City of Minneapolis

Clean Energy Partnership

2019-2021 Work Plan

DRAFT Partnership Activities

Date: September 28, 2018

EE.1: Reduce natural gas use for residential customers

Project Lead	CenterPoint Energy
Primary Support	City of Minneapolis
Customer Segment	Residential/Underserved

Partners will research, develop, and implement customer-specific and customer-cohort tailored strategies to double residential participation in building envelope and high-efficiency equipment programs across the City.

The Partners have identified research objectives to: 1) calculate the energy savings potential from high residential natural gas users, 2) compare residential natural gas use intensity across geographic areas, 3) utilize home energy audit and conservation improvement program participation data to determine share of households by census tract likely to lack specific energy efficient envelope characteristics and gas equipment, and 4) assess engagement strategies to drive customers with high energy savings potential to make energy efficiency home upgrades, especially building envelope upgrades. The Partners expect to use the following data resources for the analysis: natural gas consumption and program participation by premise, building size, and home energy squad audit findings.

The Partners, with assistance from EVAC, will work together to develop and implement customer-specific and geographically-specific engagement strategies to double participation in specified conservation improvement programs of high gas users, high gas use intensity buildings, and buildings with identified gas savings opportunities (especially building envelope). The Partners will ensure that 50% of the customers engaged through this effort qualify for low-income services or reside in the City's Green Zones. Building envelope upgrades will be encouraged with outreach and City incentive resources, as appropriate, as a best practice first-step with multiple benefits beyond energy savings.

ANTICIPATED IMPACT*

Type	No.	Performance Metric	Annual Impact
	1	Natural Gas Use Reduction (Dth)	43,000
	2	Electricity Use Reduction (Mwh)	n/a
	3	GHG Emissions Reduction from Natural Gas (mt CO_2)	2,280
	4	GHG Emissions Reduction from Electricity (mt CO_2)	n/a
	5	Participants (e.g customers, premises, households)	4,500
	6	Residential Green Zone or Income-Qualifying Participants (e.g customers, premises, households/year)	2,250
	7	Customer Cost Savings (Year 1)	$280,000
	8	Workforce Impact	TBD
Type	**No.**	**Progress towards 2025 GHG Gap**	**2025 GHG Gap %**
	9	Percentage of natural gas emissions reduction gap (mt CO_2)	9%**
	10	Percentage of electric emissions reduction gap (mt CO_2)	n/a

**Anticipated impacts are estimated based on assumptions and available data and are subject to change.*
*** Assumes constant annual savings 2020-2025 from 2016-2025 GHG Inventory Emissions Gap.*

ESTIMATED IMPLEMENTATION TIMELINE

2019-2021 Clean Energy Partnership Work Plan – Partnership Activity Summary

No.	Supporting Efforts	Time Frame
1	Engage EVAC to help identify existing resources and needs.	*Early 2019*
2	Develop a research scope of work, timeline, and budget.	*Early 2019*
3	Acquire necessary resources and funding for research analysis.	*Early 2019*
4	Compile and analyze research and data.	*Mid 2019*
5	Engage EVAC to provide feedback on research findings.	*Mid 2019*
6	Vet customer engagement strategies.	*Mid 2019*
7	Ramp up execution of customer engagement strategy	*Late 2019*
8	Receive regulatory approval, *if necessary.*	*Early 2020*
9	Develop a strategy scope of work, timeline, and budget.	*Early 2020*
10	Monitor and evaluate customer engagement strategy	*2020-2021*
11	Collaborate on ways to encourage and incentivize deep energy retrofit projects in new and existing residential buildings	*2019-2021*

EE.2: Reduce energy use for high energy use commercial customers (Pilot)

Project Lead	Xcel
Primary/Secondary Support	City of Minneapolis/ CenterPoint Energy
Customer Segment	Commercial

The utilities will create a focused effort to identify and work with the highest energy using commercial customers in the city. Utilities will reach out to the identified customers directly, either through Account Management or the Business Solutions Center, and work with the customer to engage them in solutions for their specific business to decrease consumption. Conservation Improvement Program (CIP) funding will be used for this effort. This activity is estimated to impact 25-30 buildings and bring 8-10 GWh of energy savings over the term of the work plan.

