

Minneapolis Clean Energy Partnership

2017 ANNUAL REPORT



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Executive Summary

The Clean Energy Partnership (Partnership) is a first-in-the-nation approach that partners the City of Minneapolis (City) with Xcel Energy and CenterPoint Energy (Utilities), the City's electric and natural gas utility providers, to help the City reach its greenhouse gas emission reduction goals through energy conservation and renewable energy. The [Minneapolis Climate Action Plan](#) and [City of Minneapolis Energy Vision 2014](#) set the City's climate goals and inform Partnership activities. In January 2017, the Partnership Board approved the 2017-2018 Partnership Work Plan, outlining Partnership activities that leverage partners' strengths to address energy and climate-related issues. This report is intended to aid the joint City/Utilities Board, with new members in 2018, to evaluate the Partnership's progress to date and make decisions on how to improve for the future.

This Annual Report shows progress made in 2017, the Partners' third year of collaboration. The report sections correspond to eight metrics, approved by the Board, for tracking progress towards Partnership goals. This year a section was added to give a status update on the 23 Partnership activities established in the 2017-2018 Work Plan. The following section describes some of the Partnership highlights of 2017.

2017 Partnership Highlights

Additional Funding Initiated for New & Expanded Energy Programs in Minneapolis

In December 2017, the Minneapolis City Council approved a franchise fee increase for gas and electric bills to allocate funding to energy and climate action. The decision came after months of work in early 2017 by the Partnership's Energy Vision Advisory Committee (EVAC) to identify energy programming needs and potential revenue sources. A report EVAC created for the Partnership Board, [Funding the Minneapolis Clean Energy Partnership: Recommendations from EVAC](#), led the Board to pass a landmark motion to support additional, dedicated City funding for new and existing programs to increase energy efficiency and renewable energy investments with a specific focus on equity and greenhouse gas emissions reductions. EVAC's report and the Board's motion culminated in the City Council's passage of the franchise fee increase amendment, which is currently funding new and expanded energy program opportunities for Minneapolis residents and businesses in 2018.

Energy Efficiency Community Engagement Barriers and Opportunities Identified in Hard-to-Reach Minneapolis Communities

In 2017, the Partnership conducted a Community Engagement Pilot Project (Partnership 2017-2018 Work Plan Activity #1) to identify barriers and benefits related to energy efficiency activities in lower income communities and

communities of color. The Neighborhood Hub and Minneapolis Renter's Coalition were selected to conduct a field investigations to determine the best way to educate and engage community members and stakeholder's groups in utility energy efficiency programs. Neighborhood Hub focused their efforts on Low-income single family owned and rented homes while Minneapolis Renter's Coalition focused engagement on multi-family market rate and low-income renters. The lessons learned from this Pilot included: 1) community outreach and engagement is more effective when done by a trusted partner and 2) programs and program materials must be simple and streamlined for maximum effectiveness. In 2018, the City is building upon the findings of this Pilot to engage communities in the Green Zones through trusted organizations.

New Tools Under Development in 2017 to Help Customers Achieve Energy Savings

CenterPoint Energy kicked-off development of On-Bill Loan Repayment and Energy Data Aggregation Tools (Partnership 2017-2018 Work Plan Activities #2 and #13). The vision for the On-Bill Loan Repayment tool is to allow customers to use the convenience of their gas bill to submit payments to qualified, participating lenders for energy conservation projects. The Energy Data Aggregation Tool will facilitate energy use benchmarking of commercial and multi-family buildings by aggregating energy use for the whole-building and automatically transferring it to ENERGY STAR Portfolio Manager®, while adhering to data privacy rules for the individual-tenants. Both projects met critical milestones in 2017, including: establishing project scopes of work and securing third-party expertise to help administer the projects. Starting in late 2018, CenterPoint Energy expects the Energy Data Aggregation Tool will help building owners and managers understand their energy use and track the success of energy efficiency improvements. In 2019, the On-Bill Loan Repayment Tool will reduce customer barriers to financing energy efficiency home improvements.

Xcel Energy developed its Small Business Refrigeration Program in 2017 following numerous points of engagement with City staff, EVAC members and trade professionals. The program was filed with state regulators, approved, and launched by mid-2018. The program helps small businesses, such as: grocers, convenience stores, and liquor stores, achieve energy savings through the installation of more efficient refrigeration equipment. Future outreach and engagement strategies will focus on the Green Zones and will include cobranding with supplemental opportunities provided by the City, like leveraging outreach and utilizing grants from the Green Business Cost Share program to supplement utility rebates.

Nationally Recognized Utility Conservation Improvement Programs (CIP) Continue to Deliver Big Energy Savings

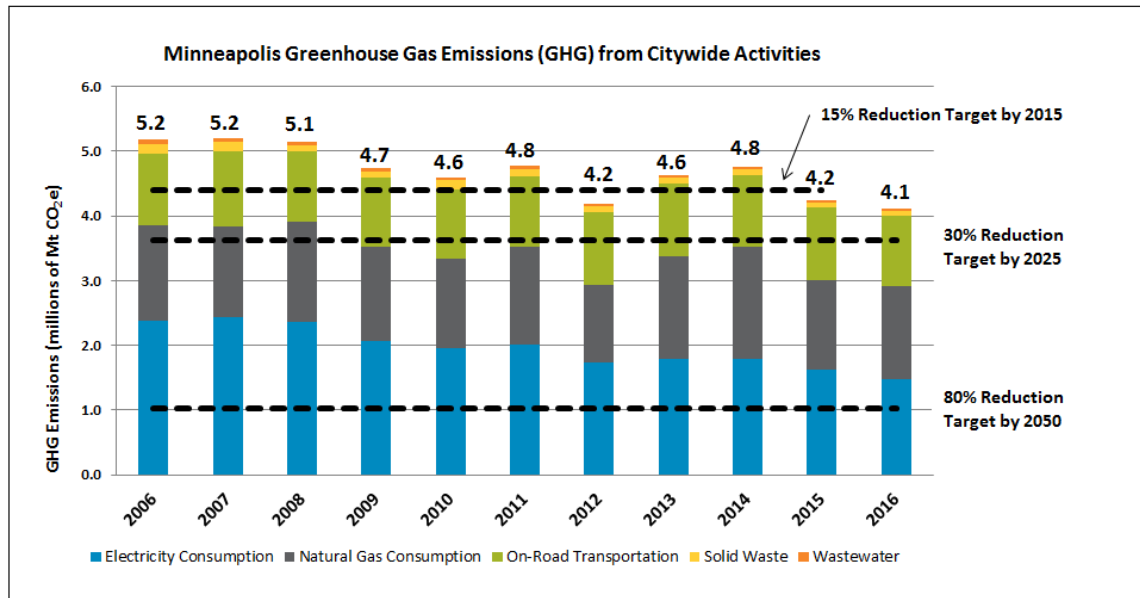
In 2017, CenterPoint Energy and Xcel Energy's portfolio of Conservation Improvement Programs (CIP) continued to play a critical role in reducing greenhouse gas emissions for a diverse-range of Minneapolis customers. CIP helps Minnesota households and businesses use electricity and natural gas more efficiently through methods that are evaluated for cost-effectiveness and reliability by Minnesota Department of Commerce, Division of Energy Resources. In

Minneapolis in 2017, the Utilities invested approximately \$18 million in energy conservation, saved their customers roughly \$12 million in annual utility bill costs, and saved an estimated 98,660 metric tons of carbon dioxide equivalent emissions*. The emissions avoided represent approximately 2.4% of overall community-wide emissions in 2016. These activities are described in greater detail in subsequent sections of this report.

*Xcel Energy estimates their CIP activity in the City of Minneapolis in 2017 to be valued at approximately \$10.4 million, saved customers an estimated \$3.5 million, and reduced electricity by roughly 59.4 million kilowatt hours(kWh). CenterPoint Energy estimates their CIP activity in the City of Minneapolis in 2017 to be valued at approximately \$8 million, saved customers an estimated \$8.1 million, and reduced natural gas use by roughly 1.4 million dekatherms.

Metric 1.0:

Citywide Greenhouse Gas Emissions



The figure above represents the citywide greenhouse gas (GHG) emissions inventory, an accounting of Minneapolis emissions from buildings, transportation, wastewater, and solid waste. Minneapolis has adopted targets to reduce community-wide emissions 15% by 2015, 30% by 2025, and 80% by 2050 (from the 2006 baseline) through the roadmap set by the *Minneapolis Climate Action Plan*.

According to the most recently available data, 2016 citywide GHG emissions decreased 20.4% from 2006 levels, further surpassing the 2015 reduction goal. GHG emissions decreased 3.1% in 2016 compared to 2015. To achieve future goals, GHG emissions will have to decrease an additional 10% by 2025 and an additional 60% by 2050. An increase in emissions from natural gas consumption, solid waste, and wastewater was offset by decreases in emissions from electricity consumption and on-road transportation.

Despite a growing population and building footprint since 2006, electricity consumption has decreased by 5.5% and electricity emissions decreased by 38%, accounting for 86% of total GHG reductions since 2006. Increases in energy efficiency and the reduced carbon intensity of electric generation, which declined by 34% over the last 11 years, led to the change. Natural gas consumption and resulting emissions can vary greatly year over year, though 2017 emissions decreased 2% compared to 2006.

