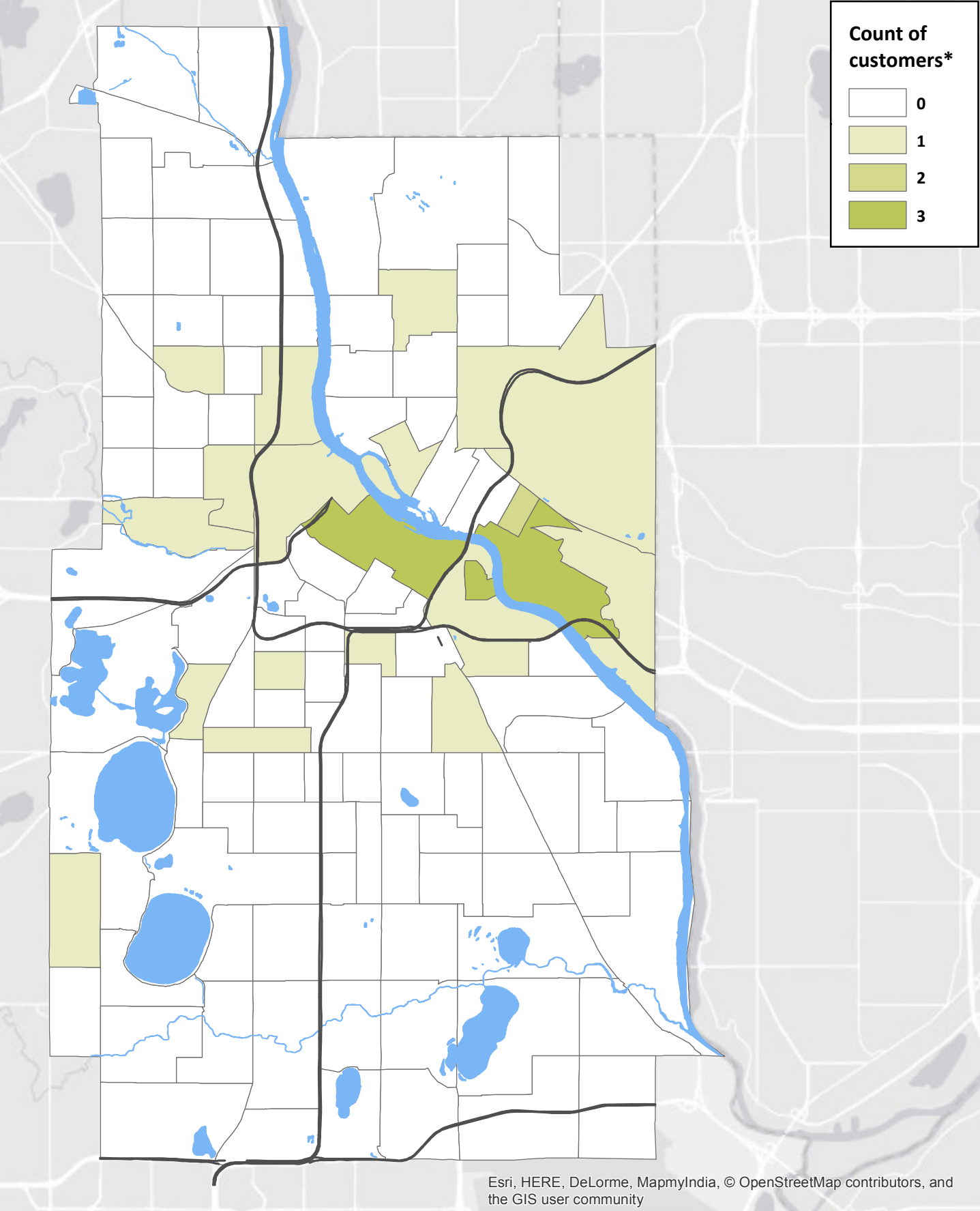


Data Source: U.S. Census Bureau, 2014 ACS 5-Year Estimates

Appendix E

Energy Design Assistance

Energy Design Assistance Program, 2015



Data source: US 2010 Census, Xcel Energy

*The Energy Design Assistance Program had 24 total Xcel Energy participants, of those, 11 are CenterPoint Energy and Xcel Energy joint projects