The City will offer Green Business Cost Share funding as an additional incentive to CIP funds. The City will develop a new recognition program for participating businesses meeting goals.

ANTICIPATED IMPACT*

Type	No.	Performance Metric	Annual Impact
	1	Natural Gas Use Reduction (Dth)	21,000
	2	Electricity Use Reduction (Mwh)	3,000
	3	GHG Emissions Reduction from Natural Gas (mt CO_2)	1,100
	4	GHG Emissions Reduction from Electricity (mt CO_2)	1,200
	5	Participants (e.g customers, premises, households)	15
	6	Residential Green Zone or Income-Qualifying Participants (e.g customers, premises, households/year)	n/a
	7	Customer Cost Savings (Year 1)	TBD
	8	Workforce Impact	TBD
Type	**No.**	**Progress towards 2025 GHG Gap**	**2025 GHG Gap %****
	9	Percentage of natural gas emissions reduction gap (mt CO_2)	<1%
	10	Percentage of electric emissions reduction gap (mt CO_2)	<1%

**Anticipated impacts are estimated based on assumptions and available data and are subject to change.*
*** Assumes constant annual savings 2019-2025 from 2016-2025 GHG Inventory Emissions Gap.*

ESTIMATED IMPLEMENTATION TIMELINE

No.	Supporting Efforts	Time Frame
1	Finalize activity scope with each party's roles	*Late 2018*
2	Conduct customer identification	*Early 2019*
3	Begin customer outreach	*Early 2019*
4	Work with engaged customers to meet goals	*2019-2021*
5	City develop recognition program	*Early 2019*
6	Regulatory filing required	*No*

EE.3: Pursue Energy Efficiency "Performance Path" at City Facilities (Pilot)

Project Lead	Xcel Energy
Primary/Secondary Support	City /CenterPoint Energy
Customer Segment	City of Minneapolis (Enterprise)

Xcel Energy has 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. Initial conversations between partners have yielded specific interest and perceived opportunity in building controls. The City has established a 10% energy reduction goal for this project.

CenterPoint Energy is committed to working with the City to identify opportunities for reducing natural gas use at City Facilities.

ANTICIPATED IMPACT*

Type	No.	Performance Metric	Annual Impact
	1	Natural Gas Use Reduction (Dth)	TBD
	2	Electricity Use Reduction (Mwh)	11,000
	3	GHG Emissions Reduction from Natural Gas (mt CO_2)	TBD
	4	GHG Emissions Reduction from Electricity (mt CO_2)	4,500
	5	Participants (e.g customers, premises, households)	n/a
	6	Residential Green Zone or Income-Qualifying Participants (e.g customers, premises, households/year)	n/a
	7	Customer Cost Savings (Year 1)	n/a
	8	Workforce Impact	TBD
Type	**No.**	**Progress towards 2025 GHG Gap**	**2025 GHG Gap %**
	9	Percentage of natural gas emissions reduction gap (mt CO_2)	TBD
	10	Percentage of electric emissions reduction gap (mt CO_2)	2.9%

**Anticipated impacts are estimated based on assumptions and available data and are subject to change.*

ESTIMATED IMPLEMENTATION TIMELINE

No.	Supporting Efforts	Time Frame
1	Inventory City buildings	*Fall 2018*
2	Develop energy efficiency plan for city buildings	*Fall/Winter 2018*
3	City buildings are entered into benchmarking tool to aid in project planning	*Fall/Winter 2018*
4	Implement EE project plan	*2019-2021*
5	Regulatory filing required	*No*

EE.4: Field Test Energy Efficiency and Carbon Capture Technology (Pilot)

Project Lead	CenterPoint Energy
Primary Support	City of Minneapolis
Customer Segment	City of Minneapolis (Commercial)

The City will participate in CenterPoint Energy's high efficiency, carbon-capture technology pilot program with CleanO2 Carbon Capture Technologies. CleanO2 is a new technology that is intended to improve energy efficiency and capture carbon dioxide emissions from commercial scale natural gas heating systems. Additionally, the carbon capture process produces a sodium carbonate by-product, called soda ash, that can be sold for manufacturing a variety of products. The pilot will install and evaluate the technology's energy efficiency and carbon capture claims at a City facility and the potential for commercial market scalability in Minneapolis.