Yearly weather variations have a significant impact on the consumption of natural gas for heating, and a lesser impact on electricity for cooling. According to the National Oceanic and Atmospheric Administration (NOAA), the winter months of 2016, with 6,332 heating degree days (HDD), were 16% warmer than the 30-year average of 7,580 HDD and warmer than the 2006 baseline of 6,676 HDD. The summer of 2016, with 935 cooling degree days (CDD), was 24% warmer than the 30-year average of 753 CDD, yet slightly cooler than the 2006 baseline of 1,023 CDD.

Table 1 provides the data for Metric 1.0: Citywide GHG Emissions that contributed to the analysis in this section of the report.

Table 1: Metric 1.0 Citywide GHG emissions, 2014-2016

Metric		2014	2015	2016
1.0	Citywide emissions (metric tons CO ₂ e)	4,758,487	4,248,025	4,117,293
1.1	Emissions from electricity use (metric tons CO ₂ e)	1,783,580	1,627,560	1,470,842
1.2	Emissions from natural gas use (metric tons CO ₂ e)	1,733,068	1,382,583	1,445,671

Metric 2.0:

Commercial Building Energy Use

The City of Minneapolis measures energy use from commercial buildings as part of its greenhouse gas emissions inventory. Electric consumption decreased 5.4% from 2016 to 2017 for commercial and industrial customers. Natural gas consumption for commercial customers saw an increase of 11.7%. Table 2 provides the data for Metric 2.0: Commercial Building Energy Use that contributed to the analysis in this section of the report.

Table 2: Metric 2.0 Commercial Building Energy Use, 2014-2017

Metric		2014	2015	2016	2017
2.0	Commercial/Industrial building electricity use (MWh)	3,088,342	3,033,427	3,028,857	2,864,604
	Commercial building natural gas use (Therms)	158,655,415	135,217,985	126,892,599	141,765,469

The City's [Commercial Building Benchmarking and Transparency](#) Ordinance requires private commercial buildings above 50,000 square feet and public buildings above 25,000 square feet to benchmark their energy usage. Approximately 80% of commercial building area in the City is subject to the energy and water benchmarking ordinance.

In 2017, the City received benchmarking energy use data for 434 commercial properties. Buildings with property types able to earn ENERGY STAR scores showed a relatively high average score of 69 (a score of 50 is the national median and a score of 75+ qualifies for ENERGY STAR certification). Of benchmarked buildings that meet data quality standards, the average energy use intensity (EUI) and average weather-normalized EUI are 92 and 97 kBtu/sf, respectively. Additional results, context, and analysis including weather-normalization are available in the [2016 Energy Benchmarking Report](#). The Minneapolis Benchmarking [interactive results dashboard and map](#) shows performance metrics for individual commercial buildings that report energy benchmarking data to the City. Table 3 provides the data for Metric 2.1: Commercial Building Benchmarking Results that contributed to the analysis in this section of the report.

Table 3: Metric 2.1 Commercial Building Benchmarking Results, 2014-2016*

Metric		2014	2015	2016
2.1	Average ENERGY STAR score of benchmarked buildings	74	71	69
	Average EUI of benchmarked buildings (kBtu/sqft/yr)	101	95	92

Metric		2014	2015	2016
	Average weather-normalized EUI of benchmarked buildings (kBtu/sqft/yr)	95	99	97
	Total site energy use of benchmarked buildings (kBtu)	8,176,575,652	8,104,028,664	8,272,790,764

*Commercial Building Benchmarking Results are not yet available for 2017

The seemingly contradictory decrease of average ENERGY STAR score paired with the increase of average EUI is the result of building owners' continued efforts to increase the accuracy of their ENERGY STAR score by adjusting building operation characteristics such as building hours of operation and number of people present.

In November 2017, the City celebrated the third year of the Minneapolis Building Energy Challenge. Building owners, managers, tenants, and operators were joined by student, utility representatives, and City staff to recognize six Minneapolis building operators for their progress in improving energy efficiency and reducing greenhouse gas emissions. To learn about the awardees, see more information at the [2017 Awards Highlights](#).

Metric 2.2:

Commercial Utility Energy Efficiency (EE) Program Utilization

CenterPoint Energy and Xcel Energy offer a variety of energy efficiency programs to their commercial and industrial customers throughout Minneapolis. These programs offer rebates and other funding support to engage customers in energy efficiency opportunities that range from full process and systematic improvements to specific end use measure installations such as heating, cooling, lighting, food service equipment, and motors. Additionally, both utilities provide consultation in the design and construction of new commercial buildings to improve the long-term energy efficiency of those buildings. CenterPoint Energy and Xcel Energy continue to collaborate on ways to successfully address the complex needs of the commercial and industrial sector.

In 2017, CenterPoint Energy's significant increase in commercial building energy savings can be attributed to the company's biggest conservation project to date at the University of Minnesota. The project, which consisted of a new high efficiency natural gas combined heat and power plant, resulted in annual energy savings of 1 million dekaTherms within the City of Minneapolis. The University of Minnesota was granted a \$2 million rebate check and expects to see approximately \$5.4 million in energy cost savings each year as a result of the conservation project. Future years may show reductions in community-wide GHG emissions and energy consumption due to this project, but building benchmarking data will not be affected as the University benchmarks buildings separately from the City's ordinance. Table 4 provides the data for Metric 2.2: Commercial EE Program Utilization for CenterPoint Energy that contributed to the analysis in this section of the report.

Table 4: Metric 2.2 CenterPoint Energy Commercial EE Program Utilization, 2014-2017

Metric		CenterPoint Energy			
		2014	2015	2016	2017*
2.2	Commercial utility energy efficiency program participation (customers)	311	473	399	504
	Commercial utility energy efficiency program participation (rebates)	1,096	1,219	1,063	1,269
	Rebate dollars spent (\$)	809,865	720,490	1,135,910	2,891,985
	Estimated annual energy savings (Therms)	4,343,071	2,668,485	5,218,578	13,398,873
	Estimated annual cost savings (\$)	2,844,873	1,280,162	2,811,119	7,426,544

*Includes U of M Project

Xcel Energy awarded the IDS Center, one of Minneapolis' historic skyline icons, with a Recognition of Excellence Award for their 2017 conservation efforts. The IDS Center received over \$150,000 in rebates for electrical efficiency upgrades at its 1.4 million square foot mixed use property in downtown Minneapolis. The project upgrades (LED lighting, high efficiency heating and cooling pumps, and recommissioning projects) resulted in a combined savings of over 2 million kWh. Table 5 provides the data for Metric 2.2: Commercial EE Program Utilization for Xcel Energy that contributed to the analysis in this section of the report.

Table 5: Metric 2.2 Xcel Energy Commercial EE Program Utilization, 2014-2017

Metric		Xcel Energy			
		2014	2015	2016	2017
2.2	Commercial utility energy efficiency program participation (customers)	653	757	918	866
	Commercial utility energy efficiency program participation (rebates)	688	1,249	1,758	1,814
	Rebate dollars spent (\$)	3,134,939	4,235,490	8,862,846	5,864,360
	Estimated annual energy savings (kWh)	36,160,509	43,204,422	75,369,492	56,415,847
	Estimated annual cost savings (\$)	1,952,667	4,622,873	7,536,949	3,215,703

Conservation program performance in the large commercial and industrial sector can vary across geographies and from year to year. In 2017, Xcel Energy completed more small-scale commercial conservation projects which resulted in lower energy savings overall compared to 2016. Meanwhile, as noted above, CenterPoint Energy's overall high commercial conservation performance was supported by a single, unique, and large project at the University of Minnesota.

The Energy Design Assistance (EDA) program partners Xcel Energy and CenterPoint Energy in offering design consultation, energy modeling services, and financial incentives to building owners, architects, and engineers to incorporate energy-efficient systems and equipment in the design of new construction and/or renovations. In 2017, EDA participation, energy savings, and rebate amounts decreased in Minneapolis following peak performance in 2016. Compared statewide, the same EDA activity metrics increased on the electric side and decreased on the gas side. Despite the decrease on the gas side, the two utilities met their statewide participation and energy saving performance goals for EDA in 2017. Tables 6 and 7 provide the data for CenterPoint Energy and Xcel Energy's EDA Program that contributed to the analysis in this section of the report.

Table 6: CenterPoint Energy EDA Program Performance, 2015-2017

Energy Design Assistance	CenterPoint Energy		
	2015	2016	2017
Program participation	11	25	18
Estimated annual energy savings (Therms)	400,317	1,890,915	586,466
Rebates dollars spent (\$)	140,596	302,767	225,256

Table 7: Xcel Energy EDA Program Performance, 2015-2017

Energy Design Assistance	Xcel Energy		
	2015	2016	2017
Program participation	24	31	19
Estimated annual energy savings (kWh)	5,847,225	14,902,577	4,221,483
Rebates dollars spent (\$)	592,603	2,139,146	780,113

Resources:

[Xcel Energy Commercial EE Programs](#)

[CenterPoint Energy Commercial EE Programs](#)

Metric 3.0:

Residential Building Energy Use

In 2017, CenterPoint Energy's approximately 122,000 residential natural gas customers in Minneapolis each used an average of 843 Therms resulting in just over 4.5 metric tons of CO₂e emissions annually per customer.

There are over 176,000 Xcel Energy residential electric customers in Minneapolis. The average annual electric consumption per household is about 5,389 kWh per year. This results in approximately 2.0 metric tons of CO₂e emissions annually per customer after accounting for carbon-free Windsource commitments by Minneapolis residents.