Appendix F

Additional Resources

Additional Resources

Metric 1 – Total GHG Emissions

Informational Resources

City of Minneapolis

GHG inventory

http://www.minneapolismn.gov/sustainability/reports/sustainability_carbon

Metric 2 – Commercial Buildings

Informational Resources

Benchmarking Report

City of Minneapolis

2014 Energy Benchmarking Report

<http://www.minneapolismn.gov/environment/energy/WCMS1P-116916>

Xcel Energy

Energy Benchmarking Tool

https://www.xcelenergy.com/programs_and_rebates/business_programs_and_rebates/new_construction_and_whole_building/energy_benchmarking

Energy Efficiency Resources

Xcel Energy

General Information: https://www.xcelenergy.com/programs_and_rebates

Business Solutions Center: 1-800-481-4700

- Commercial Efficiency
https://www.xcelenergy.com/programs_and_rebates/business_programs_and_rebates/new_construction_and_whole_building/commercial_efficiency
- Computer Efficiency
https://www.xcelenergy.com/programs_and_rebates/business_programs_and_rebates/equipment_rebates/computer_efficiency
- Cooling Efficiency
https://www.xcelenergy.com/programs_and_rebates/business_programs_and_rebates/equipment_rebates/cooling_efficiency
- Custom Efficiency
https://www.xcelenergy.com/programs_and_rebates/business_programs_and_rebates/equipment_rebates/custom_efficiency
- Data Center Efficiency
https://www.xcelenergy.com/programs_and_rebates/business_programs_and_rebates/equipment_rebates/data_center_efficiency
- Energy Design Assistance
https://www.xcelenergy.com/programs_and_rebates/business_programs_and_rebates/

- Food Service Equipment
[https://www.xcelenergy.com/programs and rebates/business programs and rebates/equipment rebates/foodservice equipment](https://www.xcelenergy.com/programs%20and%20rebates/business%20programs%20and%20rebates/equipment%20rebates/foodservice%20equipment)
- Lighting Efficiency
[https://www.xcelenergy.com/programs and rebates/business programs and rebates/equipment rebates/lighting efficiency](https://www.xcelenergy.com/programs%20and%20rebates/business%20programs%20and%20rebates/equipment%20rebates/lighting%20efficiency)
- Motor & Drive Efficiency
[https://www.xcelenergy.com/programs and rebates/business programs and rebates/equipment rebates/motor and drive efficiency](https://www.xcelenergy.com/programs%20and%20rebates/business%20programs%20and%20rebates/equipment%20rebates/motor%20and%20drive%20efficiency)
- Multifamily Building Efficiency Program
[https://www.xcelenergy.com/programs and rebates/business programs and rebates/rates/multi-family building efficiency](https://www.xcelenergy.com/programs%20and%20rebates/business%20programs%20and%20rebates/rates/multi-family%20building%20efficiency)
- Process Efficiency
[https://www.xcelenergy.com/programs and rebates/business programs and rebates/energy audits and studies/process efficiency](https://www.xcelenergy.com/programs%20and%20rebates/business%20programs%20and%20rebates/energy%20audits%20and%20studies/process%20efficiency)
- Recommissioning Assistance
[https://www.xcelenergy.com/programs and rebates/business programs and rebates/energy audits and studies/recommissioning](https://www.xcelenergy.com/programs%20and%20rebates/business%20programs%20and%20rebates/energy%20audits%20and%20studies/recommissioning)
- Self-Direct
[https://www.xcelenergy.com/programs and rebates/business programs and rebates/equipment rebates/self-direct efficiency](https://www.xcelenergy.com/programs%20and%20rebates/business%20programs%20and%20rebates/equipment%20rebates/self-direct%20efficiency)
- Turn-Key
[https://www.xcelenergy.com/programs and rebates/business programs and rebates/energy audits and studies/turn key](https://www.xcelenergy.com/programs%20and%20rebates/business%20programs%20and%20rebates/energy%20audits%20and%20studies/turn%20key)
- Electric Rate Savings
[https://www.xcelenergy.com/programs and rebates/business programs and rebates/rates/electric rate savings](https://www.xcelenergy.com/programs%20and%20rebates/business%20programs%20and%20rebates/rates/electric%20rate%20savings)
- Saver's Switch® for Business
[https://www.xcelenergy.com/programs and rebates/business programs and rebates/rates/savers switch for business](https://www.xcelenergy.com/programs%20and%20rebates/business%20programs%20and%20rebates/rates/savers%20switch%20for%20business)

