

MINNEAPOLIS CLEAN ENERGY PARTNERSHIP

2019 Annual Report



FINAL DRAFT August 26, 2020

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Introduction

The Minneapolis Clean Energy Partnership (or Partnership) is a partnership between the City of Minneapolis (City) and its electric and natural gas utilities, Xcel Energy and CenterPoint Energy, established to help the City reach its Minneapolis Climate Action Plan goals and the 2040 energy goals outlined in the City of Minneapolis Energy Vision 2014.

To illustrate progress toward meeting these City goals, this report features seven key metrics with direct relevance to the City's established [Climate Action Plan](#) and [100% Renewable Electricity](#) goals. In addition to a Metrics Scorecard, later sections of the report offer other data supporting these seven key metrics and census tract maps which show spatial distribution of specific utility program participation across the City.

As a means to create and accelerate progress toward the City's climate and energy goals, the Board approved a [2019-2021 Work Plan](#) comprised of ten Partnership Activities that the Partners will undertake. The Partnership Activities are consistent with the priorities established by the Board in March 2018, including: achieving **energy efficiency**, making clean energy accessible through **inclusive financing** tools, and increasing **local renewable energy**. This report summarizes progress made to date on these ten Partnership Activities.

The metrics in this report illustrate that, while progress has been made to achieve an 19% reduction in greenhouse gas emissions since 2006, Minneapolis is not on-track to meet its community-wide emissions reduction goals of 30% by 2025 and 80% by 2050. The 2019-2021 Work Plan's Partnership Activities are not sufficient alone in achieving the City's climate and energy goals and much more progress is needed collectively and with additional partners to achieve a Minneapolis energy system that is "reliable, affordable, local, and clean" and "sustains the city's economy and environment and contributes to a more socially just community" (Minneapolis 2040 Energy Vision). To this end, the Partners, independently or in cooperation, undertook additional efforts in 2019, such as: Xcel Energy's efforts to reduce its carbon emissions and increase renewable generation through its 2020-2034 Integrated Resource Plan, CenterPoint Energy's regulatory and legislative efforts that would allow the utility to make greater investments in renewable energy resources and technology, and the City's efforts to accelerate building energy codes and introduce voluntary advanced GHG emissions reduction standards. Activities such as these, which clearly advance the City's climate and energy goals and may become areas of future collaboration, can be found throughout the Appendix.

Metrics Scorecard

	Greenhouse Gas Emissions (Community-wide) GHG reduction goal of 30% by 2025 and 80% by 2050: 19% reduction since 2006; not on track for 2025 and 2050 goals, but achieved 2015 goal	Metric 1 Score: RED
	Greenhouse Gas Emissions (Municipal Operations) GHG reduction goal of 1.5% annually: 58% reduction since 2008 and on track	Metric 2 Score: GREEN
	Energy Use (Residential) 15% energy consumption reduction by 2025: 3% increase compared to growth baseline; unknown if on track due to annual variations	Metric 3 Score: YELLOW
	Energy Use (Commercial and Industrial) 20% energy consumption reduction by 2025: 3% increase compared to growth baseline; not on track	Metric 4 Score: RED
	Renewable Electricity (Community-wide) 100% of renewable electricity use by 2030: 24% in 2019 and not on track	Metric 5 Score: RED
	Renewable Electricity (Municipal Operations) 100% of renewable electricity use by 2022: 88% in 2019 and on track	Metric 6 Score: GREEN
	Renewable Electricity (Local and Directly Purchased) 10% of renewable electricity use by 2025: 5.7% in 2019 and unknown if on track	Metric 7 Score: YELLOW

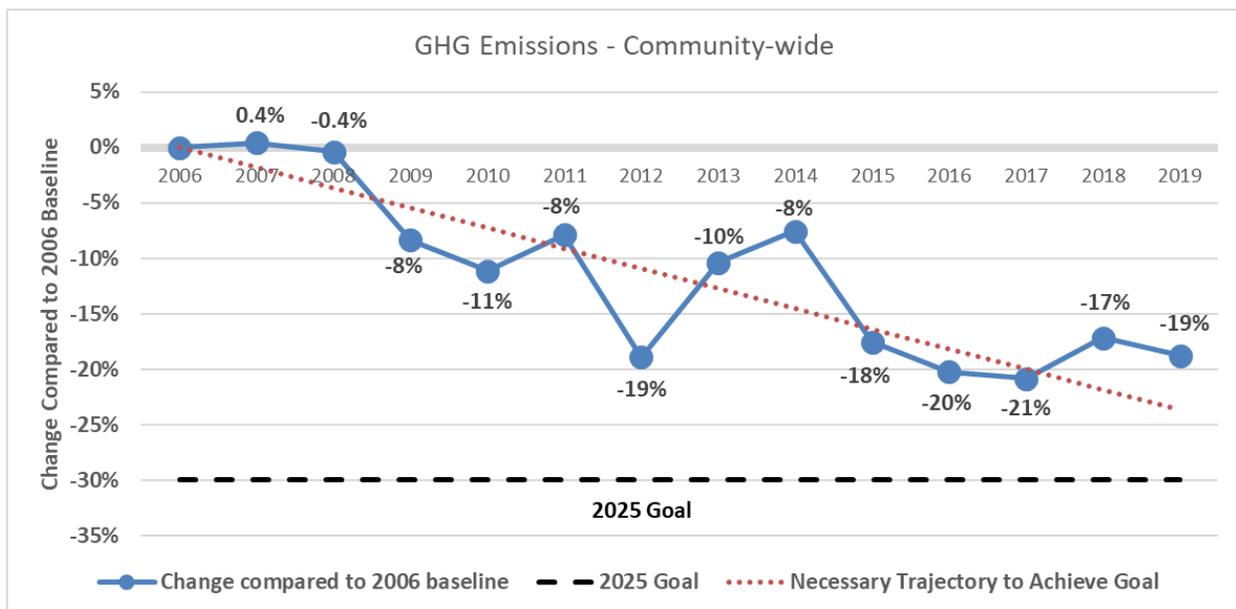
Note: metrics categorized as “yellow” lack enough data to determine outcomes at this time.

Metric 1: Greenhouse Gas Emissions (Community-wide)

This metric measures progress toward the Minneapolis Climate Action Plan's (CAP) overarching community-wide greenhouse gas (GHG) reduction goals:

Reduce community-wide greenhouse gas emissions 15% by 2015, 30% by 2025, and 80% by 2050, using 2006 as a baseline.

The following data show a 19% decrease in 2019 emissions compared to 2006. While the City's 2015 goal of a 15% GHG emission reduction was met, the current data trend and forecast (see appendix) indicate this metric is not on track to meet the 2025 and 2050 goals.



GHG emissions reductions to date are in large part attributed to progress on electricity decarbonization, moving away from coal to natural gas, wind, and solar power to produce electricity. For a third consecutive year, natural gas is the largest source of GHG emissions in Minneapolis. In 2019, natural gas was the largest emissions source at 41% of overall GHG emissions, followed by electricity (31%) and on-road transportation (24%).

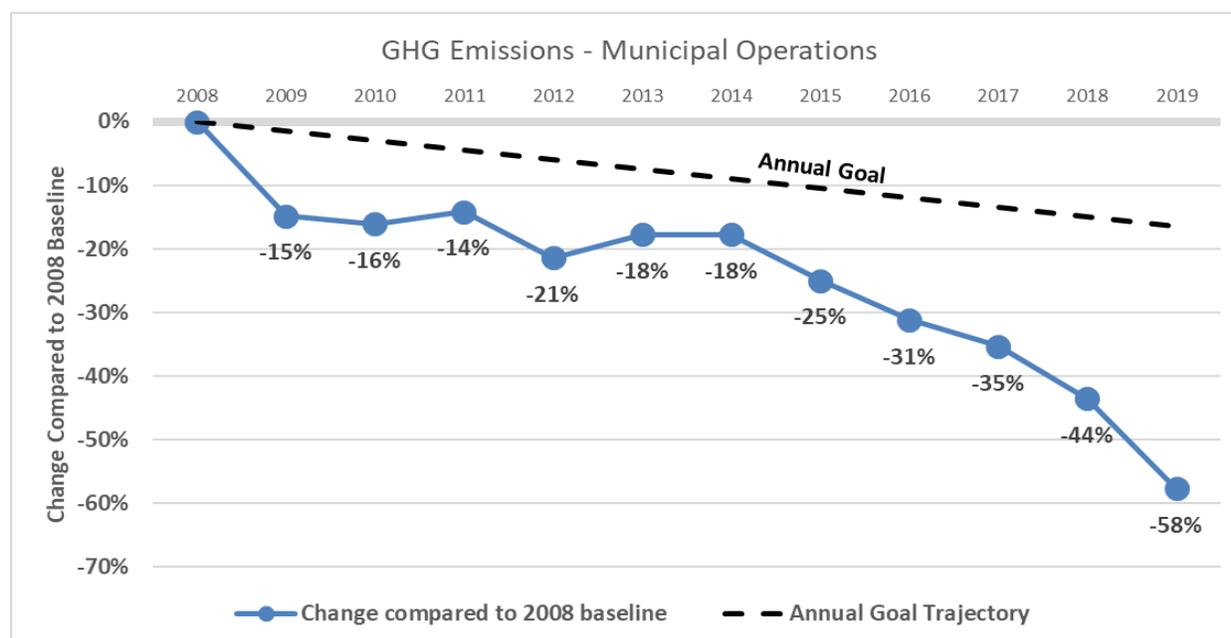
As critically important to meeting the City's goal, the Partners collectively and independently took many actions to tackle emissions from the natural gas sector in 2019, including the Partnership Activities described in more detail in this report, the utilities Conservation Improvement Programs described in detail in the Appendix, and other collaborative, regulatory, and legislative action.

Metric 2: Greenhouse Gas Emissions (Municipal Operations)

This metric measures progress toward the Minneapolis Climate Action Plan's municipal operations greenhouse gas reduction goal (CAP Buildings & Energy Goal #4):

Achieve a 1.5 percent annual reduction in greenhouse gas emissions from City facilities.

The following data show a 58% decrease in emissions in 2019 compared to 2008. The data trend indicates this metric is on track to meet the City's adopted goal.



Greenhouse gas emissions from City facilities and operations continue to dramatically decrease, primarily the result of reductions in emissions from electricity. The reductions in electricity emissions are the result of the reduced carbon intensity of the electric grid paired with City subscriptions in community solar gardens and Xcel Energy's *Renewable*Connect* green tariff program. Additionally, City municipal operations have also realized a 13% overall decrease in energy consumption since the 2008 baseline year, driven by City initiatives to reduce electricity, largely by partnering in Xcel Energy's conservation programs and vehicle fuel consumption.

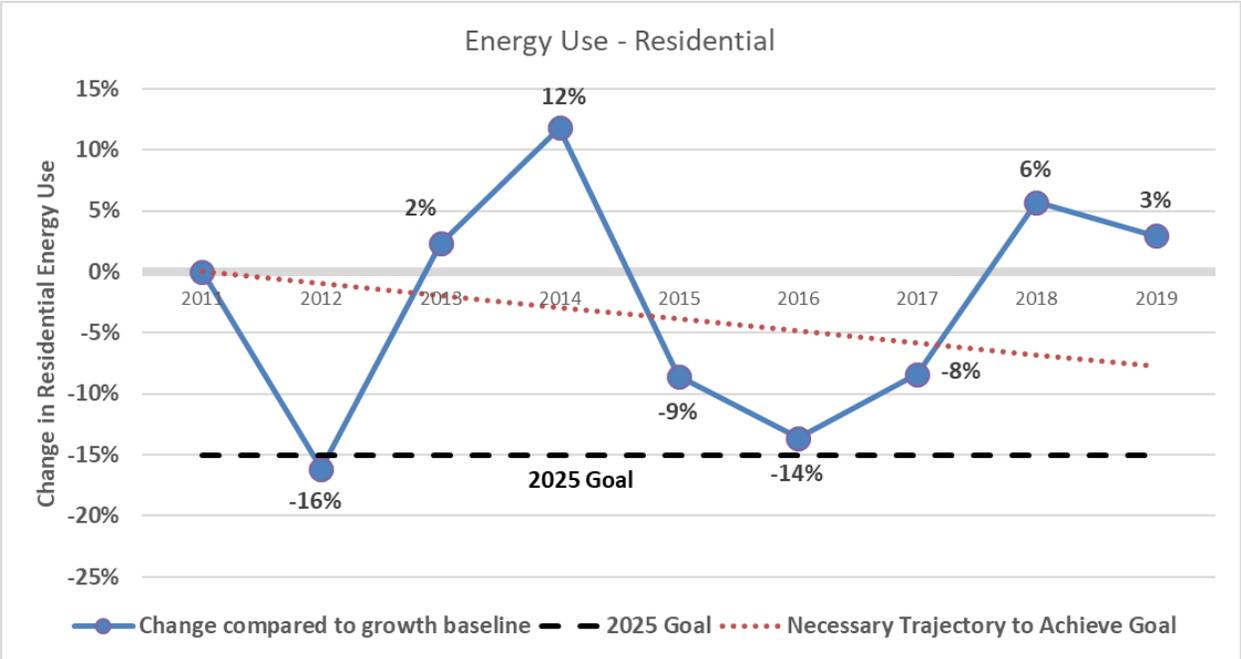
Conversely, emissions from natural gas consumption increased 5% since 2008 and require further action at reduction. Partnership Activity EE.3 continues collaboration on making City facilities more energy efficient, EE.5 has the City participating in CenterPoint Energy's carbon capture pilot, and RE.1 adds electric vehicle infrastructure with smart charging capabilities to the City's fleet thereby decreasing vehicle carbon emissions.