Overall in 2017, residential electric use (non-weather normalized) decreased by 2.1% and natural gas use increased 9.0% from 2016 levels. As in commercial buildings, residential natural gas consumption can vary greatly with winter temperatures. Metrics 4, 5, 6, and 7 further discuss specific residential energy programs that result in consumption and emissions reductions in the residential sector.

Table 8 provides the data for Metric 3.0: Residential Building Energy Use that contributed to the analysis in this section of the report.

Table 8: Metric 3.0: Residential Building Energy Use, 2014-2017

Metric		2014	2015	2016	2017
3.0	Total electric use by residential customers (kWh)	980,965,000	945,334,750	970,280,366	950,158,840
	Total natural gas use by residential customers (Therms)	130,883,472	102,326,656	94,204,489	102,712,038

Metric 4.0:

Local or Directly Purchased Renewable Energy

Xcel Energy offers four renewable energy options in Minneapolis: Windsource®, Solar*Rewards (Rooftop) and Solar*Rewards Community®, and Renewable*Connect.

Windsource is a voluntary energy program that allows customers to purchase some or all of their energy from wind energy sources. The program is certified by Green-e® and supports additional local renewable energy. This program has maintained a positive participation trend year to year.

The Solar*Rewards Community program gives residential and business customers the opportunity to participate in solar without attaching an array to their home. Subscribers to a solar garden work directly with a solar developer to access solar energy, while Xcel Energy credits the customer bill for the solar energy produced within their subscription. Xcel Energy saw a significant increase in Minneapolis subscribed Community Solar Gardens in 2017. Statewide to date, Xcel Energy has 364 MW and 92 active gardens with another 322 MW and 181 project sites in the design and construction phase. Today, Minneapolis residents and businesses are eligible to participate in 55 of the state's 92 active community solar gardens.

Through Solar*Rewards, individuals install solar panels on their roof so they can produce their own energy. If production exceeds use, the extra energy is added to the grid and the customer receives a credit on their bill. Xcel Energy saw an 87% increase in demand and 95% increase in energy produced from 2016 to 2017 levels.

The Renewable*Connect program offers all customers a way to benefit from renewable energy by accessing wind and solar without the need to purchase and install equipment at their property. The Renewable*Connect generation mix is approximately 70% wind and 30% solar energy with contracts. The first tranche of the program became available in 2017 with over 800 participants and almost 5,000 Megawatt hours subscribed in Minneapolis. Table 9 provides the data for Metric 4.0: Local or Directly Purchased Renewable Energy that contributed to the analysis in this section of the report.

Table 9: Metric 4.0: Local or Directly Purchased Renewable Energy, 2014-2017

Metric		Xcel Energy			
		2014	2015	2016	2017
4.1	Windsor Participants	9,906	11,154	11,926	12,903
	Windsor (MWh)	45,534	33,309	36,125	50,277
4.2	Solar*Rewards Community (MW)			3	29
	Solar*Rewards Community Gardens			5	55
4.3	Solar*Rewards ¹ Participants	56	92	95	150
	Solar*Rewards (MW)	0.75	0.91	1.01	1.88
	Solar*Rewards (MWh)	930	1,050	1,150	2,243
4.4	Renewable*Connect Participants				836
	Renewable*Connect (MWh)				4,996

¹Solar Rewards includes both Solar Rewards and Made in Minnesota Participants

Resources:

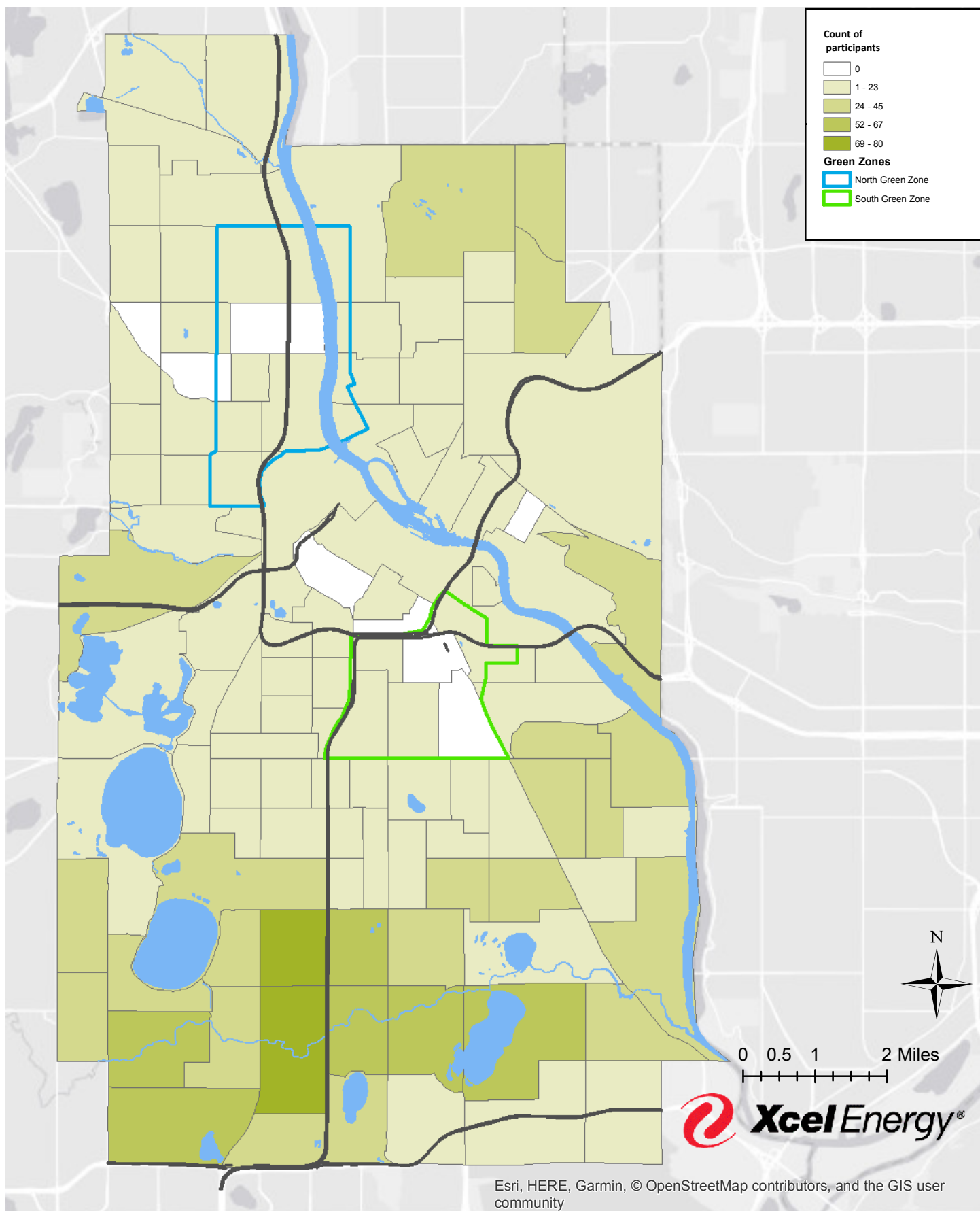
[Windsor®](#)

[Solar*Rewards \(Rooftop\)](#)

[Solar*Rewards Community®](#)

[Renewable*Connect](#)

Metric 4.2: Xcel Energy Solar*Rewards Community Participation, 2017



Metric 5.0:

Home Energy Squad Visits

The Center for Energy and Environment (CEE) delivers the Home Energy Squad (HES) program on behalf of the two utilities. HES performs a home energy audit to identify and discuss energy efficiency home improvements with residential customers. The energy audits include direct installations of energy saving devices such as LED lighting, door weather-stripping, programmable thermostats, and other measures. Although direct installations provide valuable savings, conversions to larger, higher energy saving projects provide the greatest impact. During HES visits, participants are made aware of these opportunities along with relevant financing products offered by CEE. Beginning in 2017, Home Energy Squad (HES) visits were made available at no cost to income qualifying customers (at or below 80% of area median income). Twenty percent of HES Minneapolis participants received a visit at no cost to the participant in 2017.

In 2017, HES visits increased by approximately 8% across the entire service territory with a pronounced decrease of about 26% within the City of Minneapolis. Supplemental marketing and outreach activities conducted by the City of Minneapolis in 2015 and 2016, but not continued in 2017, may have played a role in this participation trend. In 2018, the City plans to subsidize the cost of HES visits in the Green Zones and for customers earning less than the area median income. Table 10 provides the data for Metric 5.0: Home Energy Squad Visits that contributed to the analysis in this section of the report.

Table 10: Metric 5.0: Home Energy Squad Visits, 2014-2017

Metric		2014	2015	2016	2017
5.0	Home Energy Squad participation	731	1,198	837	620
	Annual energy savings (kBtu)	6,605,790	10,825,904	7,563,674	6,056,072
	Estimated annual cost savings (\$)	99,031	136,161	77,354	115,499
5.1	Percent of 1-4 unit residences served by HES (incremental)	0.8%	1.0%	0.9%	0.7%

Overall, approximately 10% of 1-4 unit Minneapolis residences have participated in HES between 2009 and 2017. In 2017, the average participant in HES saved 9,770 kBtu annually, which is nearly 10% of the average annual Minnesota household energy use. Electric savings for HES in 2017 were primarily driven by the installation of LED lightbulbs and programmable thermostats.