CenterPoint Energy

General Information: <http://www.centerpointenergy.com/en-us/business/save-energy-money/efficiency-programs-rebates?sa=mn>

- Energy Design Assistance, Recommissioning, and Engineering Assistance
<http://www.centerpointenergy.com/en-us/business/save-energy-money/efficiency-programs-rebates/equipment-programs-and-rebates/commercial-engineering-programs?sa=mn>
- Multifamily Building Efficiency Program
<http://www.xcelenergy.com/multifamily>
- Commercial Heating & Water Heating Rebates
<http://www.centerpointenergy.com/en-us/business/save-energy-money/efficiency-programs-rebates/equipment-programs-and-rebates/commercial-engineering-programs?sa=mn>

Metric 3 – Residential Energy Use

Informational Resources

Energy Efficiency Resources

- Center for Energy and Environment, Energy Fit Homes report
https://www.mncee.org/getattachment/Resources/Resource-Center/Technical-Reports/Energy-Fit-Homes-A-Tool-to-Transform-the-Market-f/EFHReport_web.pdf.aspx
- Minnesota Department of Commerce, Home Energy Guide
<http://mn.gov/commerce-stat/pdfs/home-energy-guide.pdf>

Xcel Energy

Residential Energy Efficiency Programs and Rebates

General Information: https://www.xcelenergy.com/programs_and_rebates/residential_programs_and_rebates

- Home Energy Squad
<http://homeenergysquad.net/> or 866-222-4595
- Home Energy Saver Tool; online audit
<http://homeenergysaver.lbl.gov/consumer/>

CenterPoint Energy

- Energy Efficiency Programs and Rebates
<http://www.centerpointenergy.com/en-us/residential/save-energy-money/efficiency-programs-rebates?sa=mn>
- Home Energy Squad
<http://homeenergysquad.net/>
- Online Residential Energy Analyzer
<http://www.centerpointenergy.com/en-us/residential/save-energy-money/analyze-your-energy-use?sa=mn>

Metric 4 – Renewable Energy

Xcel Energy

General Information: https://www.xcelenergy.com/programs_and_rebates/residential_programs_and_rebates/renewable_energy_programs

- Windsorce®
https://www.xcelenergy.com/programs_and_rebates/residential_programs_and_rebates/renewable_energy_programs/windsorce_for_residences
- Solar*Rewards
https://www.xcelenergy.com/programs_and_rebates/residential_programs_and_rebates/renewable_energy_programs/solar_rewards_for_residences
- Made in MN
<https://mn.gov/commerce/industries/energy/solar/mim/>
- Solar*Rewards Community (gardens)
https://www.xcelenergy.com/programs_and_rebates/residential_programs_and_rebates/renewable_energy_programs/solar_rewards_community

Energy Efficiency Resources

Federal Assistance

Weatherization Assistance Program – Coordinated through local community action agencies and utilities.