Metric 3: Energy Use (Residential)

This metric measures progress toward the Minneapolis Climate Action Plan’s residential energy reduction goal (CAP Buildings & Energy Goal #1):

Achieve 15 percent energy efficiency in residential buildings from the growth baseline by 2025.

The following data show a 3% increase in residential energy use in 2019 compared to the growth baseline; actual use has increased 4% since 2011. The data exhibits significant year-to-year variation (caused in large part by weather); therefore, it is unknown if this metric is on track to meet the City’s adopted goal.



The residential energy sector consists of approximately 180,000 electric and 123,000 gas customers in Minneapolis. The number of electric and natural gas customers has increased in the last decade, but data suggests that households in Minneapolis are using energy more efficiently. However, the reliance on natural gas for space heating in cold-weather continues to contribute to significant peaks of energy use in cold weather years (see graph years 2014, 2018, and 2019).

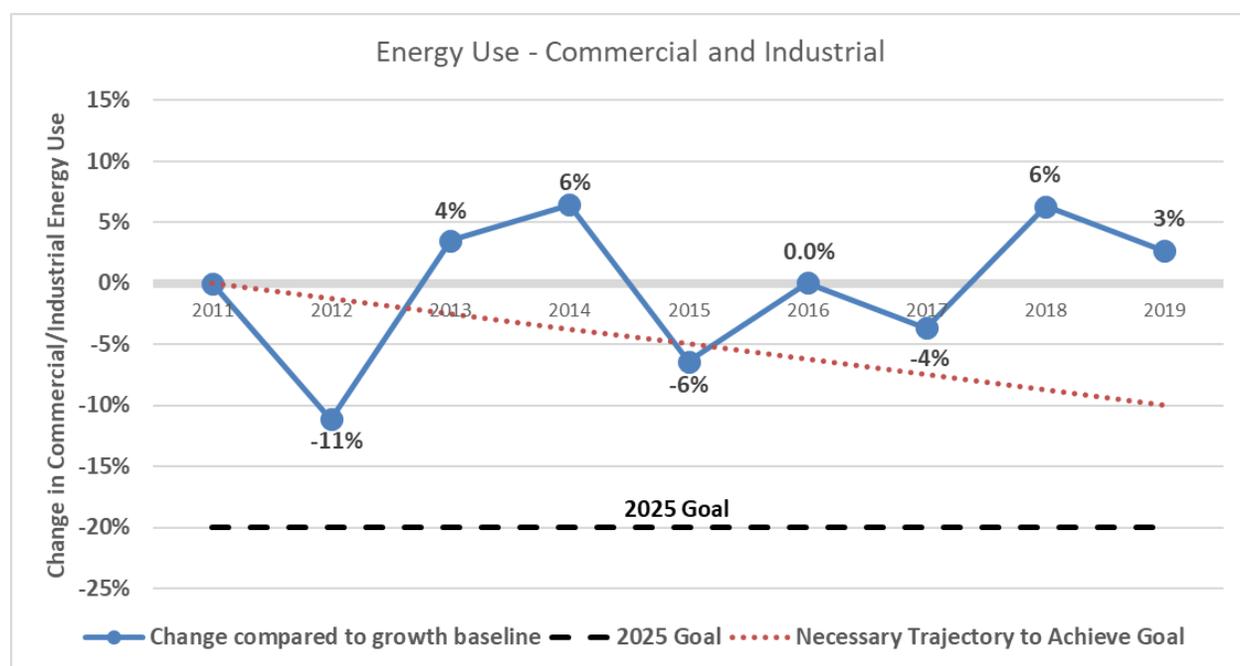
Partnership Activity EE.1 has the Partners collaborating on data-driven strategies to reduce natural gas emissions in the residential sector, especially for customers living in the City’s Green Zones. Partnership Activity EE.5 will result in new and enhanced utility tools to help implement the City’s energy data disclosure policies. Partnership Activity IF.1 aims to provide residential customers with an inclusive financing option.

Metric 4: Energy Use (Commercial and Industrial)

This metric measures progress toward the Minneapolis Climate Action Plan's commercial and industrial energy reduction goal (CAP Buildings & Energy Goal #2):

Achieve 20 percent energy efficiency in commercial/industrial buildings from the growth baseline by 2025.

The following data show a 3% increase in commercial/industrial energy use in 2019 compared to the growth baseline; actual use has increased 4% since 2011. The data trend indicates this metric is not on track to meet the City's adopted goal.



The commercial and industrial energy sector consists of approximately 18,000 electric and 11,000 gas customers in Minneapolis. The number of electric and natural gas customers has increased in the last decade (17% and 3% respectively) while electricity use declined 14% and gas use increased 17% since 2011. While less affected by weather trends than the residential sector, emissions from natural gas represent over 52% of the emissions in this sector.

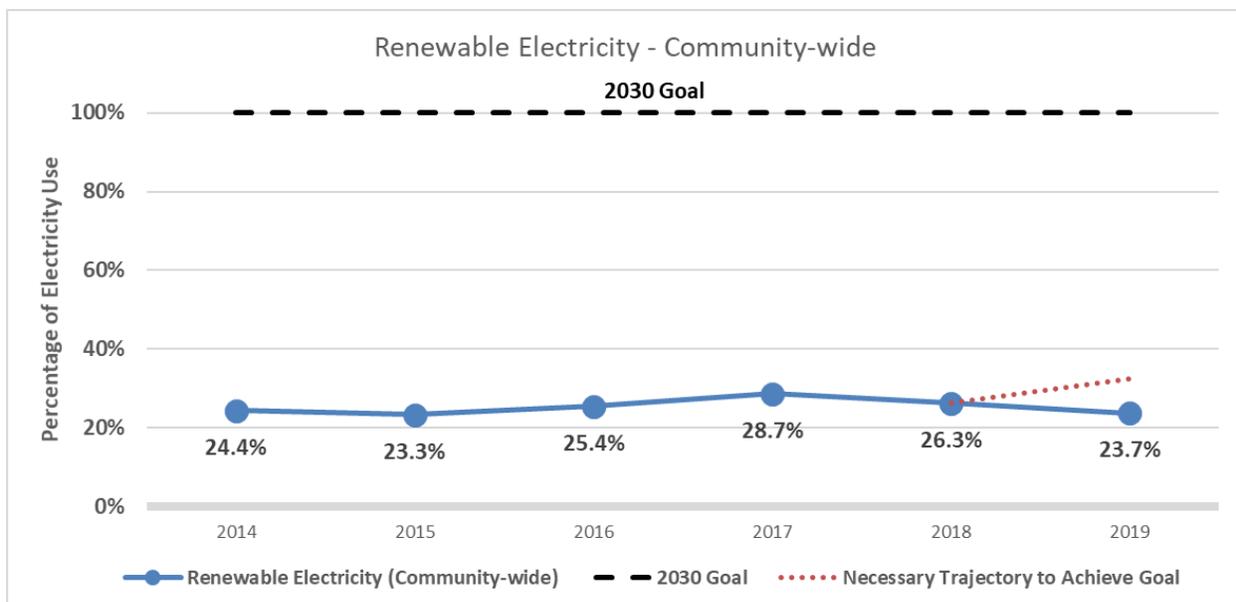
Partnership Activity EE.2 has the Partners teaming up to address energy consumption in the City's most energy intensive commercial buildings. In addition, Partnership Activity EE.4 has CenterPoint Energy testing new energy-saving, carbon capture technology designed for the commercial sector.

Metric 5: Renewable Electricity (Community-wide)

This metric measures progress toward the Minneapolis community-wide renewable electricity goal:

Receive one hundred percent (100%) of community-wide electricity use from renewable sources by 2030.

The following data show that 24% of electricity consumption came from renewable sources in 2019. The data trend indicates this metric is not on track to meet the City's adopted goal, which was established in 2018.



The data shown above indicates that the community's renewable percentage of electricity has decreased over the last two years. The data shows that this metric is not improving at the pace required to meet the 100% goal by 2030, thus this metric is determined to not be on track.

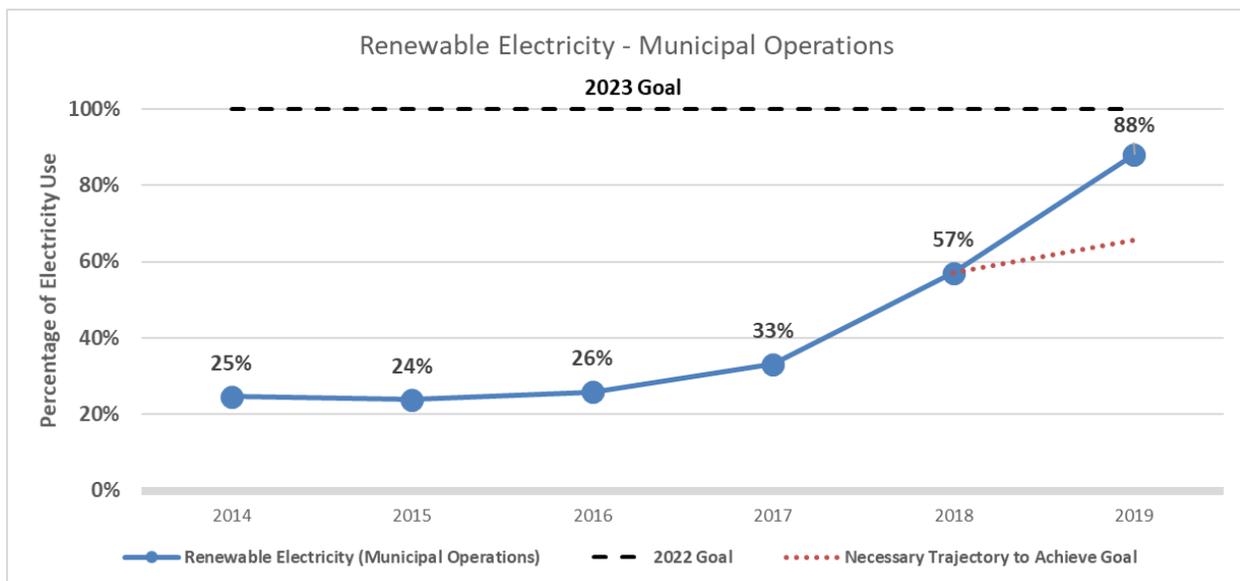
The Xcel Energy renewable electricity grid mix has decreased from 28% to 26% since 2017 due the portion of Xcel Energy's renewable generation that is available for utilization during the year. Subscription consumption amounts in Xcel Energy's green tariffed Renewable*Connect, Windsource, and community solar garden programs have risen in recent years. Generation changes may fluctuate annually because of Xcel Energy's requirement to comply with the Midcontinent Independent System Operator's (MISO) to produce energy from certain plants due to pricing and availability. Renewable Energy is always dispatched first. Looking past 2030, Xcel Energy's proposed Integrated Resource Plan projects that by 2035 about 65% of its generated electricity will come from renewable energy.

Metric 6: Renewable Electricity (Municipal Operations)

This metric measures progress toward the Minneapolis municipal operations renewable electricity goal:

Reach one hundred percent (100%) renewable electricity for municipal facilities and operations by 2022

The following data show that 88% of electricity consumption came from renewable sources in 2019. The data trend back to 2014 indicates this metric is on track to meet the City's adopted goal.



