Minneapolis Clean Energy Partnership

2019-2021 Work Plan

Approved: November 8, 2018

By: Clean Energy Partnership Planning Team

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Overview

Established in September 2014, the Minneapolis Clean Energy Partnership is an agreement between the City of Minneapolis (City), Xcel Energy, and CenterPoint Energy, to work together to achieve the City's climate and energy goals.

On June 28, 2013, the City adopted its Climate Action Plan (CAP) which seeks to reduce greenhouse gas emissions by 30% by 2025, and 80% by 2050, from a 2006 baseline. On September 3, 2013, the City adopted an Energy Vision, which provides that 'in 2040, Minneapolis' energy system will provide reliable, affordable, local, and clean energy services for Minneapolis homes, business, and institutions. It will sustain the city's economy and environment and contribute to a more socially just community.'

To achieve the City's 2025 emissions target requires an estimated reduction of 158,000 metric tons of carbon dioxide equivalent (MTCO2e) from electricity and 152,000 MTCO2e from natural gas, from the City's 2016 greenhouse gas (GHG) emissions level.

As a first-of-its-kind cooperative among a City and its energy Utilities, the Clean Energy Partnership is well positioned to address societal challenges through ambitious and innovative energy solutions. The work plan is a tool that will help achieve the essential outcome of the City achieving its climate goals. As such, this document should be viewed as a living and learning document, to adapt as circumstances necessitate.

Work Plan Development

On December 19, 2017, the Clean Energy Partnership Board (Board) adopted the *Work Plan Principles* to define and articulate the framework for future Partnership efforts as distinct Partnership Activities or Potential Collaboration Activities, as outlined below.

Partnership Activities	Potential Collaboration Activities
A Partnership activity: 1. Helps the City reach its *Climate Action Plan* and *Energy Vision for 2040* goals, 2. Initiates an action that would not happen absent the Partnership, 3. States roles for the City and at least one utility, and 4. Identifies a lead Partner.	The Partners may identify certain individual Partner activities that clearly advance the City's climate and energy goals and may become areas of future collaboration. Previously existing and/or new utility programs near deployment may be considered for this section with a planned collaborative effort to leverage the Partners' resources. These collaboration items may fully develop and become priority initiatives of the Clean Energy Partnership, turning into Partnership activities.

(See Attachment A – Work Plan Principles).

On March 15, 2018, the Board established three priorities for this work plan:

1. Achieve ***energy efficiency*** in industrial, commercial, and residential sectors;
2. Make clean energy accessible through ***inclusive financing*** tools; and
3. Make the city more sustainable/resilient through increased ***local renewable energy***.

The Board also identified four approaches to address its priorities through:

a. Finding pathways to approach legislators/regulators with meaningful, agreed-upon asks;
b. Considering return-on-investment and equity in making investments in energy efficiency;
c. Identifying and leveraging the Partners' respective strengths; and
d. Improving operation through role clarification and prioritization of goals and activities.
(See Attachment B for a full account of Board Priorities).

On July 27, 2018, the Board discussed draft Partnership Activity concepts proposed by the Planning Team and considered comments provided by the Energy Vision Advisory Committee (EVAC).

EVAC Input

The Clean Energy Partnership Planning Team solicited input from the Partnership Energy Vision Advisory Committee (EVAC) throughout the work plan development process. On May 7, 2018, EVAC first provided Partnership Activity ideas relevant to the Board-approved priorities for consideration in the work plan.

On July 16, 2018, the Planning Team returned to EVAC for feedback of an initial draft of potential Partnership Activity concepts. Six EVAC members met again on September 17, 2018 to offer additional criteria to incorporate into the work plan. On September 28, 2018, the Planning Team released Draft Partnership Activity Summaries for review and received EVAC feedback and recommendations on October 9, 2018.

Comments and recommendations received from EVAC on the work plan centered on several key themes, including:

1. Demonstrate ambition and innovation,
2. Identify metrics and outcomes that tie to CAP and Energy Vision goals,
3. Measure and compare the anticipated impact of Partnership Activities against the CAP emissions reduction requirement and other activities contributing to emissions reductions,
4. Define and measure opportunities for equity and workforce development,
5. Explain how activities might lay the foundation for larger impacts over time, and
6. Leverage community engagement.
(See Attachment C for a full account of EVAC's comments).