ANTICIPATED IMPACT*

Type	No.	Performance Metric	Annual Impact
	1	Natural Gas Use Reduction (Dth)	5
	2	Electricity Use Reduction (Mwh)	n/a
	3	GHG Emissions Reduction from Natural Gas (mt CO_2)	10
	4	GHG Emissions Reduction from Electricity (mt CO_2)	n/a
	5	Participants (e.g customers, premises, households)	n/a
	6	Residential Green Zone or Income-Qualifying Participants (e.g customers, premises, households/year)	n/a
	7	Customer Cost Savings (Year 1)	$400
	8	Workforce Impact	TBD
Type	**No.**	**Progress towards 2025 GHG Gap**	**2025 GHG Gap %**
	9	Percentage of natural gas emissions reduction gap (mt CO_2)	<1%**
	10	Percentage of electric emissions reduction gap (mt CO_2)	n/a

**Anticipated impacts are estimated based on assumptions and available data and are subject to change.*
*** Assumes constant annual savings 2019-2025 from 2016-2025 GHG Inventory Emissions Gap.*

ESTIMATED IMPLEMENTATION TIMELINE

No.	Supporting Efforts	Time Frame
1	Evaluate possible sites for CleanO2 technology installation.	*Late 2018*
2	Kick-off meeting	*Early 2019*
3	Execute necessary agreements.	*Early 2019*
4	Install CleanO2 technology.	*Mid 2019*
6	Develop education and outreach to share lessons learned	*Late 2019*
7	Monitor and evaluate CleanO2 technology.	*2019-2021*

EE.5: Make data accessible through energy disclosure tools

Project Lead	City of Minneapolis
Primary Support	CenterPoint Energy and Xcel Energy
Customer Segment	All

Partners will create streamlined systems and modify existing ones for compliance with residential energy disclosure policies the City will enact. Systems will in part allow property owners of 500 units or less to readily access necessary usage data in a format easily shared with prospective tenants. Partners will co-create data outputs, as needed, that provide required compliance documentation and valuable information on participating in energy efficiency programs available to property owners and tenants. This activity's streamlined systems will enable policies that provide transparent energy use and cost data within the marketplace, empowering building owners and tenants alike to make informed energy decisions and utilize energy efficiency programs and incentives.

ANTICIPATED IMPACT

Type	No.	Performance Metric	Annual Impact
	1	Natural Gas Use Reduction (Dth)	n/a
	2	Electricity Use Reduction (Mwh)	n/a
	3	GHG Emissions Reduction from Natural Gas (mt CO_2)	n/a
	4	GHG Emissions Reduction from Electricity (mt CO_2)	n/a
	5	Participants (e.g customers, premises, households)	n/a
	6	Residential Green Zone or Income-Qualifying Participants (e.g customers, premises, households/year)	n/a
	7	Customer Cost Savings (Year 1)	n/a
	8	Workforce Impact	n/a
Type	**No.**	**Progress towards 2025 GHG Gap**	**2025 GHG Gap %**
	9	Percentage of natural gas emissions reduction gap (mt CO_2)	n/a
	10	Percentage of electric emissions reduction gap (mt CO_2)	n/a

ESTIMATED IMPLEMENTATION TIMELINE

No.	Supporting Efforts	Time Frame
1	City passes residential energy disclosure polices	*2019*
2	Discuss potential City energy disclosure polices, collaboratively reduce barriers, and develop utility tools when necessary to ease compliance.	*2019-2021*
3	Compliance with policies takes effect and tools as necessary are available to utility customers for compliance and energy cost saving programs/opportunities	*2021*

2019-2021 Clean Energy Partnership Work Plan – Partnership Activity Summary

RE.1: Install Electric Vehicle Infrastructure for City Fleet (Pilot)

Project Lead	Xcel Energy
Primary Support	City of Minneapolis
Customer Segment	City Enterprise