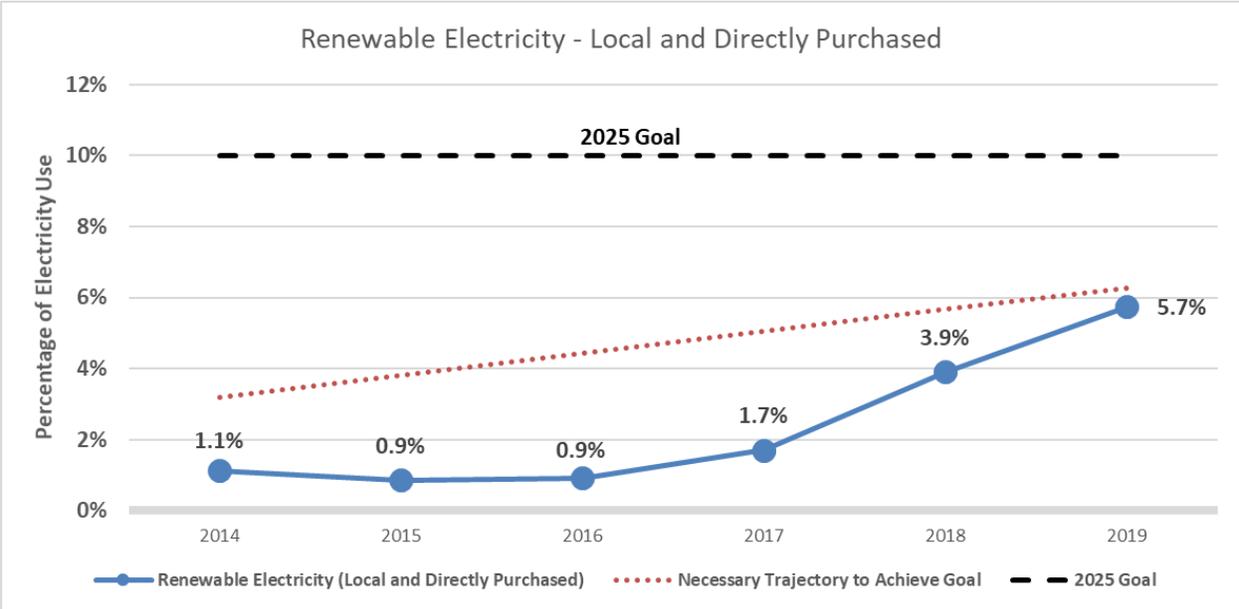
The share of renewable electricity consumed by the City's municipal operations has increased year-over-year, with a dramatic increase in recent years due to the City's increased participation in Xcel Energy's community solar garden (11 million kWh in 2019) and *Renewable*Connect* (58 million kWh in 2019) programs. Electricity consumption from municipal operations continues to decline (15% since 2014), making it easier to achieve the renewable electricity goal.

Metric 7: Renewable Electricity (Local and Directly Purchased)

This metric measures progress toward the Minneapolis Climate Action Plan’s renewable electricity goal (CAP Buildings & Energy Goal #3):

Increase electricity from local and directly purchased renewables to 10 percent of the total consumed by 2025.

The following data show that 5.7% of electricity consumption came from local and directly purchased renewable sources in 2019. Despite recent significant improvements, progress needs to continue for additional years, making it unknown if this metric is on track.



2018 and 2019 showed dramatic upticks in local and directly purchased renewable electricity. Increases were largely due to new, large direct-purchase subscriptions in Xcel Energy’s *Renewable*Connect* program, and a surge in local renewables through both Xcel Energy’s community solar garden program, and new Minneapolis-sited arrays supported by the City’s Green Cost Share program. Partnership Activity RE.3 targets local renewable energy by adding a community solar garden, funded through Xcel Energy’s Renewable Development Account, constructed at a City facility and offered to low income consumers.

Progress falls short of the trajectory needed to achieve the adopted 2025 goal. Much of the recent progress can be attributed to large subscriptions in Xcel Energy’s *Renewable*Connect* program by the City’s municipal operations, the University of Minnesota, and other large consumers.

2019-2021 Work Plan Progress

Progress to Date (August 2020)

EE.1 REDUCE NATURAL GAS USE FOR RESIDENTIAL CUSTOMERS

EE.1 aims to double residential participation in building envelop and high-efficiency equipment programs across the City. EE.1 proposes to use data-driven strategies to identify and engage customers with high energy savings potential with a specific focus on the City's Green Zones.

In 2019, participation in CenterPoint Energy's Home Insulation rebate program doubled in large part due to Minneapolis, with assistance from the Center for Energy and Environment, offering Home Energy Squad co-pays and buying down interest rates to 0% for insulation projects.

CenterPoint Energy contracted with ILLUME, a consulting firm with expertise in energy data, to develop a process to map and profile energy savings potential and customer characteristics across geographic areas. EVAC was engaged at the end of 2019 and again in early 2020 to provide feedback on CenterPoint Energy's Minnesota Community Profile Dashboard which uses Tableau software to map CenterPoint Energy's Conservation Improvement Program participation data, CenterPoint Energy customer natural gas use data, and Census demographic data. The tool plus labor costs for this effort is estimated to be \$250,000 by the end of 2020.

In 2020, CenterPoint Energy and ILLUME are making refinements to the Dashboard based on EVAC feedback. CenterPoint Energy is engaged with additional stakeholders, including Home Energy Squad vendor, Center for Energy and Environment, and other community stakeholders, like the City of Bloomington and Prospect Park Association, in using the Dashboard to deploy targeted engagement strategies and track progress towards goals.

CenterPoint Energy and ILLUME are finalizing a Minneapolis specific Dashboard analysis that will inform targeted engagement strategies and provide a process for setting and tracking climate and equity goals.

In addition, CenterPoint Energy has started to engage insulation contractors and develop a process to offer point of sale home insulation rebates to address the upfront cost barrier for customers pursuing these types of projects. The Company hopes to make this offer available by fourth quarter of 2020.

EE.2 REDUCE ENERGY USE FOR HIGH ENERGY SAVING POTENTIAL COMMERCIAL CUSTOMERS

EE.2 has the Partners coordinating on engaging commercial buildings with high energy use and energy use intensity.

Xcel Energy continues to work on completing the contracting to its software vendor to help address the City's bottom 25% performing benchmarked buildings for this pilot project. In the interim, Xcel Energy and CenterPoint have finalized their reviews of the City's benchmarked bottom 25% Energy Star score building list for previous program participation and potential for future opportunities – considering the current economic impacts of the Coronavirus Pandemic. The utilities and the City have met to discuss possible Green Cost Share program interaction. The utilities are meeting again to finalize an electric/gas account management approach and launch the effort.

In CenterPoint Energy's 2021-2023 CIP Triennial filings, the Company proposes to begin to coordinate efforts related to their respective energy audit programs for commercial buildings. The utilities propose maintaining their existing commercial energy audit services for customers that are not served by both utilities or prefer to address issues specific to either fuel source. However, starting in 2021, the utilities are prepared to coordinate on outreach, intake, and delivery of their program for interested customers. These modifications were informed by a third-party evaluation of CenterPoint Energy's Natural Gas Energy Analysis program, which found that customers expressed different opinions about a joint gas and electricity energy audit offering. The draft evaluation will be filed in CenterPoint Energy's CIP Triennial Plan Docket No. G-008/CIP-20-478 at the request of the Department of Commerce.

In response to the widespread acts of property damage in the Twin Cities in May and June, Xcel Energy and CenterPoint Energy are offering increased incentives for affected properties. These offerings include free consulting services for Xcel Energy and CenterPoint Energy customers, double rebates for qualifying electric efficiency measures and triple rebates for qualifying natural gas efficiency measures.

EE.3 PURSUE ENERGY EFFICIENCY "PERFORMANCE PATH" AT CITY FACILITIES

EE.3 aims to improve energy efficiency in City facilities.

Xcel Energy developed a pilot program to test with the City of Minneapolis in their facilities. This program is designed to incentivize higher levels of customer engagement in energy efficiency with higher levels of utility engagement through assessments/studies and rebates. Xcel Energy has been working with the City's Energy Manager to help achieve a pilot goal of 10% electricity use reduction in City facilities.

As part of this pilot, additional building needs assessments were completed and found minimal new opportunities beyond previous work the Partners have done together, which has included building needs assessments, lighting upgrades, HVAC system upgrades, and street lighting LED conversion. Building Operator Certification (BOC) training for City employees is currently being explored. Once the City Energy Manager determines who may participate in the BOC training, Xcel Energy will schedule to the needs of the city.

CenterPoint Energy conducted site visits to evaluate over 70 gas meters at City facilities for possible upgrades for automated daily meter reads. City Facilities staff reviewed the information on meter upgrade potential and costs and has decided to proceed with upgrades to two-thirds of the evaluated meters at the City's expense.

EE.4 FIELD TEST ENERGY EFFICIENCY AND CARBON CAPTURE TECHNOLOGY

EE.4 aims to pilot energy efficiency and carbon capture technology, called CARBiNX at commercial facilities in Minneapolis and surrounding suburbs.

By the end of 2019, CenterPoint Energy had recruited and contracted with eight customers to pilot nine CARBiNX units in Bloomington, Minneapolis, Edina, Columbia Heights, Plymouth, Elk River, Fridley, and Anoka. And, the first CARBiNX unit in the Country was delivered to the Radisson Blu at the Mall of America. The City of Minneapolis signed a contract to host a CARBiNX unit at its water treatment facility in Columbia Heights. CenterPoint Energy is covering all pilot costs expected to be \$15,000-20,000/customer.

In 2020, the CARBiNX pilot experienced delays due to permitting challenges and COVID-19. While permitting the CARBiNX unit is permissible under current law, permitting is at the discretion of building code officials who are not familiar with the technology and have to prioritize more standard projects. Therefore, CenterPoint Energy and the makers of CARBiNX, CleanO₂ Technology, have had to invest more time and resources than expected into municipal code official engagement. A virtual meeting was held in late June, to provide a demonstration of the technology and determine permitting criteria and procedures with code officials. The pilot also experienced several months of delays as code officials and project partners focused on other work related to adjusting to COVID-19.

CenterPoint Energy is working with City of Bloomington code officials to prepare their precise permitting criteria and process requirements for this technology. Meanwhile, CenterPoint Energy and the City have plans to discuss additional CARBiNX pilot opportunities in Minneapolis.

EE.5 SUPPORT RESIDENTIAL ENERGY DISCLOSURE POLICIES BY MAKING DATA ACCESSIBLE WITH TOOLS

EE.5 proposes new and enhanced utility data access tools to support implementation of the City's energy disclosure policies.

In 2019, the Partners met several times to better understand the City's Time-of-Rent policy implementation needs, the data privacy regulations, and the utilities' technical and resource capacity.

In 2020, the Partners agreed on a path forward that balances ease of Time-of-Rent policy compliance for rental property owners with protecting customer's data privacy in buildings with 5+ units. CenterPoint Energy contracted with Accelerated Innovations to modify CenterPoint Energy's Data Portal by the end of 2020 to accommodate the City's Time-of-

Rent ordinance compliance features. The tool modifications and labor costs are approximately \$50,000.

Xcel Energy will either rebuild its current benchmarking tool with the addition of a Time of Rent tool or create an extension of the current benchmarking tool that can meet the needs of the city's Time of Rent ordinance. Xcel Energy expects to complete this work by the end of 2020 or early 2021. Total costs are yet undetermined.

The Partners will consider next steps for time-of-rent compliance strategies related to rental property owners of 1-4 unit buildings. The Partners had requested that the Minnesota Public Utilities Commission (PUC) address this issue under DOCKET NO. E,G-999/M-19-505. While the PUC did not address the issue on their first hearing in the docket in July 2020, the PUC indicated that they would leave the proceeding open and continue considering issues raised.

In 2020, CenterPoint Energy is providing up to \$60,000 to pilot Center for Energy & Environment's Energy Advisor service to support implementation of the City's Truth in Sale of Housing (TISH) energy reporting requirement.

RE.1 INSTALL ELECTRIC VEHICLE INFRASTRUCTURE FOR CITY FLEET

RE.1 spurs the transition to an electric vehicle fleet for the City of Minneapolis.

Xcel Energy and the City have finalized the Customer User Agreement and are awaiting formal approval by City Council. Xcel Energy and the City are working with program designers to lay out a formal plan for review and implementation. Charging infrastructure will likely be installed at the Aldrich facility, Fridley Water Plant, and Federal Court House Ramp.

RE.2 ACHIEVE 100% RENEWABLE ELECTRICITY FOR CITY ENTERPRISE AND COMMUNITY PATHWAY

RE. 2 creates a pathway to the City's 100% renewable electricity goal.

In 2019 the City issued a Request for Information (RFI) to meet its 100% renewable electricity goal for both city enterprise and communitywide by 2030. Xcel Energy responded to the RFI.

The City and Xcel Energy have met multiple times to discuss potential renewable options the City is interested in.

The City intends to release two Requests for Proposal (RFPs) in the near-future: one to provide most of the City enterprise's electricity needs with renewable electricity and the other to provide 10% of the City enterprise's electricity needs with locally-sited renewables.

RE.3 PROVIDE SOLAR GARDEN AND ENERGY EFFICIENCY OPPORTUNITIES FOR LOW-INCOME COMMUNITIES

RE.3 aims to establish a low-income community solar garden.