Work Plan Contents

This Work Plan is comprised of ten Partnership Activities the Partners will undertake in the 2019-2021 timeframe to reduce GHG emissions and make progress towards the 2040 Energy Vision. The Partnership Activities are responsive to the priorities set by the Board and many of the comments received from EVAC. In this Work Plan, each of the ten Partnership Activities includes a description of the activity, including: a customer focus, lead Partner, anticipated impact, and estimated timeline of supporting efforts. Potential Collaboration Activities are listed for ongoing consideration. The following table lists the Partnership Activities and summarizes the estimated environmental, economic, and social impacts as they are understood at the time of this report.

2019-2021 Anticipated Partnership Activity Impacts

	Social Benefits				Energy Savings		GHGs Savings	
2019-2021 Partnership Activity	**EQUITY IMPACT**	**WORKFORCE IMPACT**	**PARTICIPANTS**	**CUSTOMER COST SAVINGS/REVENUE ($)**	**NATURAL GAS SAVINGS (DTH)**	**ELECTRICITY SAVINGS (MWH)**	**NG GHG SAVINGS (MT CO2)**	**ELECTRICITY GHG SAVINGS (MT CO2)**
EE.1 REDUCE NATURAL GAS USE FOR RESIDENTIAL CUSTOMERS	Yes	TBD	4,500	$280K	43,000	TBD	2,280	TBD
EE.2 REDUCE ENERGY USE FOR HIGH ENERGY SAVING POTENTIAL COMMERCIAL CUSTOMERS	TBD	TBD	35	TBD	21,000	10,000	1,100	4,000
EE.3 PURSUE ENERGY EFFICIENCY "PERFORMANCE PATH" AT CITY FACILITIES	TBD	TBD	1	TBD	TBD	11,000	TBD	4,500
EE. 4 FIELD TEST ENERGY EFFICIENCY AND CARBON CAPTURE TECHNOLOGY	No	TBD	1	$2,600	5	TBD	10	TBD
EE. 5 SUPPORT RESIDENTIAL ENERGY DISCLOSURE POLICIES BY MAKING DATA ACCESSIBLE WITH TOOLS	Yes	TBD	TBD	n/a	n/a	n/a	n/a	1-2%/ year
RE. 1 INSTALL ELECTRIC VEHICLE INFRASTRUCTURE FOR CITY FLEET	No	TBD	80	$528K	n/a	n/a	n/a	1,008
RE. 2 ACHIEVE 100% RENEWABLE ELECTRICITY FOR CITY ENTERPRISE AND COMMUNITY PATHWAY	Yes	Yes	n/a	n/a	n/a	n/a	n/a	24,000
RE. 3 PROVIDE SOLAR GARDEN AND ENERGY EFFICIENCY OPPORTUNITIES FOR LOW-INCOME COMMUNITIES	Yes	TBD	200	TBD	TBD	1,100	TBD	1,000
WD.1 IMPROVE EQUITABLE ACCESS TO CLEAN ENERGY JOBS	Yes	Yes	TBD	TBD	TBD	TBD	TBD	TBD
IF.1 IMPROVE ACCESS TO ENERGY EFFICIENCY BY PROVIDING INCLUSIVE FINANCING	Yes	TBD	TBD	TBD	TBD	TBD	TBD	TBD
TOTAL ESTIMATE (Rounded)	**Yes**	**Yes**	**5K**	**$800K**	**64K**	**21K**	**4K**	**35K**

(See Attachment D for Climate Action Plan & 2040 Energy Vision Alignment).

The Partners acknowledge that other efforts are making progress towards the CAP emissions target and encompass elements of the 2040 Energy Vision. These efforts, along with Partnership Activities, require more comprehensive modeling and tracking to inform decision makers. Through implementation of the Work Plan, Partners will continue to develop and refine metrics, demonstrate impact, and share lessons learned. The Planning Team will provide progress reports on Partnership Activities during quarterly Board meetings and via Annual Reports.