In 2017, HES-driven energy efficiency loan activity decreased significantly. In 2017, 0% financing for insulation and air-sealing upgrades was not available, unlike previous years. The City has now made this offering available again in 2018. Table 11 provides the data for Metric 5.2: Energy Efficiency Loans that contributed to the analysis in this section of the report.

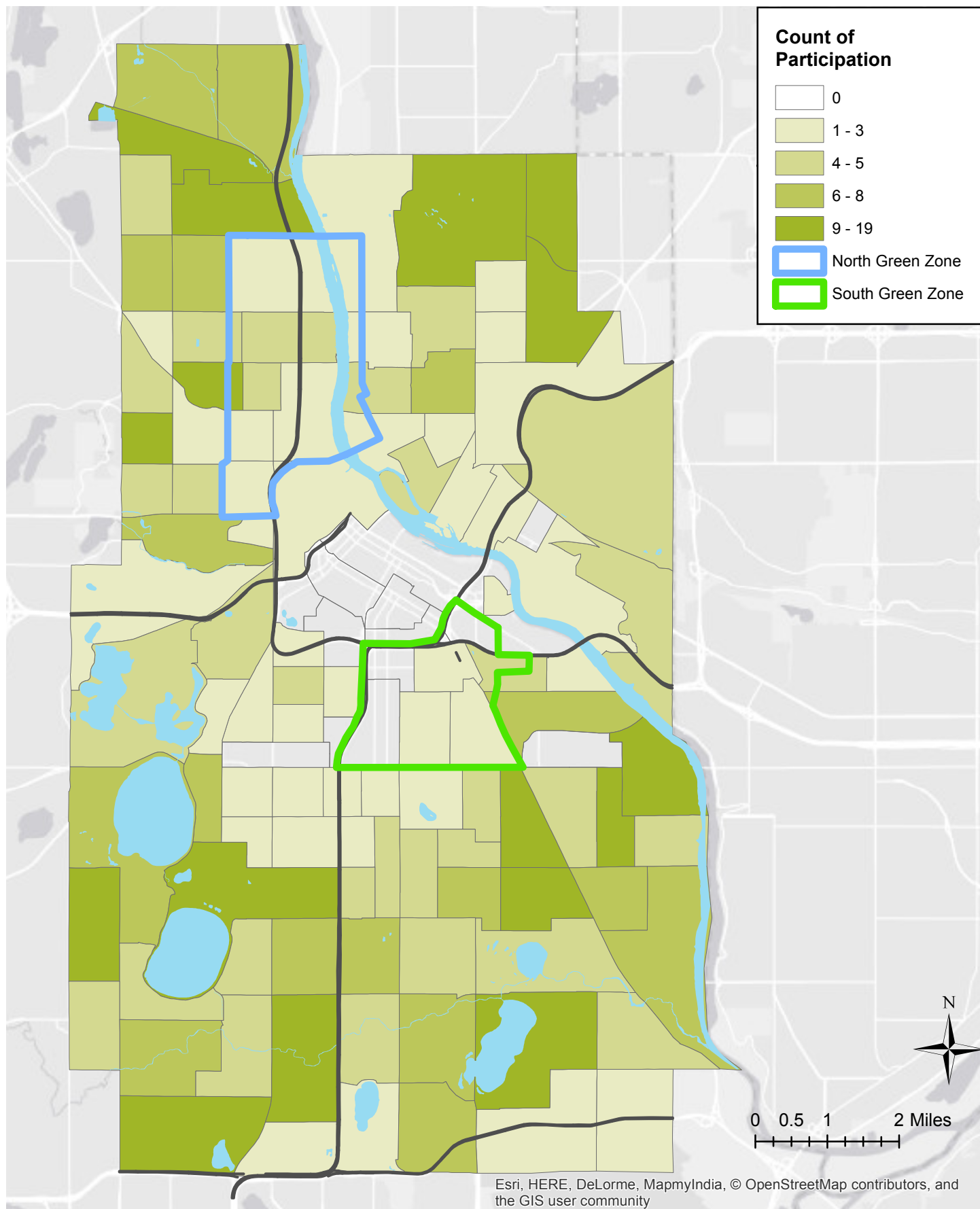
Table 11: Metric 5.2: Energy Efficiency Loans, 2014-2017

Metric		2014	2015	2016	2017
5.2	Energy efficiency loan count	11	47	43	12
	Total value of loans (\$)	72,519	279,882	192,234	66,870

Resources:

[*Home Energy Squad*](#)

Metric 5: Home Energy Squad Participation, 2017



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

Metric 6.0:

Low-income Conservation Improvement Program (CIP) Utilization

CenterPoint Energy and Xcel Energy offer energy conservation programs that serve low-income customers, including a wide range of programs designed specifically for homeowners, renters, multi-family building owners, and affordable housing organizations. These comprehensive programs provide weatherization services, lighting upgrades, appliance replacements, mechanical systems upgrades, and more.

Xcel Energy's low-income segment consists of the Low-income Home Energy Squad, Home Energy Savings Program (HESP), and Low-income Multi-Family Program (MESP). In 2017, Xcel Energy's affordable energy programs showed a slight decrease in energy savings and a significant decrease in program participation. In 2017, a programmatic change to remove Home Assessments from HESP contributed to a decrease in energy savings for that program (By mid-2017, a regulatory filing was submitted to reinstate the Home Assessment to HESP.) Also, energy savings decreased in this program because the opportunity for lighting retrofits was not as available, as in previous years. The significant decrease in program participation is largely attributed to how participation is counted for the MESP, as a single building served and not units or residents served. Thus, MESP served larger multi-family buildings containing more units than in 2016, and only the buildings were counted as participants, creating a larger spend per participant. Table 12 provides the data for Metric 6.0: Low-income CIP Program Utilization for Xcel Energy that contributed to the analysis in this section of the report.

Table 12: Metric 6.0: Xcel Energy's Low-income CIP Program Utilization, 2015-2017

Metric		Xcel Energy		
		2015	2016	2017
6.0	Number of low-income program participants	661	1,331	596
	CIP low-income dollars spent (\$)	324,360	334,018	629,357
	Estimated annual energy savings (kWh)	359,233	491,532	423,297
	Estimated annual cost savings (\$)	32,331	49,153	45,018

In 2017, CenterPoint Energy saw a significant increase in Low-income Conservation Improvement Programs performance in the City of Minneapolis. The large increase can be attributed to two factors. First, the Low-income Weatherization (LIW) program's energy savings calculation was improved, resulting in higher energy

savings than the previous method. The new calculation, derived from the State of Minnesota Technical Reference Manual, considers property-specific characteristics to determine the impact of weatherization measures at a specific project site. In previous years, weatherization projects were allocated a fixed deemed savings amount per measure type. The second contributor to increased program-wide performance was a single large project in the Low-income Multifamily Housing Rebate program, representing over a quarter of the combined total energy savings achieved by CenterPoint Energy's Low-Income Conservation Programs. Table 13 provides the data for Metric 6.0: Low-income CIP Program Utilization for CenterPoint Energy that contributed to the analysis in this section of the report.

Table 13: Metric 6.0: CenterPoint Energy's Low-income CIP Program Utilization, 2015-2017

Metric		CenterPoint Energy		
		2015	2016	2017
6.0	Number of low-income program participants	583	453	712
	CIP low-income dollars spent (\$)	921,832	1,618,735	1,841,555
	Estimated annual energy savings (Therms)	231,859	57,547	205,272
	Estimated annual cost savings (\$)	122,208	37,305	133,839

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 maximize efficiency improvements completed at a residence, by using all available resources. In 2017, DOE's WAP program served 253 low-income Minneapolis properties; the majority of projects were supplemented by CenterPoint Energy's LIW program. Customers, including renters who that pay a gas bill, may qualify for this program. In 2017, the program conducted a historically high share of projects specifically in rental property units; 37% of the LIW program total in Minneapolis. Table 14 provides the data for Metric 6.0: Low-income Program Utilization for the DOE that contributed to the analysis in this section of the report.

Table 14: Metric 6.0: DOE Low-income Program Utilization, 2015-2017

Metric		Department of Energy		
		2015	2016	2017
6.0	Number of Weatherization Assistance Program (WAP) Visits	168	122	253
	WAP dollars spent (\$)	916,805	448,356	887,202

In addition to the Utilities' conservation programs, both utilities offer bill payment assistance to customers in need. Through the Power-On program, Xcel Energy provided \$1,090,603 to assist 2,321 low-income residents make electric bill payments. In addition, Xcel Energy's Senior Discount program provided 5,784 customers assistance of \$941,056. In 2017, CenterPoint Energy provided \$1,269,960 to 3,247 low-income customers in Minneapolis through the Gas Affordability Program. Combined, Xcel Energy and CenterPoint Energy supplemented state and federal funds with more than \$3.3 million in bill payment assistance to Minneapolis residents in 2017. Tables 15 and 16 provide the data for CenterPoint Energy and Xcel Energy's affordable energy programs that contributed to the analysis in this section of the report.