Xcel Energy is developing a Pilot program with the City of Minneapolis to monitor fleet charging patterns, particularly during peak renewable energy generation times. If approved by the Public Utilities Commission, Xcel Energy will provide a new line of service, necessary transformer upgrades, new meter, new service panel, conduit and wiring up to the stub of the charger. The City has identified 80+ station sites for this Pilot at four building locations. Estimated cost of the Minneapolis pilot to Xcel Energy is $1 million. The City will choose to "own" or "lease to own" the vehicle chargers to be installed. Estimated cost to the City is unknown at this time until it determines which chargers to install and ownership structure. The pilot will help inform a broader city-wide process on charging for public and private spaces, and for future Xcel Energy program offerings.

ANTICIPATED IMPACT*

Type	No.	Performance Metric	Annual Impact
	1	Natural Gas Use Reduction (Dth)	n/a
	2	Electricity Use Reduction (Mwh)	n/a
	3	GHG Emissions Reduction from Natural Gas (mt CO_2)	n/a
	4	GHG Emissions Reduction from Electricity (mt CO_2)	800**
	5	Participants (e.g customers, premises, households)	80
	6	Residential Green Zone or Income-Qualifying Participants (e.g customers, premises, households/year)	n/a
	7	Customer Cost Savings (Year 1)	$175,000
	8	Workforce Impact	TBD
Type	**No.**	**Progress towards 2025 GHG Gap**	**2025 GHG Gap %**
	9	Percentage of natural gas emissions reduction gap (mt CO_2)	n/a
	10	Percentage of electric emissions reduction gap (mt CO_2)	TBD

**Anticipated impacts are estimated based on assumptions and available data and are subject to change.*
***Assumes the City enterprise will be 100% electric renewable by 2021*

ESTIMATED IMPLEMENTATION TIMELINE

No.	Supporting Efforts	Time Frame
1	File electric vehicle pilot program with Public Utilities Commission (PUC)	*October-2018*
2	City provides letter of support for pilot project in filing	*October-2018*
3	Xcel Energy & City of Minneapolis finalize project plan	*Late 2018/Early 2019*
4	If approved by PUC, begin program rollout & installation	*Early 2019*
5	Discussion begins between Xcel Energy & City regarding citywide EV infrastructure planning	*2019*
6	Monitor and reporting as required by PUC Order	*2019-2021*
7	Integrate learnings in larger City EV transition planning	*2019 and beyond*

RE.2: Achieve 100% Renewable Electricity for City Enterprise and Community Pathway

Project Lead	Xcel Energy
Primary Support	City of Minneapolis
Customer Segment	City of Minneapolis (Enterprise)

Partners will create a pathway for meeting the City's 100% renewable electricity enterprise goal after the current Renewable*Connect tranche subscriptions expire while meeting the City's priorities. The City will evaluate possibilities based upon priorities of: renewable energy source type; City ownership or key partner status; cost; cost predictability; upfront capital to achieve lower price or price predictability; City as an anchor or single consumer with possible expansion to citywide residents and business; additionality; REC ownership; workforce development or hiring component; and medium risk tolerance.

Partners will explore options that have the capability of being expanded to other community members, helping to reach the community-wide goal. Partners will examine ways to encourage community adoption of carbon-free energy, such as incentivizing via franchise fee structures.

ANTICIPATED IMPACT*

Type	No.	Performance Metric	Annual Impact
	1	Natural Gas Use Reduction (Dth)	n/a
	2	Electricity Use Reduction (Mwh)	-
	3	GHG Emissions Reduction from Natural Gas (mt CO_2)	n/a
	4	GHG Emissions Reduction from Electricity (mt CO_2)	24,000
	5	Participants (e.g customers, premises, households)	n/a
	6	Residential Green Zone or Income-Qualifying Participants (e.g customers, premises, households/year)	n/a
	7	Customer Cost Savings (Year 1)	TBD
	8	Workforce Impact	TBD
Type	**No.**	**Progress towards 2025 GHG Gap****	**2025 GHG Gap %**
	9	Percentage of natural gas emissions reduction gap (mt CO_2)	n/a
	10	Percentage of electric emissions reduction gap (mt CO_2)	15%