EE.1: REDUCE NATURAL GAS USE FOR RESIDENTIAL CUSTOMERS

Key Takeaways	
Project Lead	CenterPoint Energy
Primary/Secondary Support	City of Minneapolis
Customer Segment	Residential
GHG Reduction	2,280 MTCO2e
Equity Element	Yes
Workforce Element	TBD

SUMMARY

Partners will research, develop, and implement customer-specific and group tailored strategies to double residential participation in building envelope and high-efficiency equipment programs across the City with a specific goal for Green Zone participation.

DESCRIPTION

The Partners have identified research objectives to: 1) utilize home energy audit and conservation improvement program participation data and City assessor data to quantify and describe residential building characteristics by census tract, 2) calculate the energy savings potential from high residential natural gas users, 3) compare residential natural gas use intensity across geographic areas, and 4) assess strategies to drive customers with high energy savings potential to make energy efficiency home upgrades, especially building envelope upgrades.

The Partners, with assistance from EVAC, will work together to develop and implement strategies to engage customers with high energy savings potential and double participation in specified conservation improvement programs. As a best practice first-step with multiple benefits beyond energy savings, building envelope upgrades will be encouraged with outreach and City franchise fee supported incentive resources.

To improve equitable access to energy efficiency opportunities, Partners will target customers that qualify for low-income services or reside in the City's Green Zones. The Partners will also consider strategies to ensure the local workforce can sufficiently accommodate the anticipated influx of energy efficiency jobs caused by this activity.

ANTICIPATED IMPACT

The research and data analysis produced from this activity will better inform goal-setting and strategies to reduce energy use in the residential sector and for under-resourced communities. This activity is expected to reduce GHG emissions by 2,280 MTCO2e by 2021 from approximately 4,500 rebated projects saving an estimated 43,000 dekatherms of natural gas. Half of these projects should benefit residents of the City's Green Zones or income qualifying customers. The Partners will develop and track metrics related to equity and workforce goals.

ESTIMATED IMPLEMENTATION TIMELINE

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*

No.	Supporting Efforts	Time Frame
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 and Passive House projects with natural gas heating in new and existing residential buildings	*2019-2021*

EE.2: REDUCE ENERGY USE FOR HIGH ENERGY SAVING POTENTIAL COMMERCIAL CUSTOMERS (PILOT)

Key Takeaways	
Project Lead	Xcel Energy
Primary/Secondary Support	City of Minneapolis/ CenterPoint Energy
Customer Segment	Commercial
GHG Reduction	5,100 MTCO2e
Equity Element	TBD
Workforce Element	TBD

SUMMARY

The utilities will create a focused effort to realize significant energy savings by targeting commercial buildings with the highest energy use intensity and highest energy use.

DESCRIPTION

The City will provide site-specific energy use intensity data from the commercial benchmarking program to the utilities. The utilities will integrate the benchmarking data with energy consumption data to identify buildings with the greatest overall site energy savings potential. Utilities will use internal customer engagement systems, such as Account Management or the Business Solutions Center, to provide customer specific energy solutions and encourage the use of automatic data transfer for seamless compliance with the City's benchmarking ordinance. This pilot program will focus on organizational and technical support for the identification and implementation of operational energy efficiency projects that have potential to drive significant energy savings. Conservation Improvement Program (CIP) funding will be used for this effort and the utilities will report the aggregate cohort participation in CIP programing compared to non-cohort baseline participation.

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 the cohort of participating buildings and will track and celebrate progress toward meeting reduction goals annually.

In addition, the City, CenterPoint Energy, and Xcel Energy will jointly pursue a conversation with NRG about opportunities for energy efficiency and integrated renewable energy in the Minneapolis district energy system. The Minneapolis district energy system serves 130 blocks in downtown Minneapolis.