Xcel Energy

- Home Energy Savings Program
[https://www.xcelenergy.com/programs and rebates/residential programs and rebates/affordable energy/income-qualified home energy savings program](https://www.xcelenergy.com/programs%20and%20rebates/residential%20programs%20and%20rebates/affordable%20energy/income-qualified%20home%20energy%20savings%20program)
- Multi-Family Home Energy Savings Program
[https://www.xcelenergy.com/programs and rebates/residential programs and rebates/affordable energy/income-qualified multi-family energy savings program](https://www.xcelenergy.com/programs%20and%20rebates/residential%20programs%20and%20rebates/affordable%20energy/income-qualified%20multi-family%20energy%20savings%20program)
- Home Energy Squad
<http://www.homeenergysquad.net/services/>

CenterPoint Energy

- Low-Income Weatherization
- Non-Profit Affordable Housing
- Affordable Housing Multi Family Building Rebates
<http://www.centerpointenergy.com/en-us/business/save-energy-money/efficiency-programs-rebates/programs-and-rebates-by-industry/affordable-housing-multi-family-buildings?sa=mn>
- Low-Income Renter Efficiency Program

Bill-Payment Resources

Xcel Energy

- Power on Program Call 651-774-9010 or 888-774-9070
[https://www.xcelenergy.com/programs and rebates/residential programs and rebates/affordable energy/poweron and gas affordability program](https://www.xcelenergy.com/programs%20and%20rebates/residential%20programs%20and%20rebates/affordable%20energy/poweron%20and%20gas%20affordability%20program)
- Energy Assistance Call 1-800-895-4999
[https://www.xcelenergy.com/billing and payment/lower your bill/energy assistance/energy assistance - mn](https://www.xcelenergy.com/billing%20and%20payment/lower%20your%20bill/energy%20assistance/energy%20assistance%20-%20mn)

CenterPoint Energy

- General Payment Assistance Information
<http://www.centerpointenergy.com/en-us/residential/customer-service/billing-payment/need-help-paying-your-bill?sa=mn>
- Low-Income Home Energy Assistance Program (LIHEAP)
 - Federally-funded assistance to income-qualified customers
 - General Information
<http://www.centerpointenergy.com/en-us/CustomerService/Pages/liheap.aspx?sa=mn&au=res>
 - Apply through MN Department of Commerce

Metric 7 – Air Sealing & Insulation

Energy Efficiency Resources

CenterPoint Energy

- Air Sealing & Insulation Rebates
<http://www.centerpointenergy.com/InsulationRebate>
- Home Energy Audits
<http://www.centerpointenergy.com/residential/save-energy-money/efficiency-programs-rebates/home-energy-audits> or 888-240-4123

Metric 8 – Multi Family

Energy Efficiency Resources

Xcel Energy

- Energy Design Assistance
[https://www.xcelenergy.com/programs and rebates/business programs and rebates/new construction and whole building/business new construction](https://www.xcelenergy.com/programs%20and%20rebates/business%20programs%20and%20rebates/new%20construction%20and%20whole%20building/business%20new%20construction)
- Multi-Family Building Efficiency Program
[https://www.xcelenergy.com/programs and rebates/business programs and rebates/rates/multi-family building efficiency](https://www.xcelenergy.com/programs%20and%20rebates/business%20programs%20and%20rebates/rates/multi-family%20building%20efficiency)
- Multi-Family Energy Savings Program
[https://www.xcelenergy.com/programs and rebates/residential programs and rebates/affordable energy/income-qualified multi-family energy savings program](https://www.xcelenergy.com/programs%20and%20rebates/residential%20programs%20and%20rebates/affordable%20energy/income-qualified%20multi-family%20energy%20savings%20program)
- One Stop Shop – Multi-Family/Tenant Projects
<https://www.mncee.org/services/program-design-and-delivery/one-stop-efficiency-shop®-lighting-retrofits/>

CenterPoint Energy

- Multifamily Building Efficiency Program
<http://xcelenergy.com/multifamily>
- Affordable Housing Multi Family Building Rebates
<http://www.centerpointenergy.com/en-us/business/save-energy-money/efficiency-programs-rebates/programs-and-rebates-by-industry/affordable-housing-multi-family-buildings?sa=mn>
- Energy Design Assistance (for new construction)
<http://www.centerpointenergy.com/en-us/Documents/2016CIPDocs/150289-Energy-Design-Asst-Fact-Sheet.pdf>
- Other offerings for multi-family building owners
<http://www.centerpointenergy.com/en-us/business/save-energy-money/efficiency-programs-rebates/programs-and-rebates-by-industry/multi-family-housing?sa=mn>