Table 15: Xcel Energy's Affordable Energy Programs, 2015-2017

Affordable Energy Programs	Xcel Energy		
	2015	2016	2017
Power-On Participants	924	2,313	2,321
Power-On Total Spent (\$)	598,752	1,887,408	1,090,603
Senior Discount Participants	4,790	4,790	5,784
Senior Discount Total Spent (\$)	862,200	1,008,796	941,056

Table 16: CenterPoint Energy's Gas Affordability Programs, 2015-2017

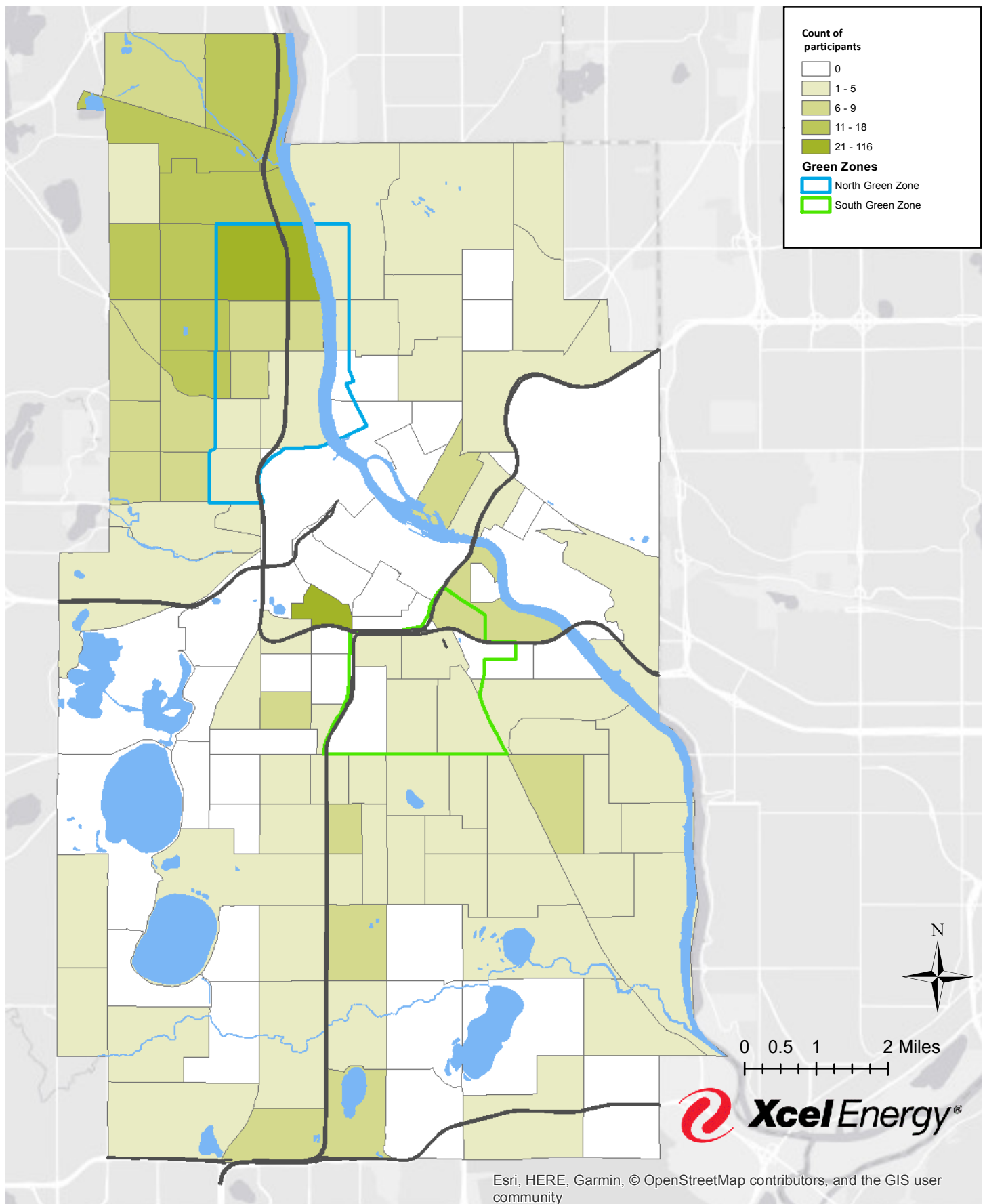
Gas Affordability Program	CenterPoint Energy		
	2015	2016	2017
Bill Payment Assistance Participants	4,000	3,450	3,247
Bill Payment Assistance Total Spent (\$)	2,200,000	1,178,370	1,269,960

Resources:

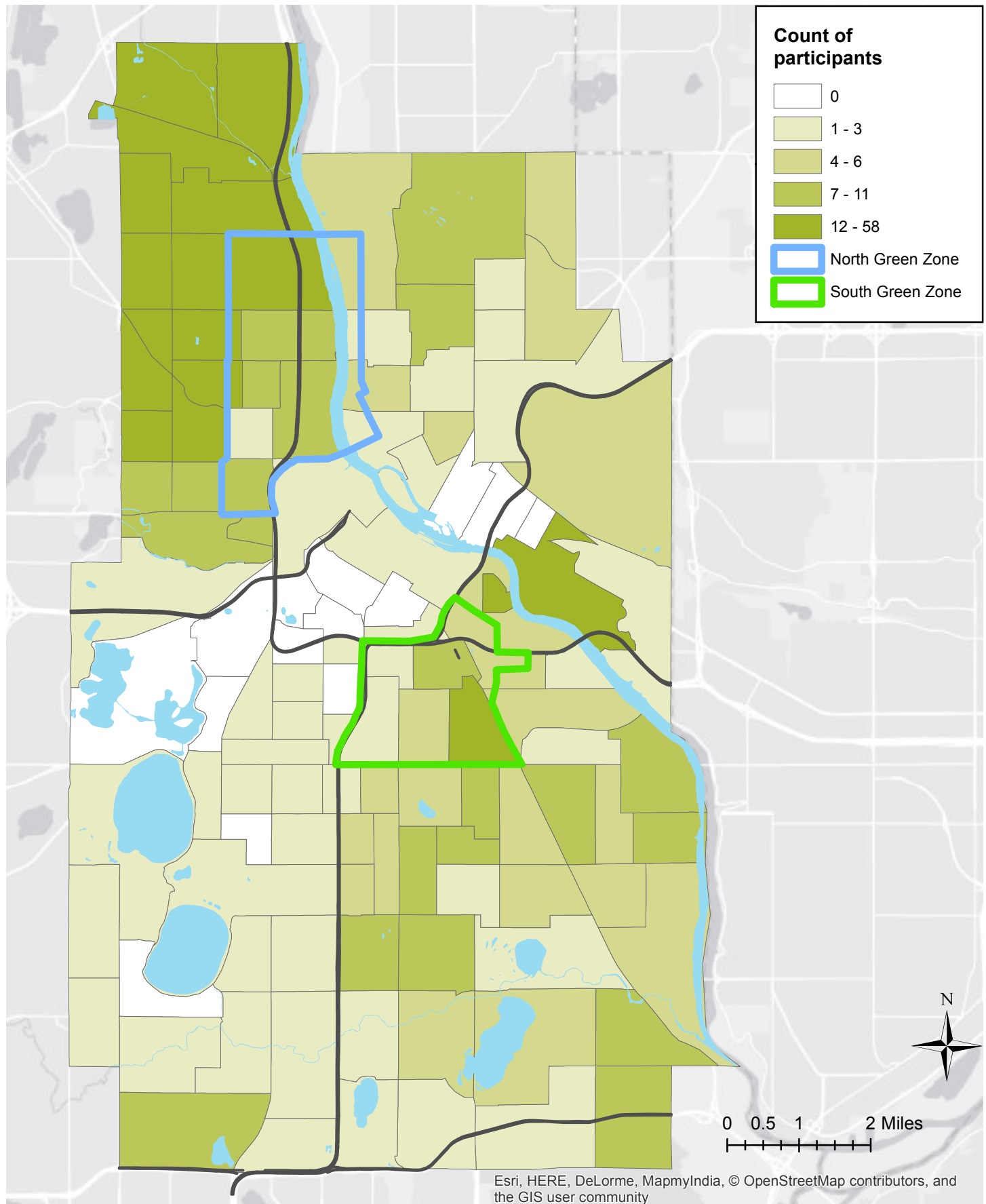
[*Xcel Energy Affordable Energy Programs*](#)

[*CenterPoint Energy Income-Qualified Programs*](#)

Metric 6: Xcel Energy Low-Income Program Participation, 2017



Metric 6: CenterPoint Energy Low-Income Program Participation, 2017



Data source: US 2010 Census, CenterPoint Energy

Metric 7.0:

Air-Sealing and Insulation

Insulation and air sealing improvements are among the biggest opportunities for energy savings in homes, with most of the energy savings coming from reduced heating loads in the winter. The energy savings potential is particularly high for older homes that may have little, or even no, insulation in the walls and attic. CenterPoint Energy's rebates are paid according to upgrade type and cost per the schedule below:

Measure	Rebate Amount
Wall insulation	30% of cost, up to \$500
Air sealing (alone)	30% of cost, up to \$300
Attic insulation + Air sealing	30% of cost, up to \$500

In 2017, the number of customers receiving insulation and air sealing rebates decreased, while energy savings and rebates spending increased. This trend is due to a program modification to calculate insulation and air sealing energy savings based on the State of Minnesota Technical Reference Manual. The new calculation considers property-specific characteristics to determine the impact of insulation and air sealing measures at a specific project site. Of the participants that received air sealing and insulation rebates in 2017, 84% received both attic insulation and attic air-sealing work and 33% received wall insulation. Table 17 provides the data for Metric 7.0: CenterPoint Energy's Air Sealing and Insulation that contributed to the analysis in this section of the report.