ANTICIPATED IMPACT

This activity is expected to reduce GHG emissions by 5,100 MTCO2e by 2021. The activity will result in energy saving of approximately 10,000 megawatt hours of electricity and 21,000 dekatherms of natural gas for an initial cohort of about 35 commercially benchmarked buildings over the term of the work plan. We intend to continue outreach to this sector of high energy use intensity customers beyond the scope of the initial projected participants and hope to expand participation. By focusing on this cohort in a pilot program, the Partners will test the effects of their combined outreach and incentives and create a path for broader engagement of all benchmarked buildings.

ESTIMATED IMPLEMENTATION TIMELINE

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

EE.3: PURSUE ENERGY EFFICIENCY "PERFORMANCE PATH" AT CITY FACILITIES (PILOT)

Key Takeaways	
Project Lead	Xcel Energy
Primary/Secondary Support	City of Minneapolis/ CenterPoint Energy
Customer Segment	Commercial
GHG Reduction	4,500 MTCO2 (electric)
Equity Element	No
Workforce Element	TBD

SUMMARY

The utilities will provide enhanced services to identify and act on opportunities to save energy at City facilities.

DESCRIPTION

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 from electricity for this project.

CenterPoint Energy will help the City identify and act on opportunities to reduce natural gas use at City facilities. The City is interested in better understanding gas consumption patterns at city facilities to prioritize natural gas efficiency projects and demonstrate natural gas savings over time. CenterPoint Energy will provide the City with options to access daily gas usage data as well as provide technical assistance to interpret trends and strategize efficiency improvements.

ANTICIPATED IMPACT

The City has established a 10% electricity reduction goal for this project. This activity is expected to reduce GHG emissions by 4,500 MTCO2e by 2021 from over 11,000 megawatt hour savings in electricity. On the gas side, the activity will increase data sets for identifying consumption patterns at City facilities and help to analyze data and prioritize actions to reduce gas use. Natural gas savings goals and associated emissions reductions will be determined during activity implementation in 2019. There is no equity impact anticipated for this Partnership Activity but possible workforce opportunities through energy efficiency work implemented at City facilities. This pilot project will test the program methodology for viability for other customers in future projects throughout the State.

ESTIMATED IMPLEMENTATION TIMELINE

No.	Supporting Efforts	Time Frame
1	Inventory City Buildings	*Early 2018*
2	Develop energy efficiency plan for city buildings	*Early 2018*
3	City buildings are entered into benchmarking tool to aid in project planning	*Mid 2018*
4	Implement energy efficiency project plan(s)	*2019-2021*
5	Regulatory filing required	*No*

EE.4: FIELD TEST ENERGY EFFICIENCY AND CARBON CAPTURE TECHNOLOGY (PILOT)

Key Takeaways	
Project Lead	CenterPoint Energy
Primary/Secondary Support	City of Minneapolis
Customer Segment	Commercial
GHG Reduction	13 MTCO2e
Equity Element	No
Workforce Element	TBD

SUMMARY

The City will participate in CenterPoint Energy's high efficiency, carbon-capture technology pilot program with $CleanO_2$ Carbon Capture Technologies.

DESCRIPTION

$CleanO_2$ is a new technology that is intended to improve energy efficiency and capture carbon dioxide emissions from commercial-scale natural gas heating systems. The $CleanO_2$ technology claims to improve water heating system efficiency by preheating domestic water with excess heat from the heating system. The technology captures carbon by chemically reacting carbon dioxide from a boiler's flue gas with metal hydroxides to create a carbonate mineral by-product. The by-product can be sold and used in manufacturing a variety of products, such as glass and soap.

CenterPoint Energy will fund the installation of the $CleanO_2$ technology at a City facility and work with a third-party contractor to monitor, measure, and verify energy savings and carbon dioxide reduction. The Partners will help facilitate installation, track progress of other installations in Minneapolis, report results, and share lessons learned with stakeholders.