The Renewable Development Fund (RDF) grant recipient has submitted the adjusted grant contract to Xcel Energy. It is currently under review and Xcel Energy is working with the grant recipient to acquire necessary information to develop a Public Utilities Commission filing for approval. The amended contract will be filed within 60 days of receipt of completed information. Subscribers may be identified through the City's 4D program and energy efficiency roll-out plan.

WD.1 IMPROVE EQUITABLE ACCESS TO CLEAN ENERGY JOBS

WD.1 aims to build the Partner's collective understanding of the obstacles and opportunities of achieving a diverse clean energy workforce.

Throughout 2019, the Partners engaged in efforts to study workforce conditions in Minneapolis and Minnesota, including the City's [Renewable Energy and Energy Efficiency Workforce Assessment](#) and the Minnesota Energy Utility Diversity Group Report.

Since the adoption of the Work Plan in late 2018, the workforce situation in clean energy jobs, like all parts of the economy, has been altered due to the pandemic. The Partners are in the process of beginning new conversations reflective of the evolving workforce situation.

Xcel Energy highlighted in its recent COVID-19 Relief & Recovery filing (Docket No. 20-492), that in 2019, the Company (all operating companies) spent \$480 million with businesses owned by women, minorities or veterans. This spending supported 3,625 jobs and \$179 million in wages. The Company expects to spend \$599 million in 2020. In Minnesota, Xcel Energy spent almost 85 million on diverse suppliers in 2019. As part of its commitment to supplier diversity, the Company has established the "Xcel Energy Supplier Diversity Program," which develops and strengthens business relationships with diverse suppliers.

CenterPoint Energy filed its 2019 Conservation Improvement Program (CIP) Status Report which provides information about the diversity of its CIP vendors. In 2019, CenterPoint Energy's Minority and Women Business Enterprise (MWBE) CIP vendor spend was \$1,725,763 or 14% of the total CIP Vendor Spend, an increase from 10% in 2017. The Company notes that \$5,886,116 or 47% of its vendor spend goes to non-profit entities; nonprofit entities cannot qualify as MWBEs under the definition CenterPoint Energy uses. If non-profit entities are excluded from the calculation, 26% of the Company's remaining vendor spend went to MWBEs.

IF.1 IMPROVE ACCESS TO ENERGY EFFICIENCY BY PROVIDING INCLUSIVE FINANCING

IF.1 proposes an Inclusive Financing pilot.

In 2019, the Partners continued to explore inclusive financing feasibility in Minnesota and develop the parameters of a pilot program for Minneapolis residential customers. The Partners, along with several other stakeholders, participated on the advisory working group for the Tariffed On-Bill Financing Feasibility Assessment prepared by the Cadmus Group for the University of Minnesota Energy Transition Lab. In Q4 2019, the Partners supported the City's intervention in CenterPoint Energy's rate case to propose an inclusive financing pilot program. In June, the City filed a proposal for an Inclusive Financing program in CenterPoint Energy's rate case.

CenterPoint Energy and interveners in the rate case, including the CenterPoint Energy and the Department of Commerce submitted rebuttal testimony to the City's proposal in mid-August. Next steps in the rate case include Settlement Conferences and Evidentiary Hearings (September), Briefings and Findings of Fact (October), and Administrative Law Judge's Report (November).

Appendix: Supporting Data

The Partnership originally established metrics based on recommendations of EVAC and the Planning Team in 2015 and first reported on them in the 2015 Annual Report (published in 2016). The intent of this first generation of metrics was to inform the Board of progress in the Partnership, helping the partners understand what activities are happening in the community and determining the level of success. Compiling metrics included significant data collection from all three partners to determine which areas of the community are currently being well-served, less-served, or under-served.

The data collected in the first generation of metrics remains very valuable to the Partnership and other stakeholders, and thus is retained and reorganized under the new seven key metrics. This section contains this data for posterity and to help illuminate the reasons for trends and yearly variation seen in the key metrics in this report.

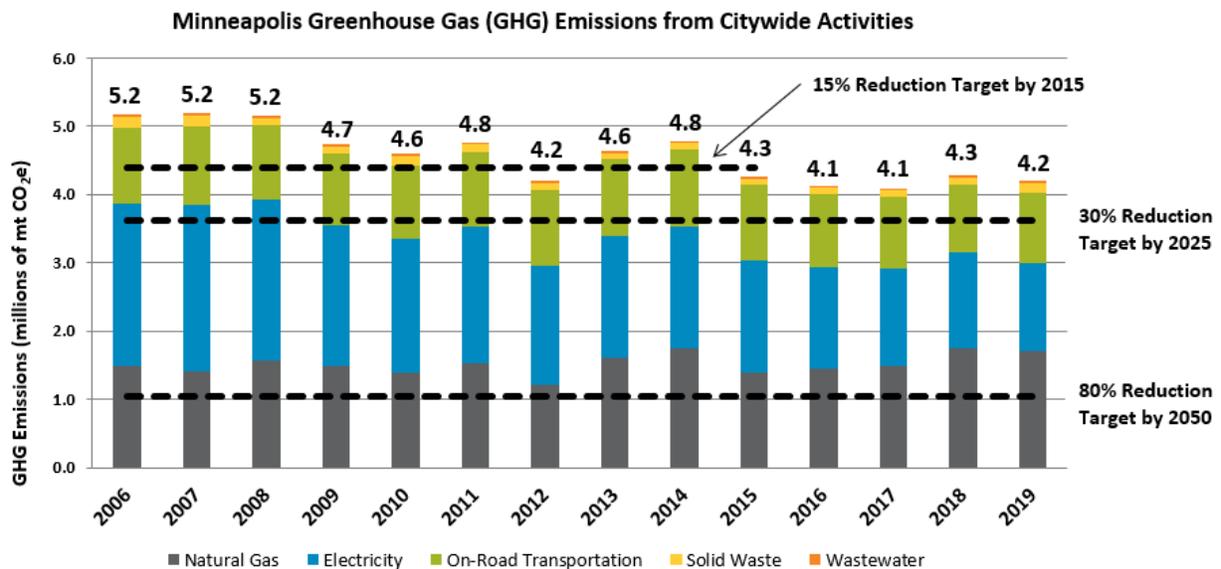
This section also provides trend forecasting (when data is available), which is an area of continued effort by the Partnership.

Metric 1 Supporting Data: Greenhouse Gas Emissions (Community-wide)

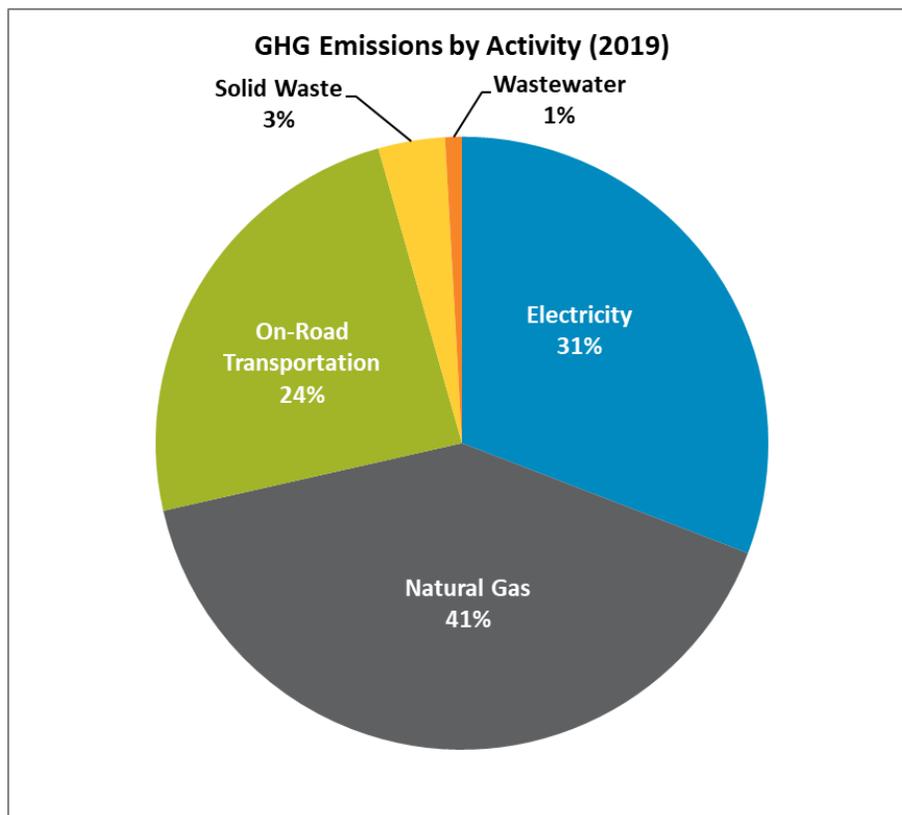
Metric		2015	2016	2017	2018	2019
1	GHG emissions - Community-wide (mt CO ₂ e)	4,264,879	4,127,692	4,093,890	4,284,733	4,201,604
	Change compared to 2006 baseline	-18%	-20%	-21%	-17%	-19%

Supporting Data		2015	2016	2017	2018	2019
1a	Emissions from electricity use (mt CO ₂ e)	1,633,878	1,473,229	1,429,560	1,403,714	1,295,926
1b	Electricity emissions factor (mt CO ₂ e/MWh)	0.406	0.365	0.372	0.365	0.356
1c	Emissions from natural gas use (mt CO ₂ e)	1,393,609	1,457,201	1,478,843	1,742,208	1,706,439

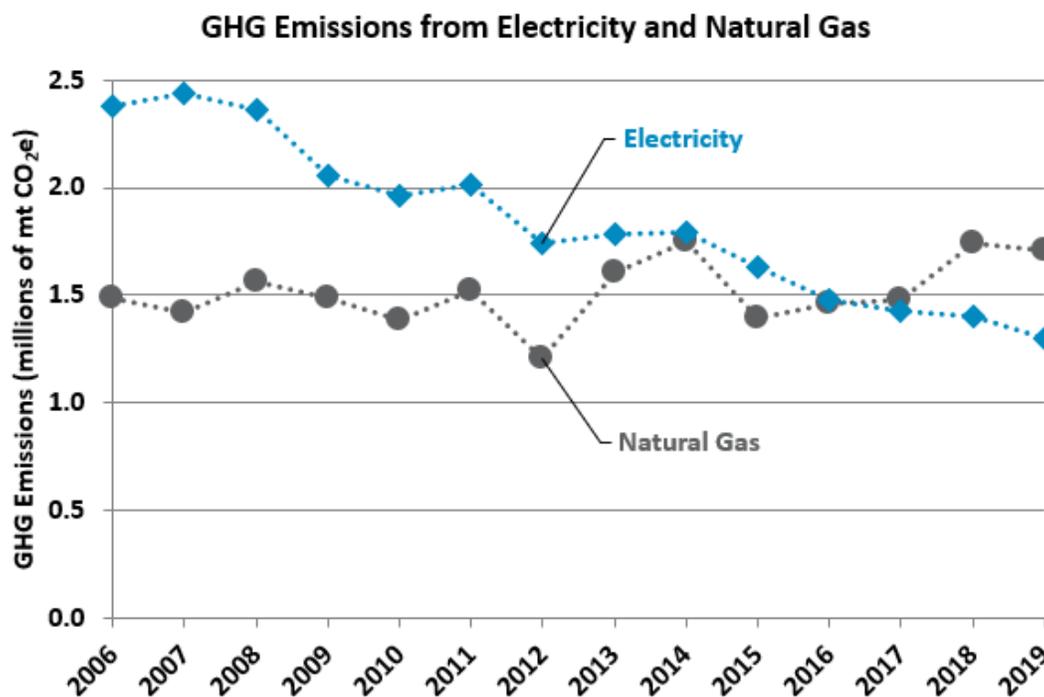
The figure below represents the citywide greenhouse gas (GHG) emissions inventory, an accounting of Minneapolis emissions from buildings, transportation, wastewater, and solid waste. Minneapolis has adopted targets to reduce community-wide emissions 15% by 2015, 30% by 2025, and 80% by 2050 (from the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