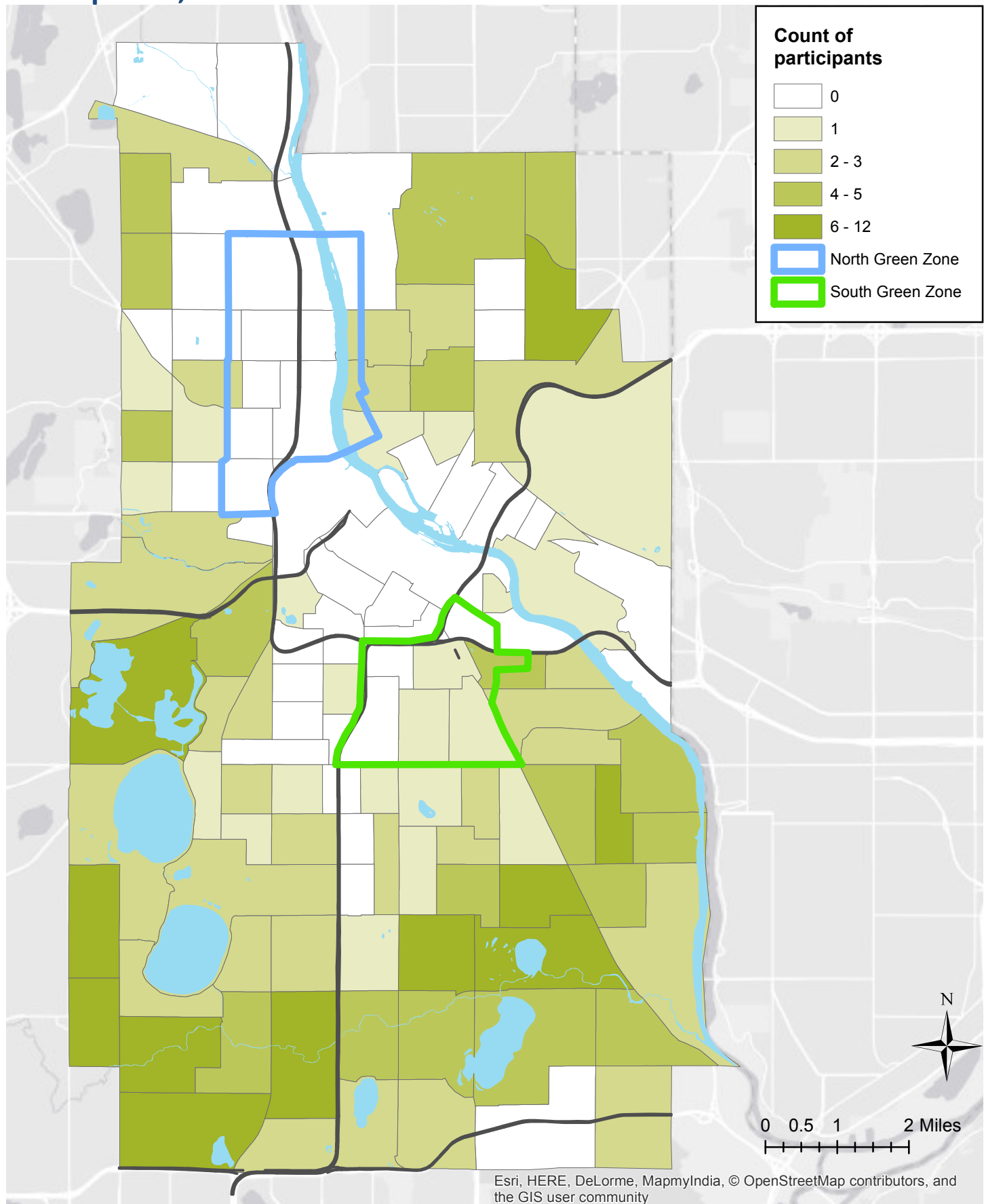
Table 17: Metric 7.0: Air Sealing and Insulation, 2015-2017

Metric		CenterPoint Energy		
		2015	2016	2017
7.0	Count of participating customers	335	277	242
	Estimated annual energy savings (Therms)	74,741	64,404	67,390
	Estimated annual cost savings (\$)	42,069	42,292	43,938
	Rebate dollars spent (\$)	n/a	130,000	136,060

Resources:

[*CenterPoint Energy Air Sealing and Insulation Rebates*](#)

Metric 7: CenterPoint Energy Home Insulation Rebate Program Participation, 2017



Data source: US 2010 Census, CenterPoint Energy

Metric 8.0:

Multi-Family Program Participation

Multi-Family energy efficiency programs are offered by both CenterPoint Energy and Xcel Energy, including the jointly offered Multi-Family Building Efficiency program and Energy Design Assistance program. Xcel Energy also offers multi-family and tenant energy efficiency options through the following programs: Multi-Family Energy Savings Program (MESP) and One Stop Efficiency Shop. CenterPoint Energy serves multi-family housing buildings through its general conservation rebate programs for heating, water heating, and custom projects as well as the Low-Income Multi-Family Housing Rebate project. The Affordable Housing Multi-family Bonus Rebate program provides extra rebate dollars for qualifying affordable housing providers.

Xcel Energy's multi-family conservation program participation and energy savings increased in 2017, but significantly fewer rebate dollars were spent. This is largely attributed to the MFBE program's 2017 offering of free direct installation of lighting measures and limited additional electric measure retrofits completed by participants. Table 18 provides the data for Metric 8.0: Xcel Energy's Multi-Family Participation that contributed to the analysis in this section of the report.

Table 18: Metric 8.0: Xcel Energy's Multi-family Participation, 2015-2017

Metric		Xcel Energy		
		2015	2016	2017
8.0	Multi-family program participation	623	619	943
	Estimated annual energy savings (kWh)	3,282,658	5,422,415	5,674,561
	Estimated annual cost savings (\$)	294,576	542,242	603,490
	Rebate dollars spent (\$)	468,587	1,649,393	828,862

CenterPoint Energy's Multi-Family Program participation significantly increased, while energy savings and cost savings estimates decreased. The increase in participation is attributed to higher than normal performance in the Low-Income Multi-Family Housing Rebate Program. The decrease in overall energy and cost savings in multi-family programs is related to the differences in types and frequency of heating and water heating measures implemented between 2016 and 2017. In 2017, CenterPoint Energy customers installed fewer high-energy savings measures, such as steam traps and commercial boilers, than they did in 2016. Table 19 provides the data for Metric 8.0: Xcel Energy's Multi-Family participation that contributed to the analysis in this section of the report.

Table 19: Metric 8.0: CenterPoint Energy's Multi-family Participation, 2015-2017

Metric		CenterPoint Energy		
		2015	2016	2017
8.0	Multi-family program participation	136	90	191
	Estimated annual energy savings (Therms)	709,335	760,144	552,270
	Estimated annual cost savings (\$)	364,661	452,839	318,251
	Rebate dollars spent (\$)	245,840	302,767	286,612

Resources:

[Multi-Family Building Efficiency Program](#)

[CenterPoint Energy Affordable Housing Multi-Family Bonus Rebate Program](#)

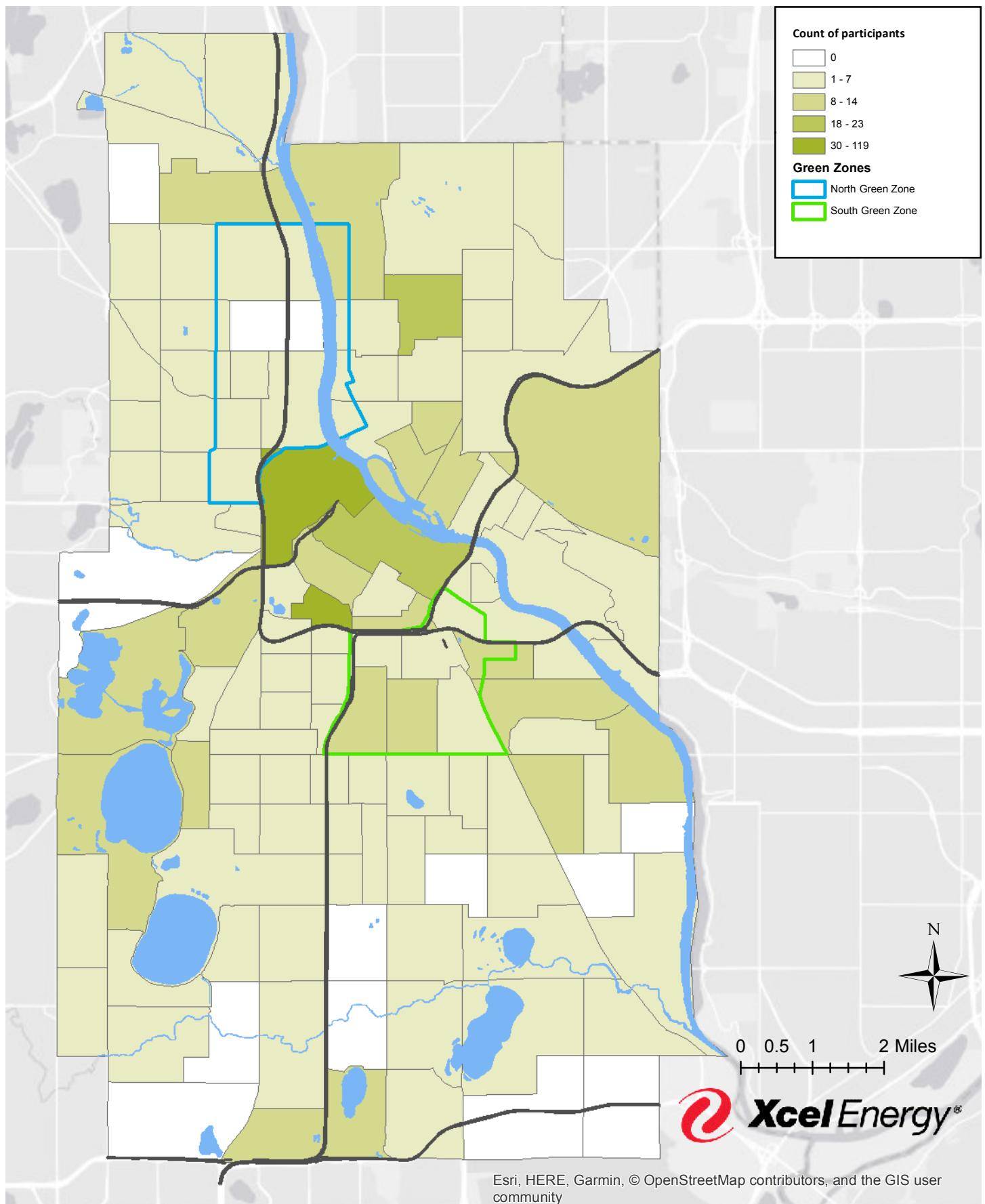
[CenterPoint Energy Commercial Programs](#)