ANTICIPATED IMPACT

This activity is expected to reduce GHG emissions at a City facility by approximately 13 MTCO2e by 2020. By participating in the pilot, the City may save $600/year in energy costs and gain about $2,000/year from the sale of the by-product. Demonstrating claimed energy savings and lessons learned from the pilot could lead to more wide-spread adoption of carbon capture technologies, providing an opportunity to capture GHG emissions from natural gas fueled economic activity. In addition, the uptake in carbon capture technologies could also increase local opportunities in manufacturing and installation employment opportunities.

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	Monitor, measure, and evaluate $CleanO_2$ technology	*Late 2019-2020*
7	Report results and share lessons learned with stakeholders	*2020*

EE.5: SUPPORT RESIDENTIAL ENERGY DISCLOSURE POLICIES THROUGH DATA ACCESSIBILITY AND TOOLS

Key Takeaways	
Project Lead	City of Minneapolis
Primary Support	Xcel Energy and CenterPoint Energy
Customer Segment	Residential
GHG Reduction	1-2% annually
Equity Element	Yes
Workforce Element	TBD

SUMMARY

The City of Minneapolis will collaborate with Partners to create and modify tools to support compliance with a new set of residential energy disclosure policies for multi-family benchmarking, truth in sale of housing (TISH) and residential energy rental lease disclosures that the City will enact in 2019.

DESCRIPTION

These tools will, in part, allow multi-family and single-family property owners to readily access necessary energy usage data in a format easily shared with the city, prospective tenants and future homebuyers. Partners will co-create data outputs that provide valuable information to tenants and homebuyers about the energy use of the home or apartment and how to participate in energy efficiency programs available to property owners and tenants.

ANTICIPATED IMPACT

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 supported by the City and utilities.

ESTIMATED IMPLEMENTATION TIMELINE

No.	Supporting Efforts	Time Frame
1	City passes residential energy disclosure polices	*Early 2019*
2	Begin Implementation of City energy disclosure polices with multi-family benchmarking, collaboratively reduce barriers, and develop utility tools when necessary to ease compliance.	*Early 2020*
3	Full Implementation of policies take effect and all tools are available to utility customers for compliance and energy cost saving programs/opportunities	*Early 2021*

RE.1: INSTALL ELECTRIC VEHICLE INFRASTRUCTURE FOR CITY FLEET (PILOT)

Key Takeaways	
Project Lead	Xcel Energy
Primary Support	City of Minneapolis
Customer Segment	City Enterprise
GHG Reduction	1,008 MTCO2e
Equity Element	No
Workforce Element	TBD

SUMMARY

The Partners will design a program to spur transition of the City's combustion engine fleet to electric.

DESCRIPTION

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 that will likely receive dual mode chargers for 160 electric fleet vehicles for this pilot at four building locations. Estimated cost of the Minneapolis pilot to Xcel Energy is at least $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.

ANTICIPATED IMPACT

The pilot will avoid 1,008 MTCO2e over the term of the work plan as it helps to inform a broader city-wide process on charging for public and private spaces and for future Xcel Energy program offerings. The pilot will save the City an estimated $528,000 in fuel savings over the term of the Plan. This project required a PUC filing, submitted mid-October 2018 that included substantial additional EV pilot requests to establish key learnings based on the needs of different market segments and to inform longer-term EV programs that will help transition the transportation segment and reduce GHG emissions. They included: public charging infrastructure pilot, residential EV advisor online tool, residential EV subscription service pilot, residential smart service charging pilot, workplace smart charging study pilot and vehicle to grid demonstration with school buses[1]. Within the public charging pilot, Xcel Energy plans to partner with the cities of Minneapolis and St. Paul to support the installation of mobility hubs, for which the cities have selected HOURCAR as the anchor tenant. Additionally, the cities recently received approval of Federal Congestion Mitigation Air Quality (CMAQ) funds to purchase vehicles, chargers, and operating services for this new mobility service.

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	*Early 2019*
4	Upon approval by PUC, begin program rollout and installation	*Early 2019*
5	Begin planning citywide EV infrastructure.	*2019*
6	Monitor and reporting as required by PUC Order	*2019-2021*
7	Integrate learnings in larger City EV transition planning	*2019 and beyond*

[1] Docket #E002/M-18-643

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

Key Takeaways	
Project Lead	Xcel Energy
Primary Support	City of Minneapolis
Customer Segment	City of Minneapolis (Enterprise) Residential
GHG Reduction	24,000 MTCO2e
Equity Element	Yes
Workforce Element	Yes

SUMMARY

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.