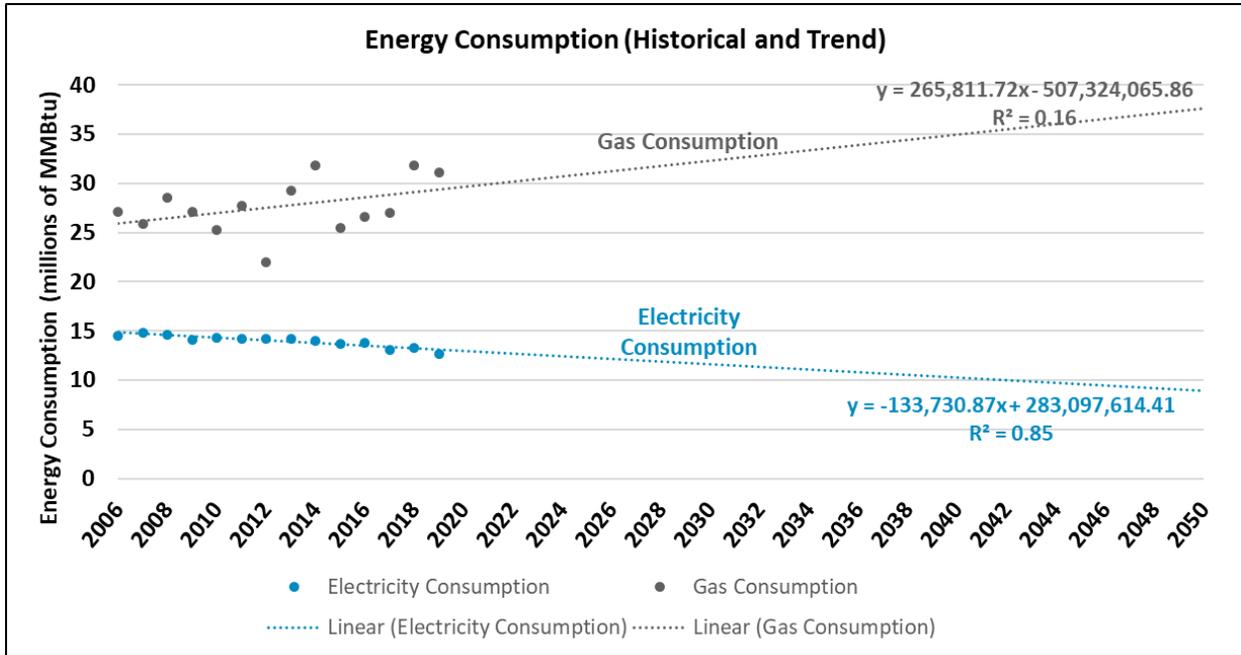
Emissions from the two fuels that are the focus of the Clean Energy Partnership – electricity and natural gas – account for 72% of the City’s overall greenhouse gas emissions.



For the first time in 2017, the largest source of emissions came from the combustion of natural gas. This has remained true since, with emissions from both fuels further diverging and continuing their respective trends.

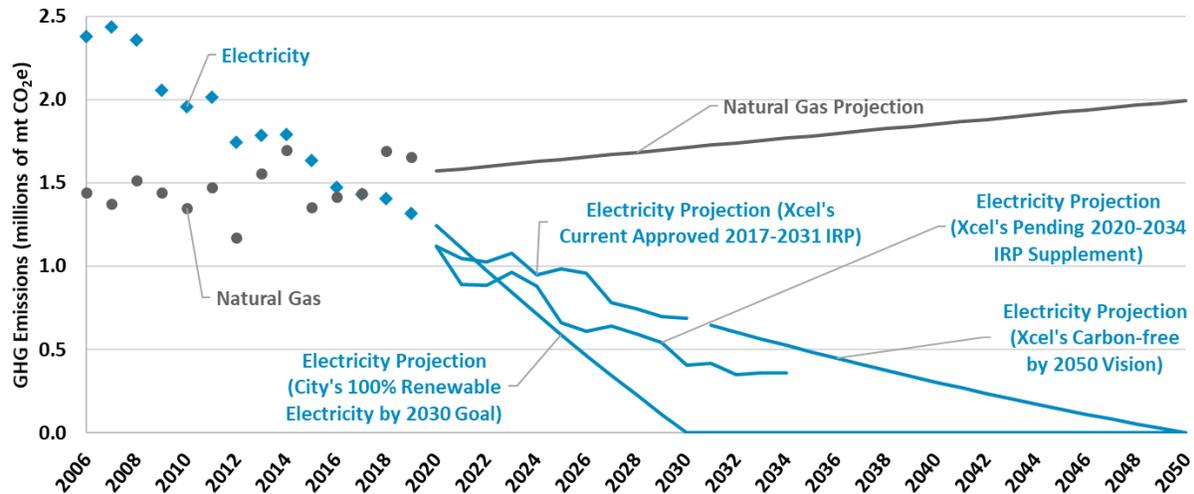


A trend line can be created by looking at the underlying historical energy consumption data and applying a linear regression. The resulting trend prediction is shown in the following graph.



To predict future emissions, the consumption forecasts above are coupled with emission factors for fuels, while keeping everything else constant. The emission factor for natural gas is assumed to remain constant. In 2019, CenterPoint Energy continued to take action to disrupt natural gas emissions trends by developing programs and proposals to encourage the production and use of renewable sources of gas and carbon capture technologies. The emission factor for electricity falls over time in four scenarios: 1) Xcel Energy’s current, approved 2017-2031 Integrated Resource Plan (IRP), 2) Xcel Energy’s pending 2020-2034 IRP, 3) Xcel Energy’s carbon-free by 2050 vision, and 4) The City of Minneapolis’ 100% renewable electricity by 2030 goal.

GHG Emissions Scenarios for Electricity and Natural Gas



The results show the emissions trajectory for each fuel. Looking toward 2025, if other sectors besides electricity and natural gas are held constant, overall emissions will continue to decrease driven by the decrease in electricity emissions. Under this scenario, the City would miss the same goal with the current, approved Xcel Energy 2017-2031 IRP, making a 25% overall GHG reduction. The City will exceed its 30% overall GHG reduction goal with a 33% overall GHG reduction in the City's 100% renewable electricity projection scenario. Additionally, the goal would be achieved with a 32% reduction in Xcel Energy's pending 2020-2034 IRP scenario. In this scenario, Xcel Energy's projected carbon intensity in 2025 under the IRP Supplement is 69% below what it was in the City's baseline year of 2006.

To achieve the City's 80% GHG reduction goal by 2050, emissions from all sectors and fuels must be below approximately 1,000,000 metric tons of carbon dioxide equivalent (mt CO₂e). If current trends continue, natural gas will account for nearly twice the GHG emissions as the City's goal for all sectors combined.

To address the need to dramatically reduce GHG emissions from natural gas, the Partners collectively and independently took the following actions in 2019:

- The Partners started work on the 2019-2021 Work Plan Partnership Activities which include efforts to improve access to natural gas efficiency and pilot carbon capture technology for commercial uses,
- CenterPoint Energy allocated \$7.9 million to help Minneapolis residents and businesses reduce their natural gas use and save over \$3 million via its Conservation Improvement Programs,
- CenterPoint Energy and the City were participants in the Rocky Mountain Institute e-Lab Accelerator to discuss how Minnesota might move forward with efforts to decarbonize natural gas end uses,
- CenterPoint Energy, Xcel Energy, and the City participated in the Decarbonizing Minnesota's Natural Gas End Uses stakeholder group facilitated by Great Plains Institute and Center for Energy and Environment,
- CenterPoint Energy petitioned the Public Utilities Commission to allow the utility to pilot a renewable natural gas green-tariff program; the PUC denied the petition

without prejudice and encouraged CenterPoint Energy to work with stakeholders to modify the petition,

- CenterPoint Energy held a day-long workshop convening local and national stakeholders in understanding how Renewable Natural Gas might help meet Minnesota's climate, clean air, waste management, and economic development goals,
- CenterPoint Energy President & CEO (former), Scott Prochazka, presented Committed to Minnesota, summarizing the Company's investments to ensure a safe reliable system and commitment to environmental stewardship,
- CenterPoint Energy established a Carbon Policy committing to reducing carbon emissions in company operations 70% from 2005 levels by 2035 and reducing emissions from customer use of natural gas 20-30% from 2005 by 2040.
- CenterPoint Energy conducted legislative and stakeholder engagement to develop the Natural Gas Innovation Act that would establish a regulatory framework for the utility to choose to use renewable energy resources and innovative technologies. The Bill received bipartisan approval in the State Senate in 2020 but was not heard by the State House.

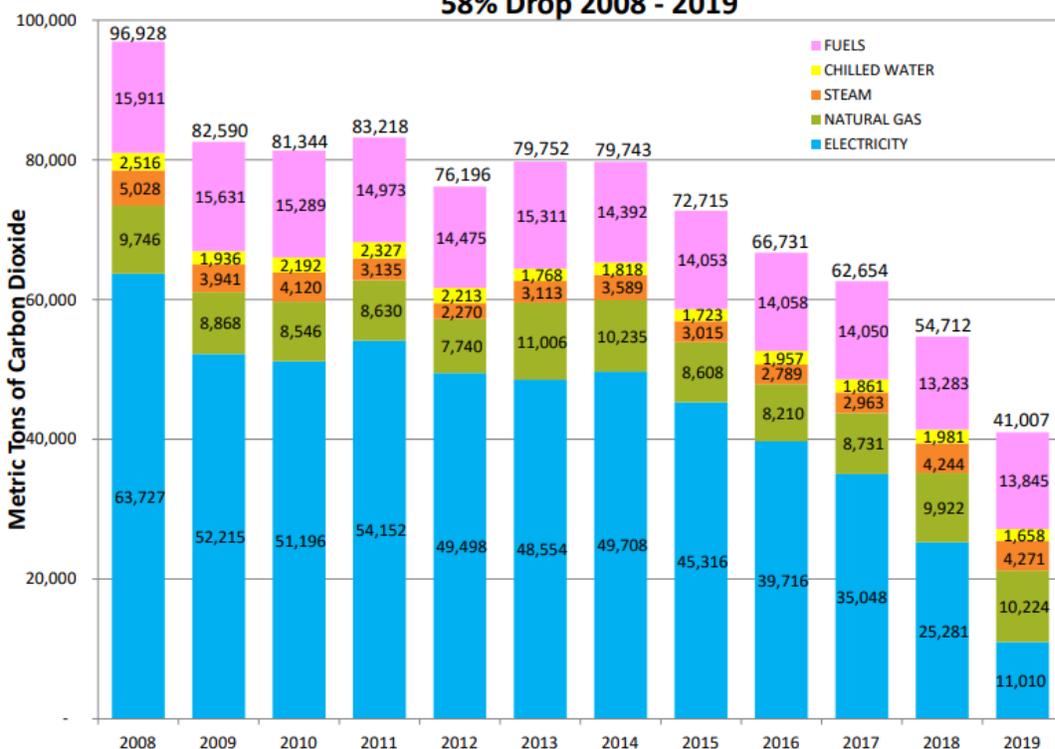
Metric 2 Supporting Data: Greenhouse Gas Emissions (Municipal Operations)

Metric		2015	2016	2017	2018	2019
2	GHG emissions - Municipal operations (mt CO ₂)	72,715	66,731	62,654	54,712	41,007
	Change compared to 2008 baseline	-25%	-31%	-35%	-44%	-58%

Supporting Data		2015	2016	2017	2018	2019
2a	Emissions from electricity use (mt CO ₂)	45,316	39,716	35,048	25,281	11,010
2b	Emissions from natural gas use (mt CO ₂)	8,608	8,210	8,731	9,922	10,224

Greenhouse gas emissions from City facilities and operations have decreased dramatically (58%) since the 2008 baseline. This drop has been largely due to substantial decreases in electricity emissions, due to reductions in Xcel Energy’s grid mix emissions and City renewable energy projects and subscriptions. Starting in 2019, electricity is no longer the largest single source of emissions in the inventory, representing 27% compared to 34% for vehicle fuels. Electricity has accounted for 54 percentage points of the 58% decrease seen below.

Figure 8: City's Carbon Emissions
58% Drop 2008 - 2019



Emissions from natural gas have remained relatively constant and are the third largest source of emissions after vehicle fuels and electricity. Likely in 2020, emissions from natural gas will eclipse those from electricity as renewable electricity for municipal operations increases due to the City’s 100% renewable electricity goal. New solutions, including energy efficiency and beneficial electrification, will be needed to reduce reliance on fossil fuels for heating in the future. Additional options to considered may be carbon capture technology and renewable natural gas.

Metric 3 Supporting Data: Energy Use (Residential)

Metric		2015	2016	2017	2018	2019
3	Energy use - Residential (MMBtu)	13,465,134	12,737,491	13,520,158	15,617,627	15,229,655
	Growth baseline energy use - Residential (MM	14,726,352	14,743,172	14,759,991	14,776,811	14,793,631
	Change compared to growth baseline	-9%	-14%	-8%	6%	3%
Residential Energy Use		2015	2016	2017	2018	2019
3a	Residential building electricity use (MWh)	945,335	970,280	950,159	1,029,006	970,477
3b	Residential building gas use (therms)	102,326,656	94,204,489	102,712,038	120,984,119	119,102,768

Residential Energy Use

Residential energy use decreased slightly in 2019 compared to 2018 and year-to-year energy use continues to fluctuate greatly due to changes in yearly temperatures. The National Oceanic and Atmospheric Administration (NOAA) recorded heating degree days, a measurement of heating demand, in 2019 as being the second highest in Minneapolis within the last ten years.