[Xcel Energy Commercial Programs](#)

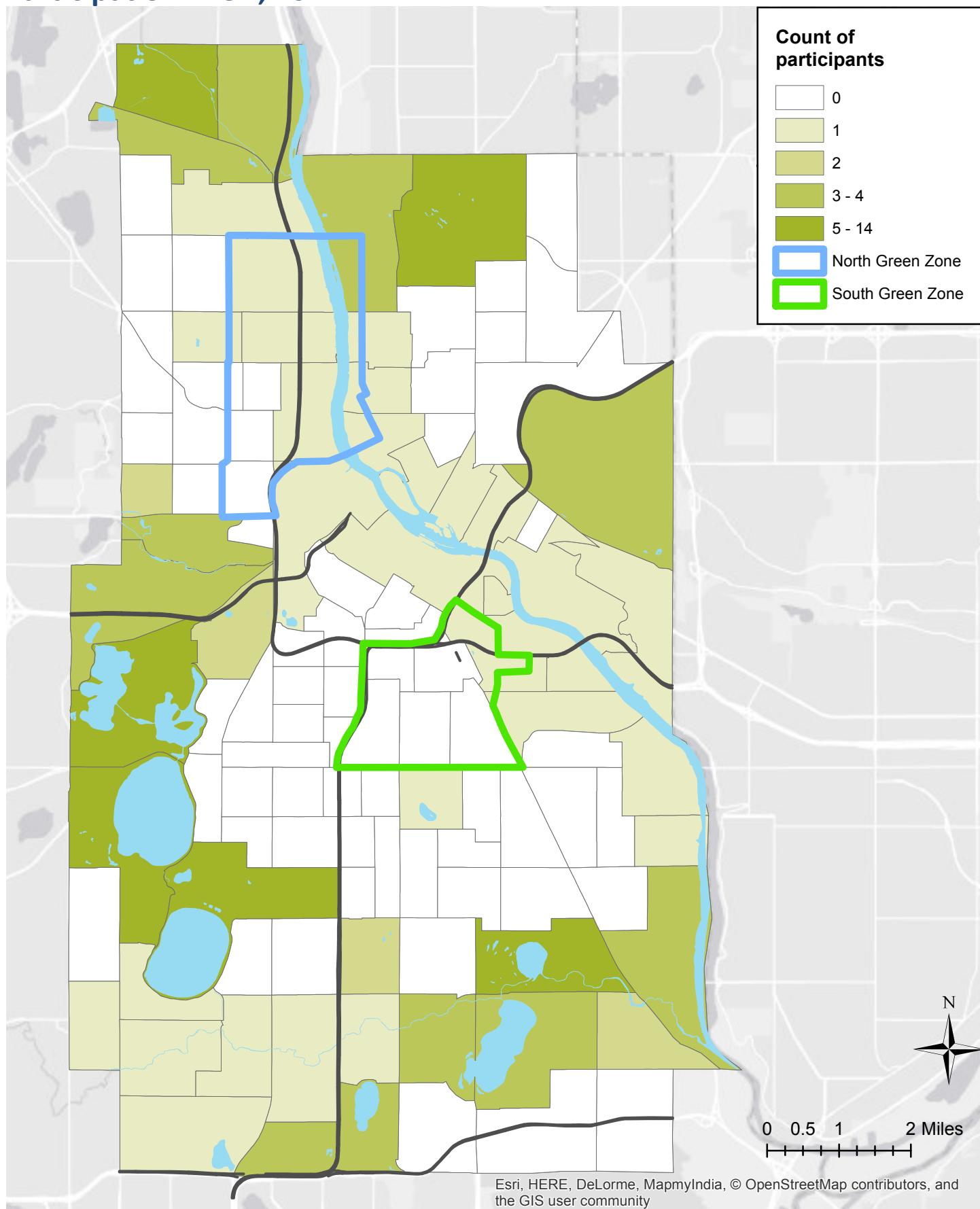
[Xcel Energy Multi-Family Energy Solutions](#)

[One Stop Efficiency Shop](#)

Metric 8: Xcel Energy Multi-Family Participation in CIP, 2017



Metric 8: CenterPoint Energy Multi-Family Housing Participation in CIP, 2017



Data source: US 2010 Census, CenterPoint Energy

2017-2018 Work Plan Activities

2017 Progress Report

2017-2018 Work Plan Activities		2017 Progress Description
No.	Residential, 1-4 Units	
1	The Partnership will implement the Community Engagement Pilot Project, which is designed to increase participation in utility energy efficiency programs, particularly in neighborhoods with characteristics that have historically been associated with low participation in energy efficiency programs.	The Partnership undertook two Community Engagement Pilot projects in 2017, one focused on multi-family and one on single family. Both pilot projects included a significant number of renters. The multi-family project was implemented by Minneapolis Renters Coalition and the single family project was implemented by Neighborhood Hub. Both organizations indicated different challenges in their outreach. However, two common themes came through in these community pilots: 1) community outreach and engagement is more effective when done by a trusted community partner and 2) program materials must be simple and streamlined for maximum effectiveness.
2	CenterPoint Energy will implement the On-Bill Loan Repayment project, which will enable CenterPoint Energy customers to finance energy efficiency improvements through the utility bill.	In the 4th Quarter of 2017, CenterPoint Energy developed a Scope of Work for the On-Bill Loan Repayment Project. The Scope of Work includes the project description, implementation service needs, technical and regulatory considerations, a timeline, and budget. In October 2017, CenterPoint Energy issued a Request for Proposals (RFP) and subsequently selected the Center for Energy and Environment as the vendor for the project.
3	Xcel Energy will work with CenterPoint Energy beginning six months after CenterPoint Energy has rolled out its on-bill repayment program to assess CenterPoint Energy's experience with the program, in order to determine next steps.	This activity is under development in 2018. A progress description will be included in a subsequent Annual Report.

2017-2018 Work Plan Activities		2017 Progress Description
No.	Residential, 1-4 Units	
4	The Partnership will continue to identify additional lending sources to finance energy efficiency and renewable energy projects.	This activity is under development in 2018. A progress description will be included in a subsequent Annual Report.
5	The City of Minneapolis will develop a strategy to utilize City regulatory authority to drive energy efficiency and encourage energy usage transparency. Examples may include: mandated disclosure of energy at time-of-sale through the multiple listing service (MLS) listing, disclosure in advertisements for rental properties, or by expanded energy efficiency information in Truth in Sale of Housing (TISH) disclosures.	The City of Minneapolis worked with the Center for Energy and Environment (CEE) to conduct a pilot for home inspectors from June to October 2017. The overall goal of this pilot was to increase the usefulness of information provided through home inspections done at time of sale, with the ultimate goal of increasing energy retrofits. Research has shown that new homeowners are more likely to conduct energy upgrades, making time of sale an important target for energy retrofit efforts. Approximately 5,000 homes per year are sold in Minneapolis, with seller-paid home inspections required prior to the home going on the market through the city's Truth in Sale of Housing (TISH) program. The pilot evaluated the training needs of home inspectors, required data points to make energy recommendations, time required to collect and record data, and related costs. CEE recruited eight inspectors who went through the pilot training and completed nearly 40 inspections. The pilot found that TISH inspections already require most of the data needed to make energy recommendations, little training is needed for inspectors to collect this data, and home sellers would not have to pay more for TISH inspections if this data is added, because it does not take extra time for inspectors to collect it. The City of Minneapolis will continue to look for the resources to make the necessary upgrades to the TISH IT system to allow for the collection, recording, and dissemination of these energy data points.