DESCRIPTION

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

This activity is expected to reduce GHG emissions by 24,000 MTCO2e coming from the electric sector by the end of 2021. The impact during the time frame of this work plan will come mainly from the City enterprise reaching its 100% renewable goals. The activity may also help to reduce costs to the City and community by seeking out lower cost renewable energy options. The activity has an equity component resulting from potential lower costs of renewables over time and from potential workforce development training and employment impacts. Broader impact is to collaborate and explore in depth opportunities to bring the larger community to 100% renewable energy by the City's 2030 goal date.

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 COMMUNITY SOLAR AND ENERGY EFFICIENCY OPPORTUNITIES FOR LOW-INCOME COMMUNITIES

Key Takeaways	
Project Lead	Xcel Energy
Primary/Secondary Support	City of Minneapolis/CenterPoint Energy
Customer Segment	Residential/Low Income
GHG Reduction	1,000
Equity Element	Yes
Workforce Element	TBD

SUMMARY

A low-income Community Solar Garden will be developed incorporating energy efficiency to subscribers and the surrounding neighborhood.

DESCRIPTION

A low-income community solar garden (CSG) will be developed at one of two City sites. This CSG will be available to renters and homeowners with a goal of saving 30-50% off their electric 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 array will range between 700-800 KW and would be located in or near the north or south green zone.

The City and Xcel Energy will develop and implement an energy efficiency plan for the CSG subscribers and the surrounding neighborhood prior to the CSG installation. Because the neighborhood for the garden is not yet chosen by the City, we have made very rough estimates of assuming a 20% electric energy savings in single family homes and 10% in multi-family units for an estimated 1,100 MWh in electric energy savings.

ANTICIPATED IMPACT

This activity is expected to reduce GHG emissions by 600 MTCO2e in the CSG and 400 MTCO2e in energy efficiency efforts by 2021. The activity will result in electricity and cost savings for approximately 70 CSG participants as well as other energy and GHG emission savings in the surrounding neighborhood for an estimated 120 participants. The activity has an equity component in the green zone location and possible workforce impacts through the CSG and/or energy efficiency installation.

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*

WD.1: IMPROVE EQUITABLE ACCESS TO CLEAN ENERGY JOBS

Key Takeaways	
Project Lead	City of Minneapolis
Primary/Secondary Support	Xcel Energy /CenterPoint Energy
Customer Segment	Residential
GHG Reduction	TBD
Equity Element	Yes
Workforce Element	Yes

SUMMARY

Partners will review findings from the Workforce Development Assessment and stakeholder input to execute activities that improve equitable access to clean energy jobs. Partners will consider resources and opportunities to address equity and workforce needs as part of each Work Plan Partnership Activity.

DESCRIPTION

Minneapolis has an opportunity to leverage its clean energy initiatives to provide skills training and employment opportunities for City residents, particularly low-income residents and communities of color. Greater numbers of well-trained workers with skills in energy efficiency, renewable energy, advanced transportation and smart grid technologies are critical for the City to cost-effectively reach aggressive energy goals. Training is essential to addressing the current shortage of skilled workers, looming retirements of skilled workers, and the increasing demand for skilled workers in energy fields.

To help meet this critical need, the City will utilize the findings of the workforce development assessment to set goals to support workforce development and skills training for energy-related investments funded or directed by the City, and as part of the CEP. In addition, to support equitable sharing of benefits from clean energy, City contracting preferences will be granted to women and minority-owned businesses with their primary offices in Minneapolis.

ANTICIPATED IMPACT

This activity is expected to provide new career opportunities for residents of Minneapolis especially Green Zone residents and small and minority businesses looking to grow. Training will focus on new or upgraded skills as identified by employers, contractors and educators. Training will build on existing initiatives, and also create new capacity for training as a better-connected and integrated training ecosystem, which may include: Career and Technical Education (CTE) programs in high schools to create a pipeline to clean energy jobs; Greater access to training in clean energy skills for under-served populations and neighborhoods; Business development support for new and growing women and minority-owned businesses in clean energy services.