In 2019, Minneapolis had approximately 123,000 residential natural gas customers, an increase of 7.5% over ten years. While overall natural gas consumption has increased with customer growth, the weather-normalized gas use per customer has decreased by about 8.2% over the same ten-year period. In 2019, Minneapolis residential gas customers used approximately 895 therms of natural gas or the equivalent of 4.7 metric tons of carbon dioxide equivalent (CO₂e).

Xcel Energy's approximate number of 179,800 residential customers increased 6.4% over 2014 while their consumption decreased 1.0%. Minneapolis customers used an average annual electric consumption of 5,395 kWh in 2019, equating to approximately 1.9 metric tons of CO₂e per household after accounting for carbon-free Windsource and Renewable*Connect commitments by Minneapolis residents, reflecting the ongoing decline in CO₂ per kWh on Xcel Energy's Upper Midwest system. This is less than half the emissions of a typical gasoline-powered vehicle at approximately 4.6 metric tons per year.

Utility Residential Conservation Improvement Programs

CenterPoint Energy and Xcel Energy's portfolio of Conservation Improvement Programs continued to help Minneapolis residents conserve energy, save on their utility bills, and improve the comfort and safety of their homes. On the gas side, [CenterPoint Energy's Efficiency Programs & Rebates](#) spending amounted to \$3 million, including \$1.4 million in customer rebates, to assist over 38,000 Minneapolis residents save over 1 million therms of natural gas or \$850,000 on their gas utility bills in 2019 (calculation does not include income-qualifying or multi-family program participants). [Xcel Energy's Residential Energy Efficiency Programs & Rebates](#) provided over 6,900 residential customer rebates with over 3.3 million kWh in energy savings, \$341,016 per year in bill savings over the lifetime of the measure and \$1.25 million in rebates.

Home Energy Squad

[Home Energy Squad \(HES\)](#) is a joint program offered by Xcel Energy and CenterPoint Energy to help residential customers identify energy efficiency opportunities via a home energy assessment.

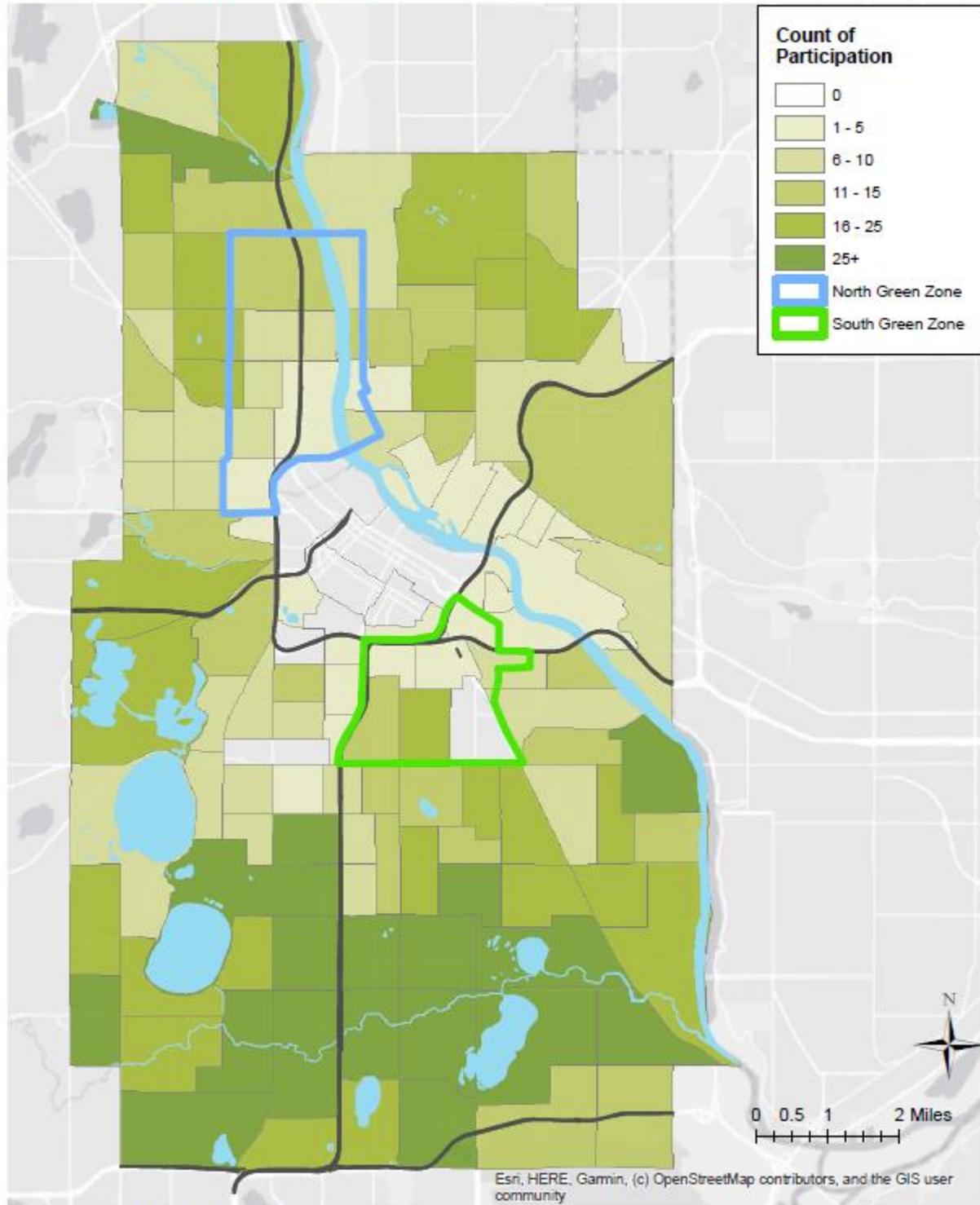
Home Energy Squad Program		2015	2016	2017	2018	2019
3c	Home Energy Squad participation	1,198	837	620	869	1786
3d	Home Energy Squad annual energy savings (kBtu)	4,195,767	2,931,433	2,118,397	3,095,041	6,397,219
3e	Home Energy Squad estimated annual cost savings	\$ 94,812	\$ 60,486	\$ 59,959	\$ 77,237	\$ 157,534
3f	Residences (1-4 unit) annually served by HES	1.3%	0.9%	0.7%	1.0%	2.0%

In 2019, HES participation doubled thanks in large part to the City of Minneapolis contributing to the customer co-pay for nearly 1,046 HES visits, equivalent to three out of every five visits in the City. In addition to assisting with co-pays, the City also invested resources in enhanced engagement with landlords and high-need communities. The following table describes Home Energy Squad participant characteristics.

2019 Minneapolis Home Energy Squad Visits	Number	Percent of Total
Total HES Visits	1,786	100%
Visits at Owner-occupied home	1,638	92%
Visits at renter-occupied home	148	8%
Visits at single-family residences	1,336	75%
No-cost visits for low-income customers	248	14%
Received wall insulation recommendation	652	37%
Received attic insulation recommendation	991	55%
Received air sealing recommendation	841	47%

The following map shows the distribution of Home Energy Squad visits across Minneapolis in 2019. In 2019, the neighborhoods that saw the most visits were: 1.) East Phillips, 2.) Longfellow, 3.) Hale/Page/Diamond Lake, 4.) Nokomis East, and 5.) Standish Ericsson.

Home Energy Squad Participation, 2019



Home Energy Squad-driven loans

The Center for Energy and Environment's [Home Loans Programs](#) offers low-interest loans for home energy efficiency improvements. In 2019, Minneapolis residents financed 14 high-efficiency air conditioners, 43 high-efficiency heating systems, and 96 home insulation projects. HES-driven loans increased significantly with the help of the City of Minneapolis making 0% interest loans available for 80 of the home insulation projects.

Energy Efficiency Loans		2015	2016	2017	2018	2019
3g	HES-driven energy efficiency loan count	39	43	37	73	153
3h	HES-driven value of loans	\$ 202,079	\$ 192,234	\$ 346,772	\$ 628,422	\$ 1,216,944

Air Sealing & Insulation Rebates

CenterPoint Energy offers a [rebate for residential air sealing and insulation upgrades](#). Insulation and air sealing improvements are among the greatest 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.

Home insulation rebated projects in Minneapolis averaged approximately 240 therms of estimated annual energy savings per project, or approximately 27% of weather-normalized natural gas use per Minneapolis residential customer.

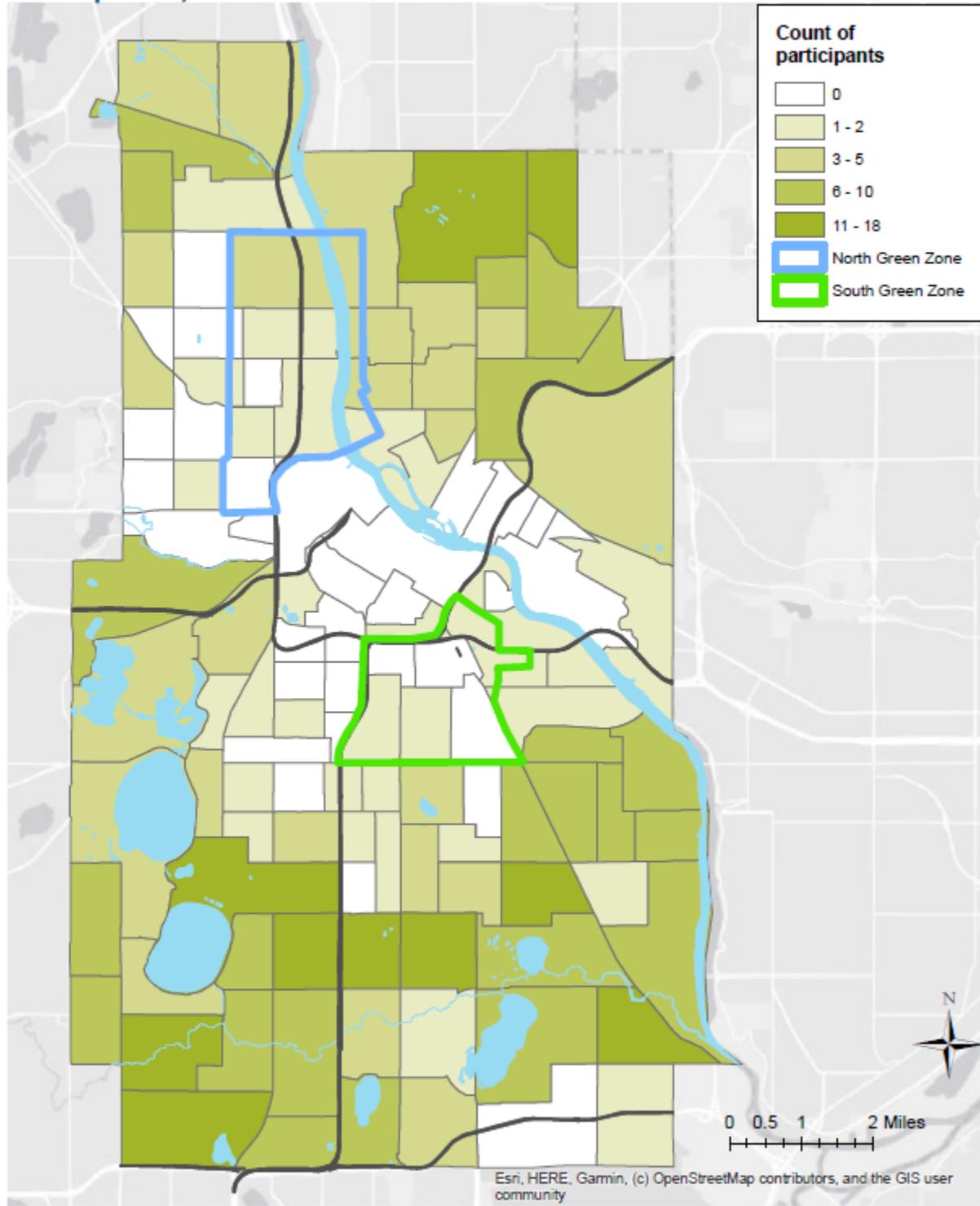
Air Sealing & Insulation (ASI) Rebates		2015	2016	2017	2018	2019
3i	ASI participating customers	335	277	242	258	569
3j	ASI estimated annual energy savings (therms)	74,741	64,404	67,390	71,670	136,330
3k	ASI estimated annual cost savings	\$ 42,069	\$ 42,292	\$ 43,938	\$ 46,729	95,158
3l	ASI rebate dollars spent	n/a	\$ 130,000	\$ 136,060	\$ 138,469	\$ 300,573

In 2019, the number of Minneapolis residences to receive an air sealing and insulation rebate more than doubled. This dramatic increase was helped in part by the substantial increase in HES visits in 2018 and 2019, which helped connect interested customers to wall and attic insulation services.