2017-2018 Work Plan Activities		2017 Progress Description
#	Multi-family, 5+ Units	
6	The Partnership will develop and conduct outreach and engagement strategies to drive greater participation in energy efficiency and renewable energy programs among multifamily buildings. Outreach and engagement efforts should be informed by program utilization maps, data, and the expertise of EVAC and other appropriate stakeholders to target poor performing buildings and buildings in areas of the City with low participation rates.	This activity is under development in 2018. A progress description will be included in a subsequent Annual Report.
7	The City of Minneapolis will develop a policy to expand the Building Benchmarking and Transparency ordinance to include multi-family residential buildings.	Internal City discussions will continue in 2018.
8	The City of Minneapolis will develop a strategy utilizing City regulatory authority under the tiered rental licensing structure to encourage energy efficiency implementation.	Internal City discussions will continue in 2018.
9	The Partnership will explore and as feasible develop a City program to use the Multi-Family Building Efficiency program and other programs to preserve existing affordable, unsubsidized housing.	This activity is under development in 2018. A progress description will be included in a subsequent Annual Report.

2017-2018 Work Plan Activities		2017 Progress Description
#	Multi-family, 5+ Units	
10	The City of Minneapolis will develop a Sustainable Building Policy for city-financed new or significantly renovated projects (examples may include TIF, AHTF, Green Homes North, etc.) to require that energy efficiency efforts include the Sustainable Buildings 2030 Energy Standard.	Internal City discussions will continue in 2018.

2017-2018 Work Plan Activities		2017 Progress Description
#	Small Commercial, <50,000 square feet	
11	The Partnership will continue to monitor the progress of the implementation of small business programs through Xcel Energy's Partners in Energy (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 program.	EVAC's small business work group is working to procure additional resources and explore work in this area. Representatives from all three parties sit on a metro-wide advisory panel to support this activity. The City will launch an Energy Technical Assistance Program (E-TAP) in 2018 that is an extension of this work.
12	Xcel Energy will develop a small business refrigeration program targeted at corner stores, grocery stores, gas stations and liquor stores.	This statewide program with a specific targeted focus in Minneapolis was developed with engagement by the EVAC small business group and city staff, filed for and received regulatory approval, and was rolled out 4/24/18. During the roll-out planning phase, collaborative discussions between Xcel Energy, the City and the implementer took place to coordinate rebate levels (utility energy efficiency and city Green Business Cost Share), communications, marketing materials, and financing options.

2017-2018 Work Plan Activities		2017 Progress Description
#	Large Commercial, >50,000 square feet	
13	CenterPoint Energy will develop a natural gas data aggregation policy and data aggregation software tool to allow owners and managers of multi-metered buildings to access whole-building data for the purpose of benchmarking energy consumption. Throughout the development and implementation of the data aggregation policy and tool, CenterPoint Energy will balance access to data with customer data privacy and utility liability concerns.	In 2017, CenterPoint Energy developed a Scope of Work for the Energy Data Aggregation Tool Project. The Scope of Work includes the project description, implementation service needs, technical and regulatory considerations, a timeline, and budget. In the 4th Quarter of 2017, CenterPoint Energy issued a Request for Proposals (RFP) and subsequently selected Accelerated Innovations as the vendor for the project. CenterPoint Energy also initiated work to develop a whole-building data aggregation policy.
14	The Partnership will continue to develop feedback loops with building owners through the commercial building benchmarking process and leverage benchmarking information to target low-performing buildings.	The City of Minneapolis developed an interactive dashboard for properties to more easily compare building performance, targeted buildings with low performance for the Green Business Cost Share, and surveyed buildings about their benchmarking and ENERGY STAR experience to gain enhanced insight into better ways to encourage energy efficiency. Together, the partners continued support for the Building Energy Challenge and worked with the Minneapolis Public Schools to identify energy efficiency opportunities and establish action steps for seizing them.

2017-2018 Work Plan Activities		2017 Progress Description
#	Large Commercial, >50,000 square feet	
15	The Partnership will continue to 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.	The Partnership hosted two sector-specific workshops – one geared towards offices and the other for hotels. Participants learned how to use the benchmarking data, about the City's financial resources, and about energy efficiency programs provided both utilities. Leveraging the hotel workshop, the partners also facilitated one-on-one meetings with interested parties for additional assistance. The Partnership also met one on one with Minneapolis Public Schools to discuss energy efficiency options for their buildings.
16	The Partnership will collaborate with other interested parties to support and encourage the State of Minnesota to adopt an addendum to the state energy code that allows cities to adopt higher energy efficiency standards without undermining utilities' Conservation Improvement Programs.	The Partnership will consider implementation of this activity in 2018.

2017-2018 Work Plan Activities		2017 Progress Description
#	City Enterprise & Coordination	
17	<p>The City of Minneapolis will develop a set of strategies for achieving 100 percent renewable electricity for the City enterprise by 2030. Related activities may include: (1) Develop a model for city ownership of off-site (rural) renewable energy to generate city revenue and help achieve the City's renewable energy targets, and (2) Develop and release an RFP for the development of community solar gardens hosted on City property. The expressed purpose is to support access to renewable energy to Low-income groups who may not otherwise be able to access renewable energy programs. Factors considered may include local workforce development, especially for communities of color, the competitiveness of projects that are located within city boundaries, and the support of community-based institutions/organizations through project development.</p>	<p>The City of Minneapolis released two reports in 2017: <i>Moving Towards 100% Renewable Electricity Powering Minneapolis Operations by 2022</i> in August and <i>Blueprint for Powering Minneapolis Municipal Operations with 100% Renewable Electricity</i> in October. The first report outlined the end uses of annual electrical consumption in municipal operations and forecast reductions through 2022. The second report detailed a method and timeline for the City to claim that 100% of its electricity usage is directly tied to renewable energy sources.</p>

2017-2018 Work Plan Activities		2017 Progress Description
#	City Enterprise & Coordination	
18	The City of Minneapolis continues to implement and will accelerate the city-wide light-emitting diode (LED) conversion of its City-owned streetlights. With the Xcel Energy LED rate case approved in 2016, Xcel Energy and the City will work together in 2017 to determine the plan, details, and timeline to implement LED's on Xcel Energy-owned streetlights located in Minneapolis.	The City of Minneapolis and Xcel Energy continue to meet to discuss a LED streetlight conversion plan for Xcel Energy-owned streetlights. No final decisions or plans were finalized in 2017. Discussions continue in 2018.
19	The City of Minneapolis will expand the City's study of future fleet vehicle fueling options and infrastructure to all city vehicle types. In addition to the recently completed Compressed Natural Gas Feasibility Study, a study will be undertaken on the environmental benefits, feasibility, reasonable exceptions, cost/benefit analysis, timeline, various alternatives, and a recommended approach to eliminating fossil fuel vehicles in the City fleet.	<p>A <i>City of Minneapolis Electric Vehicle Study</i> was completed by the City of Minneapolis Public Works Department and the Fleet Services Division on the anticipated costs and environmental benefits of replacing the City's internal combustion engine (ICE) vehicles with electric vehicles (EV). The report presented multiple approaches the City could take to transition to an EV fleet based on the availability of funds and the City's existing purchasing model. A comparison of six transition scenarios show how the procurement strategy would change depending on stated objectives and financial and technical constraints.</p> <p>The City and Xcel Energy are currently discussing a Pilot for City Fleet vehicles in 2018.</p>

2017-2018 Work Plan Activities		2017 Progress Description
#	City Enterprise & Coordination	
20	The City of Minneapolis and CenterPoint Energy will work together to build upon the findings and recommendations of the Compressed Natural Gas Feasibility Study, which examined compressed natural gas as a fueling option for certain vehicle types within the City fleet.	In accordance with its Green Fleet Policy (2010), the City will continue to strongly consider compressed natural gas vehicles and equipment when evaluating vehicle replacement. CenterPoint Energy continues to be a resource for the City as it considers compressed natural gas vehicles and equipment.
21	The Partnership will continue conversations on items of interest related to infrastructure, including plans for specific sites, distribution planning, district energy, aligning capital improvement cycles, pilot projects, and long-range carbon reduction planning.	There has been ongoing communication among partners regarding infrastructure planning, specifically pilot projects.
22	The City of Minneapolis will develop RFP and procurement processes that reflect its commitment to equity in hiring and contracting in a significant and meaningful manner for energy efficiency and renewable energy projects. RFP project requirements may include the following elements: (1) A clear equity hiring goal for all projects, (2) An approved work plan demonstrating how equity hiring goals will be met, (3) An outline of numbers of jobs and skill level requirements, and (4) An assessment of local community benefits; with an emphasis specifically on minority communities.	In 2017 the City entered into multiple community solar garden subscriptions that were evaluated for and included workforce participation from Minneapolis residents and compliance with the Small and Underutilized Business Program (SUBP) goals. Additional internal City discussions will continue in 2018.

2017-2018 Work Plan Activities		2017 Progress Description
#	City Enterprise & Coordination	
23	The City of Minneapolis will develop a revision to its Leadership in Energy and Environmental Design (LEED) Building Policy to include meeting the Sustainable Buildings 2030 Energy Standard for new City buildings or major renovations.	Internal City discussions will continue in 2018.



This first-in-the-nation agreement brings together the City of Minneapolis, Xcel Energy and CenterPoint Energy in support of the City's Climate Action Plan and 2040 Energy Vision. Together they will plan, implement, market and track new approaches to delivering energy efficiency, energy choices and renewable energy to Minneapolis residents and businesses.

Learn more at: <https://mplscleanenergypartnership.org/>