**Anticipated impacts are estimated based on assumptions and available data and are subject to change.*

ESTIMATED IMPLEMENTATION TIMELINE

No.	Supporting Efforts	Time Frame
1	Create a blueprint for achieving the City of Minneapolis' 100% Renewable Electricity goal for municipal operations	*Early 2019*
2	Operationalize aspects of completed blueprint for municipal operations	*2019*
3	Examine franchise fee structures to incentivize carbon-free energy choices, collaborating with EVAC	*2019-2021*
4	Collaborate on development and implementation of plans toward 100% renewable electricity for the community	*2019-2021*

RE.3: Provide solar garden and energy efficiency opportunities for low-income communities

Project Lead	Xcel Energy
Primary Support	City of Minneapolis
Customer Segment	Residential/Low-Income

A low-income community solar garden (CSG) will be developed at one of two City fleet storage sites. This CSG will be available to 50% renters and 50% homeowners with a goal of saving 30-50% off their energy bills. Xcel Energy worked with a Renewable Development Fund (RDF) grant recipient Minnesota Renewable Energy Society (MRES) to utilize a portion of their re-allocated contract for a low income solar garden in the city of Minneapolis, totaling over $1.3 million. The City filed supportive comments in Xcel Energy's regulatory filing and testified at the Public Utilities Commission during the hearing. The PUC subsequently approved Xcel Energy's request for re-allocated funding to build the Minneapolis CSG. The site chosen by the City will determine the size of the array to be installed.

The City and Xcel Energy will develop and implement an energy efficiency plan to the CSG subscribers and the surrounding neighborhood prior to the CSG installation. We will assume a 20% electric energy savings in single family homes and 10% in multi-family units.

ANTICIPATED IMPACT*

Type	No.	Performance Metric	Annual Impact
	1	Natural Gas Use Reduction (Dth)	n/a
	2	Electricity Use Reduction (Mwh)	1,100
	3	GHG Emissions Reduction from Natural Gas (mt CO_2)	n/a
	4	GHG Emissions Reduction from Electricity (mt CO_2)	1,000
	5	Participants (e.g customers, premises, households)	-
	6	Residential Green Zone or Income-Qualifying Participants (e.g customers, premises, households/year)	80
	7	Customer Cost Savings (Year 1)	30-50% CSG 8-20% EE
	8	Workforce Impact	TBD
Type	**No.**	**Progress towards 2025 GHG Gap****	**2025 GHG Gap %**
	9	Percentage of natural gas emissions reduction gap (mt CO_2)	n/a
	10	Percentage of electric emissions reduction gap (mt CO_2)	<1%

**Anticipated impacts are estimated based on assumptions and available data and are subject to change.*

ESTIMATED IMPLEMENTATION TIMELINE

No.	Supporting Efforts	Time Frame
1	MRES and Minneapolis finalize array and site location details	*Late 2018*
2	Xcel Energy submits RDF compliance filing to PUC with above details per Order	*Late 2018*
3	MRES and Minneapolis agree upon LI CSG program parameters	*Late 2018/Early 2019*
4	MRES and Minneapolis agree upon LI CSG outreach methodology	*Early/Mid 2019*
5	Xcel Energy and City develop EE plan for surrounding neighborhood	*Mid 2019*
6	Regulatory Filing Required?	*Possibly re: EE*

2019-2021 Clean Energy Partnership Work Plan – Partnership Activity Summary

CenterPoint Energy Proposal

IF.1: Improve access to energy efficiency by providing inclusive financing.

Project Lead	CenterPoint Energy
Primary Support	City of Minneapolis
Customer Segment	TBD

The Partnership commits to an inclusive financing (IF) pilot project and, as a first step, will jointly approach Public Utilities Commission staff, Department of Commerce staff and/or other appropriate parties asking for clarification on necessary next steps with intent to undertake a pilot project. The Partners will consider feedback from stakeholders and findings of the market potential and financial impact study in designing an IF pilot program. The Partners will request and support approval of an IF pilot project, if the partners agree that it will provide a reasonably beneficial service to customers.