Of the 569 rebated insulation projects, 15% (87) also received 0% interest loans provided by the City of Minneapolis in collaboration with the Center for Energy and Environment.

The following map shows the distribution of CenterPoint Energy's home insulation rebates across Minneapolis in 2019.

CenterPoint Energy Home Insulation Rebate Program Participation, 2019



Income-Qualifying Conservation Improvement Programs

CenterPoint Energy and Xcel Energy offer energy conservation services for low-income customers, including specifically designed opportunities for homeowners, renters, multi-family building owners, and affordable housing organizations.

Income-Qualifying Energy Efficiency Programs		Source	2015	2016	2017	2018	2019
3m	Low-income CIP program participants	CNP	583	453	712	690	556
3n	Low-income CIP dollars spent	CNP	\$ 921,832	\$ 1,618,735	\$ 1,841,555	\$ 2,036,310	\$ 1,827,837
3o	Low-income CIP estimated energy savings (therms/yr)	CNP	231,859	57,547	205,272	151,380	65,590
3p	Low-income estimated annual cost savings	CNP	\$ 122,208	\$ 37,305	\$ 133,839	\$ 98,711	\$ 45,782
3q	Low-income CIP program participants	Xcel	661	1,331	596	831	730
3r	Low-income CIP dollars spent	Xcel	\$ 324,360	\$ 334,018	\$ 629,357	\$ 753,378	\$ 638,193
3s	Low-income CIP estimated energy savings (kWh/yr)	Xcel	359,233	491,532	423,297	451,639	438,243
3t	Low-income estimated annual cost savings	Xcel	\$ 32,331	\$ 49,153	\$ 45,018	\$ 43,524	\$ 48,478
3u	Weatherization Assistance Program (WAP) visits	DOE	168	122	253	238	237
3v	WAP dollars spent	DOE	\$ 916,805	\$ 448,356	\$ 887,202	\$ 1,188,524	\$ 1,091,426

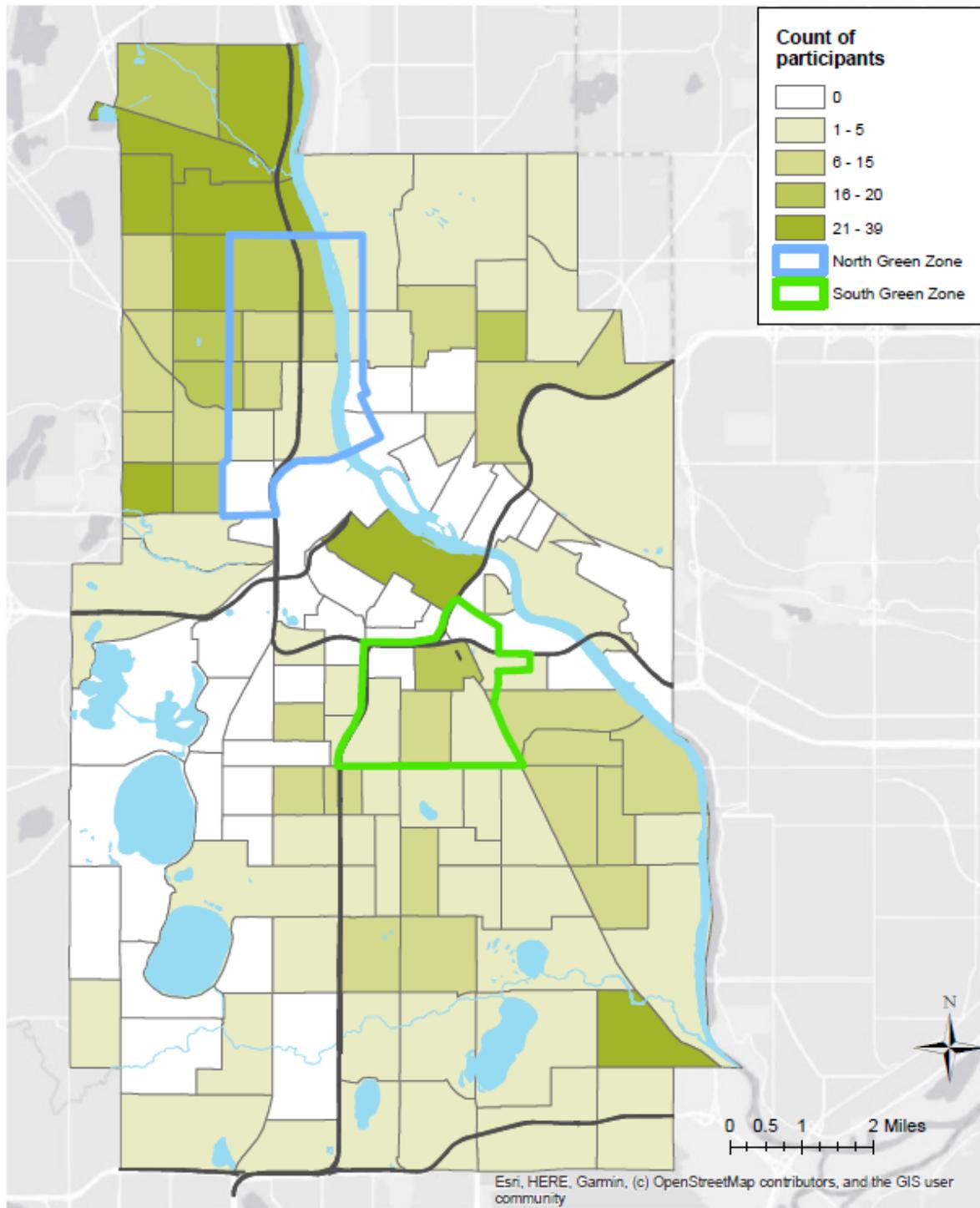
Energy Cost Assistance Programs		Source	2015	2016	2017	2018	2019
3w	Gas Affordability bill pay assistance Participants	CNP	4,000	3,450	3,247	3,228	3,451
3x	Gas Affordability bill pay assistance total spent	CNP	\$2,200,000	\$ 1,178,370	\$ 1,269,960	\$ 1,396,992	\$1,519,908
3y	Power-On participants	Xcel	924	2,313	2,321	1,550	2,515
3z	Power-On total spent	Xcel	\$ 598,752	\$ 1,887,408	\$ 1,090,603	\$ 754,558	\$ 11,171,699
3aa	Senior Discount participants	Xcel	4,790	4,790	5,784	5,817	5,864
3bb	Senior Discount total spent	Xcel	\$ 862,200	\$ 1,008,796	\$ 941,056	\$ 969,362	\$ 962,811
3cc	Medical Affordability Program participants	Xcel				344	397
3dd	Medical Affordability Program total spent	Xcel				\$ 268,275	\$ 312,415

In 2019, [CenterPoint Energy's Income-Qualified Programs](#) and [Gas Affordability Program](#) directed \$3.4 million to help qualifying customers in Minneapolis reduce their energy costs and improve the efficiency, comfort and safety of their homes.

Xcel Energy's [Energy Assistance Options](#) include access to the Power-On Program, Senior Discount, and Medical Affordability Program as well as our Income Qualified Energy Efficiency programs such as Home Energy Savings, Low Income Home Energy Squad, and Multi-Family Energy Services Program. In total, these programs reached over 8,700 Minneapolis customers providing over \$12.4 million in assistance and energy efficiency options in 2019.

The following map shows the participation distribution of CenterPoint Energy income-qualified energy efficiency services, including Low Income Weatherization, Low Income Rental Efficiency, Stay Safe Stay Warm, Non-Profit Affordable Housing Rebates, and Low Income Multi Family Building Efficiency received across Minneapolis in 2019.

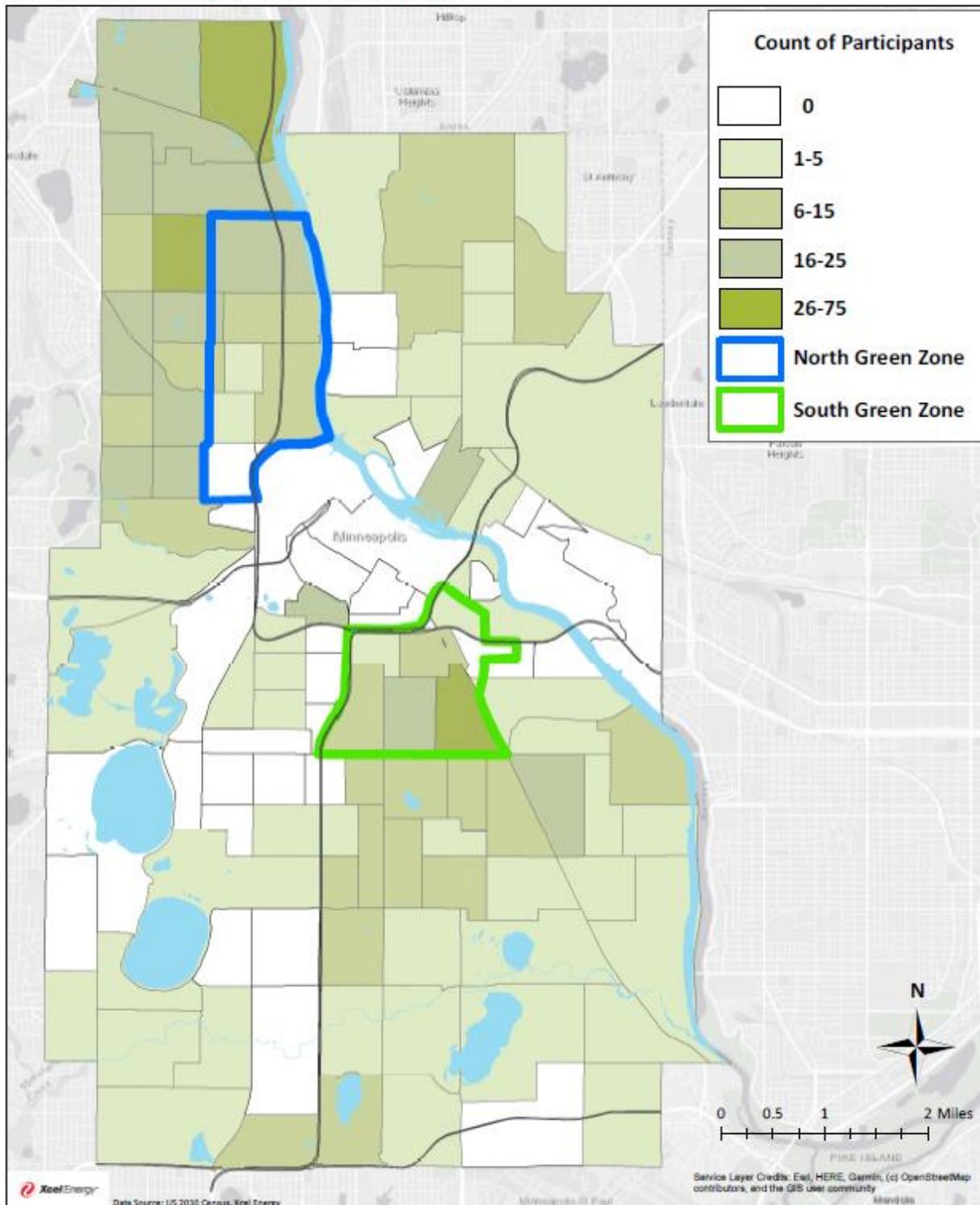
CenterPoint Energy Low-Income Program Participation, 2019



Data source: US 2010 Census, CenterPoint Energy

The following map shows the distribution of Xcel Energy's income-qualified energy efficiency services received across Minneapolis in 2019 including the Home Energy Savings and Low Income Multi-Family programs.

Metric 3q: Xcel Energy Low-Income Program Participation, 2019



Metric 4 Supporting Data: Energy Use (Commercial and Industrial)

Metric		2015	2016	2017	2018	2019
4	Energy use - Commercial and Industrial (MMBtu)	28,876,945	30,923,623	29,828,901	32,979,209	31,898,871
	Growth baseline energy use - Commercial and Industrial (MMBtu)	30,854,454	30,908,795	30,963,136	31,017,477	31,071,818
	Change compared to 2011 baseline	-6%	0.9%	-3%	8%	4%
	Change compared to growth baseline	-6%	0.0%	-4%	6%	3%

Commercial/Industrial Energy Use		2015	2016	2017	2018	2019
4a	Commercial building electricity use (MWh)	809,784	3,059,745	2,892,605	2,863,923	2,742,001
4b	Industrial building electricity use (MWh)	2,253,239				
4c	Commercial building gas use (therms)	134,856,641	126,142,037	141,309,553	163,935,711	160,205,374
4d	Industrial building gas use (therms)	17,147,635	45,589,715	25,864,364	33,029,625	32,113,612

Commercial and Industrial Energy Use

Electric consumption decreased 4% from 2018 to 2019 for commercial and industrial customers within the City. Natural gas consumption for commercial and industrial customers decreased by 2%, despite slightly colder weather in 2019.