ANTICIPATED IMPACT*

Type	No.	Performance Metric	Annual Impact
	1	Natural Gas Use Reduction (Dth)	TBD
	2	Electricity Use Reduction (Mwh)	TBD
	3	GHG Emissions Reduction from Natural Gas (mt CO_2)	TBD
	4	GHG Emissions Reduction from Electricity (mt CO_2)	TBD
	5	Participants (e.g customers, premises, households)	TBD
	6	Residential Green Zone or Income-Qualifying Participants (e.g customers, premises, households/year)	TBD
	7	Customer Cost Savings (Year 1)	TBD
	8	Workforce Impact	TBD
Type	**No.**	**Progress towards 2025 GHG Gap**	**2025 GHG Gap %**
	9	Percentage of natural gas emissions reduction gap (mt CO_2)	TBD
	10	Percentage of electric emissions reduction gap (mt CO_2)	TBD

**Anticipated impacts are estimated based on assumptions and available data and are subject to change.*

ESTIMATED IMPLEMENTATION TIMELINE

No.	Supporting Efforts	Time Frame
1	Participate in Energy Transition Lab market potential and financial impact study on IF.	*Early 2019*
2	Engage Public Utilities Commission staff, Department of Commerce staff and/or other appropriate parties to determine next steps of IF.	*Early 2019*
3	Report stakeholder input and study findings to EVAC and Board and consider next steps.	*Early 2019*
4	Solicit and receive regulatory approval, *if necessary.*	*Mid 2019*
5	Engage EVAC and Board to consider pilot design for IF.	*Mid 2019*
6	Design and develop IF product	*Late 2019*
7	Acquire necessary resources and funding.	*Late 2019*
8	Launch IF pilot project	*2020*
9	Monitor and evaluate IF pilot project.	*2020-2021*

2019-2021 Clean Energy Partnership Work Plan – Partnership Activity Summary

City of Minneapolis Proposal

IF.1: Improve access to energy efficiency by providing inclusive financing

Project Lead	CenterPoint Energy
Primary Support	City of Minneapolis
Customer Segment	TBD

The Partnership commits to an inclusive financing (IF) pilot project and, as a first step, will jointly approach Public Utilities Commission staff, Department of Commerce staff and/or other appropriate parties asking for clarification on necessary next steps with intent to undertake a pilot project for Minneapolis customers. Utilize the findings of both the market potential and financial impact study and the pilot project to design and implement an inclusive financing program that would provide a reasonably beneficial service to customers.

ANTICIPATED IMPACT

Type	No.	Performance Metric	Annual Impact
	1	Natural Gas Use Reduction (Dth)	TBD
	2	Electricity Use Reduction (Mwh)	TBD
	3	GHG Emissions Reduction from Natural Gas (mt CO_2)	TBD
	4	GHG Emissions Reduction from Electricity (mt CO_2)	TBD
	5	Participants (e.g customers, premises, households)	TBD
	6	Residential Green Zone or Income-Qualifying Participants (e.g customers, premises, households/year)	TBD
	7	Customer Cost Savings (Year 1)	TBD
	8	Workforce Impact	TBD
Type	**No.**	**Progress towards 2025 GHG Gap**	**2025 GHG Gap %**
	9	Percentage of natural gas emissions reduction gap (mt CO_2)	TBD
	10	Percentage of electric emissions reduction gap (mt CO_2)	TBD

ESTIMATED IMPLEMENTATION TIMELINE

No.	Supporting Efforts	Time Frame
1	Participate in Energy Transition Lab market potential and financial impact study on IF.	*Early 2019*
2	Engage Public Utilities Commission staff, Department of Commerce staff and/or other appropriate parties to determine next steps of IF.	*Early 2019*
3	Report feasibility findings to EVAC and Board and consider next steps.	*Early 2019*
4	Solicit and receive regulatory approval, *if necessary.*	*Mid 2019*
5	Engage EVAC and Board to consider pilot design for IF.	*Mid 2019*
6	Design and develop IF product	*Late 2019*
7	Acquire necessary resources and funding.	*Late 2019*
8	Monitor and evaluate IF pilot project.	*2020-2021*
9	Launch full IF program to customers	*Late 2021*