Progress toward the City's goal is measured against a growth baseline established in the Climate Action Plan. The growth baseline established a post-2011 business-as-usual forecast with a 0.5% annual increase in electricity consumption and no annual increase in natural gas consumption.

Separate electricity use data for commercial and industrial customers is currently not available for all years except 2015. Xcel Energy's data privacy policy allows disclosure of aggregated data of more than 15 customers where no one customer comprises more than 15 percent of the total usage. The industrial sector in Minneapolis does not meet this threshold. The party meeting this threshold has signed a data release form in 2019; however, Xcel Energy discovered that another customer also has reached the 15% threshold in 2018 and 2019, making that data still unavailable.

Utility Commercial/Industrial Conservation Improvement Programs

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.

In 2019, [CenterPoint Energy's Efficiency Programs & Rebates](#) spending amounted to over \$2 million, including \$915,000 in rebates, to help 569 business customers reduce natural gas use by approximately 3.7 million therms and save businesses over \$2.2 million in energy costs.

[Xcel Energy's Business Programs & Rebates](#) provided 1,758 rebates to Minneapolis businesses in 2019 totaling over \$5.31 million that reduced energy consumption 55,934,867 kWh, saving businesses \$3.3 million in energy costs.

Commercial/Industrial Conservation Improvement Programs	Source	2015	2016	2017	2018	2019
4e Energy efficiency program participation (customers)	CNP	473	399	504	480	569
4f Energy efficiency program participation (rebates)	CNP	1,219	1,063	1,269	1,062	1,405
4g Rebate dollars spent	CNP	\$ 720,490	\$ 1,135,910	\$ 2,891,985	\$ 1,275,517	\$ 914,578
4h Estimated annual energy savings (therms)	CNP	2,668,485	5,218,578	13,398,873	4,945,230	3,730,500
4i Estimated annual cost savings	CNP	\$ 1,280,162	\$ 2,811,119	\$ 7,426,544	\$ 2,210,343	\$ 2,286,713
4j Energy efficiency program participation (customers)	Xcel	757	918	866	1,008	898
4k Energy efficiency program participation (rebates)	Xcel	1,249	1,758	1,814	2,113	1,758
4l Rebate dollars spent	Xcel	\$ 4,235,490	\$ 8,862,846	\$ 5,864,360	\$ 7,686,747	\$ 5,311,750
4m Estimated annual energy savings (kWh)	Xcel	43,204,422	75,369,492	56,415,847	84,863,345	55,934,867
4n Estimated annual cost savings	Xcel	\$ 4,622,873	\$ 7,536,949	\$ 3,215,703	\$ 4,777,461	\$ 3,306,631

Multi-Family Building Conservation Improvement Programs

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.

Multi-Family Building Conservation Improvement Programs	Source	2015	2016	2017	2018	2019
4o Multi-family programs participants	CNP	136	90	191	133	328
4p Multi-family programs estimated annual energy savings (Therms)	CNP	709,335	760,144	552,270	891,040	887,170
4q Multi-family programs estimated annual cost savings	CNP	\$ 364,661	\$ 452,839	\$ 318,251	\$ 609,550	\$ 575,311
4r Multi-family programs rebate dollars spent	CNP	\$ 245,840	\$ 302,767	\$ 286,612	\$ 323,003	\$ 393,171
4s Multi-family programs participants	Xcel	623	619	943	1,056	146
4t Multi-family programs estimated annual energy savings (kWh)	Xcel	3,282,658	5,422,415	5,674,561	19,446,382	2,582,954
4u Multi-family programs estimated annual cost savings	Xcel	\$ 294,576	\$ 542,242	\$ 603,490	\$ 1,094,752	\$ 152,693
4v Multi-family programs rebate dollars spent	Xcel	\$ 468,587	\$ 1,649,393	\$ 828,862	\$ 1,719,537	\$ 621,583

In 2019, multifamily buildings received close to \$400,000 in CenterPoint Energy rebates for natural gas efficiency measures that will save customers \$575,000 in gas costs a year.

Xcel Energy collaborated with the Minneapolis Public Housing Association (MPHA) to replace a total of 1,573 old inefficient air-conditioning units with high efficiency units, spanning nine different properties at no cost to MPHA or their tenants. While the ages and efficiencies of the air-conditioning units replaced varied, we estimate customers will save approximately 160,000 kWh and 250 kW. Additionally, at another MPHA property, Glendale Townhomes, MPHA replaced 41 refrigerators and 325 bulbs with LED's.

Energy Design Assistance

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 2019, incentives from this joint utility offering totaled over \$1.2 million dollars.

Energy Design Assistance Program		Source	2016	2017	2018	2019
4w	Energy Design Assistance program participation	CNP	25	18	35	29
4x	Energy Design Assistance estimated annual energy savings (therms)	CNP	1,890,915	586,466	1,788,769	543,430
4y	Energy Design Assistance rebate dollars spent	CNP	\$ 302,767	\$ 225,256	664,909	\$ 217,639
4z	Energy Design Assistance program participation (projects)	Xcel	31	19	55	33
4aa	Energy Design Assistance estimated annual energy savings (kWh)	Xcel	14,902,577	4,221,483	14,553,981	5,838,130
4bb	Energy Design Assistance rebate dollars spent	Xcel	\$ 2,139,146	\$ 780,113	\$ 1,816,269	\$ 1,019,560

Metric 5 Supporting Data: Renewable Electricity (Community-wide)

Metric		2015	2016	2017	2018	2019
5	Renewable Electricity (Community-wide)	23.3%	25.4%	28.7%	26.3%	23.7%

Supporting Data		2015	2016	2017	2018	2019
5a	Grid Mix Renewable Percentage	23.0%	25.0%	28.0%	26.2%	26.0%
5b	Adjusted Grid Mix Renewable Percentage	22.4%	24.5%	27.0%	22.3%	17.9%
5c	Community-wide Electricity Consumption (MWh)	4,008,358	4,030,026	3,842,763	3,892,929	3,712,477
5d	Local Actions (MWh)	34,359	37,300	65,303	152,075	213,342

The City of Minneapolis adopted its [100% Renewable Electricity Resolution](#) in 2018. The elements of this resolution align with the Sierra Club’s [Ready for 100](#) commitment guidelines with strong emphasis on equity and environmental justice as well as its consumption based definition, including:

“the City of Minneapolis is committed to meeting its renewable electricity goals with as little reliance on purchasing Renewable Energy Credits (RECs) on the open market as possible, and will give goal preference and credit for resources exhibiting additionality regardless of REC ownership, such as community solar gardens and local solar installations”

“Xcel Energy’s current and future renewable electricity generation mix will be counted toward municipal and community-wide goals with support from the City in its efforts to transition to renewable energy throughout its service territory”

Aligned with the Sierra Club guidance and the City’s resolution, the calculation methodology adopted by the City is action-based, meaning based on the decisions by parties within the City. These parties include Xcel Energy (acting on behalf of their customers), the City’s municipal operations, and the residential, commercial, and industrial electric account holders within the City. As the adopted resolution states, this methodology does not completely align with REC ownership.

Local actions by the City enterprise, residents, and businesses consist of the four programs in Metric 7 (Windsor@, Solar*Rewards (Rooftop) and Solar*Rewards Community@ (community solar gardens), and Renewable*Connect) that account for local and directly purchased renewable electricity. The grid mix renewable percentage reported by Xcel Energy in their Community Energy Reports is adjusted to remove the impact of all local actions across their entire Minnesota service territory. The effect of this is that local actions are not double-counted (i.e. actions by a Minneapolis resident are only counted once and the actions of any non-Minneapolis resident in Xcel Energy territory are not counted).

The Xcel Energy renewable electricity grid mix has decreased slightly in the last two years due to fluctuations in the portion of Xcel Energy’s renewable generation source that is available during the year. Renewable Energy is utilized first on the system. Generation changes may fluctuate annually because of Xcel Energy’s requirement to comply with the Midcontinent Independent System Operator’s (MISO) to produce energy from certain plants due to pricing and availability. The cost of natural gas was low in 2019, making it a

cost-effective option and MISO called generation from those plants more frequently. While electricity generation from natural gas increased, generation from coal and nuclear decreased by almost the same amount. Xcel Energy will continue to file regulatory updates to its modeling as technology evolves and economies change to increase its renewable percent. Looking past 2030, Xcel Energy's proposed Integrated Resource Plan projects that by 2035 approximately 65% of its generated energy will come from renewable energy.

Metric 6 Supporting Data: Renewable Electricity (Municipal Operations)

Metric		2015	2016	2017	2018	2019
6	Renewable Electricity (Municipal Operations)	24%	26%	33%	57%	88%

Supporting Data		2015	2016	2017	2018	2019
6a	Electricity consumption (kWh)	101,630,784	99,384,894	100,067,717	101,340,905	88,677,830
6b	Windsorce subscription (kWh)	300,000	300,000	300,000	225,000	0
6c	Renewable*Connect subscription (kWh)			6,067,895	24,552,684	57,712,547
6d	Community Solar Garden subscriptions (kWh)			23,857	844,831	11,173,540
6e	On-site solar generation (kWh)	900,000	889,805	910,811	830,434	786,130

The City of Minneapolis utilizes the same accounting methodology for municipal operations as for the entire community, as outlined in Metric 5. This includes the actions taken by the City to power municipal operations with renewable electricity, as well as the adjusted grid mix factor accounting for the actions of our partner, Xcel Energy, on behalf of their customers.

Significant progress was achieved in meeting the City's goal of using 100% renewably generated electricity by 2023. The 58 million kWh of Renewable*Connect, 11 million kWh of Community Solar Garden subscriptions, and the 12% drop in electricity usage in 2019 increased the City's renewable electricity percentage to 88% of its total electricity usage. To move the goalpost closer, so to speak, electricity usage will continue to decline as City-owned streetlights are replaced with LED fixtures, the new Public Service Building replaces the older, inefficient Public Service Center and City of Lakes buildings, newer fire stations are constructed, and general conservation measures continue in enterprise buildings.

Metric 7 Supporting Data: Renewable Electricity (Local and Directly Purchased)

Supporting Data		2015	2016	2017	2018	2019
7a	Windsorce Participants	11,154	11,926	12,903	13,180	15,315
7b	Windsorce Consumption (MWh)	33,309	36,125	50,277	42,506	45,860
7c	Renewable*Connect Participants			836	910	835
7d	Renewable*Connect Consumption (MWh)			4,996	47,929	68,384
7e	Solar*Rewards Community Subscribers		14	1,797	3,269	4,511
7f	Solar*Rewards Community Installed Capacity (MW)		3	29	79	103
7g	Solar*Rewards Community Installed Capacity (MW) w/in City					1.5
7h	Solar*Rewards Community Installed Generation (MWh) w/in City					691
7i	Solar*Rewards Community Subscribed (MWh)		25	7,787	58,050	93,840
7j	Solar*Rewards ¹ Participants	92	95	150	813	939
7k	Solar*Rewards Installed Capacity (MW)	0.91	1.01	1.88	7.21	9.04
7l	Solar*Rewards Generation (MWh)	1,050	1,150	2,243	3,589	5,258

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

Xcel Energy offers four renewable energy options to Minneapolis customers: [Windsorce®](#), [Solar*Rewards \(Rooftop\)](#) and [Solar*Rewards Community®](#), and [Renewable*Connect](#). These four programs cumulatively constitute the percentage of electricity consumed in Minneapolis from local and directly purchased sources.

Windsorce is a voluntary energy program that allows customers to purchase some or all their energy from wind energy sources. The program is certified by Green-e® and supports additional local renewable energy.

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 program became available in 2017 and has had participation encounter some fluctuations in the first three years due to the participant mix. The Minneapolis subscriber consumption has increased over 42% between 2018 and 2019 primarily because of large institutional and business subscribers.

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 a 25% increase in demand and a 47% increase in production between 2018 and 2019.

The Solar*Rewards Community program (commonly known as community solar gardens) provides 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. The Solar*Rewards Community program increased participation by 38%, capacity by 30% and subscribed energy by 62% in Minneapolis between 2018 and 2019.

The following map shows the distribution of Xcel Energy's Solar*Rewards Community program participation across Minneapolis in 2019.

Metric 7e: Xcel Energy Solar*Rewards Community Participation, 2019