ESTIMATED IMPLEMENTATION TIMELINE

No.	Supporting Efforts	Time Frame
1	Report findings of Workforce Development Assessment.	*Spring 2019*
2	Engage Partners to optimize opportunities from Workforce Development Assessment as they directly relate to activities	*Early 2019*
3	Engage EVAC to provide feedback and recommendations for Partnership workforce development activities.	*Early 2019*
4	Define workforce development performance metrics	*Mid 2019*
5	Develop a plan and budget to support workforce capacity and skills training	*Mid-late 2019*
6	Solicit proposal for energy skills training and outreach	*Late 2019*
7	Execute workforce development activities	*2019-2021*

No.	Supporting Efforts	Time Frame
8	Monitor and evaluate workforce development impacts	*2020-2021*
9	Report updates and findings in CEP annual status reports	*2019-2021*

IF.1: IMPROVE ACCESS TO ENERGY EFFICIENCY BY PROVIDING INCLUSIVE FINANCING (PILOT)

Key Takeaways	
Project Lead	CenterPoint Energy
Primary/Secondary Support	City of Minneapolis
Customer Segment	Residential
GHG Reduction	TBD
Equity Element	Yes
Workforce Element	TBD

SUMMARY

The Partnership commits to an inclusive financing (IF) pilot program to help customers overcome barriers to financing home energy upgrades.

DESCRIPTION

The Partners 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 program. 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 work together to resolve and overcome barriers, creating a program that provides a reasonably beneficial service to customers.

ANTICIPATED IMPACT

The activity aims to improve access to energy savings opportunities for customers that may lack access to traditional means of capital. The Partners will develop GHG emissions reduction, equity, and potentially workforce goals as they design key features of the pilot program.

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/legislative approval, *if necessary.*	*Mid 2019*
5	Engage EVAC and Board to consider pilot program 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 program	*2020*
9	Monitor and evaluate IF pilot program.	*2020-2021+*
10	Solicit and receive PUC/Legislative approval for full-scale program, if necessary	*Next Work Plan*
11	Launch full-scale IF program to customers	*Next Work Plan*

Potential Collaboration Activities

City of Minneapolis

1. Revise 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.
2. Develop Sustainable Building Policy for city-financed new or significantly renovated projects to require that energy efficiency efforts include the Sustainable Buildings 2030 Energy Standard.
3. Develop strategies for achieving 100% renewable electricity community-wide by 2030.
4. Implement and accelerate the city-wide light-emitting diode (LED) conversion of its City-owned streetlights.
5. Refine RFP and procurement processes to reflect its commitment to equity in hiring and contracting in a significant and meaningful manner for energy efficiency and renewable energy projects.

CenterPoint Energy

1. Encourage residences and businesses to participate in CenterPoint Energy's Renewable Natural Gas opportunities, as available.
2. Improve participation in Utility Conservation Improvement Programs by leveraging Partner resources.

Xcel Energy

1. Improve participation in Utility Conservation Improvement Programs by leveraging Partner resources.
2. Encourage residences and businesses to participate in Xcel Energy's Renewable*Connect program, as available.
3. Encourage residences and businesses to participate in Xcel Energy's Solar*Rewards program, as available.
4. Work with the City, businesses, and the community on the Clean Energy transition to electric vehicles through a series of pilot programs geared toward all sectors.

Attachments

A. Work Plan Principles

B. Board Meeting on Priorities – Report

C. EVAC Input

1. Concept Ideas for Work Plan Activities

2. Work Plan Concept Feedback

3. Desired Characteristics for Work Plan Activities

4. Recommendations for 2019-2021 Work Plan

D. Climate Action Plan, 2040 Energy Vision & Work Plan Alignment Matrix

Clean Energy Partnership (CEP)

Work Plan Principles

The intent of an approved work plan is to support a stable scope of CEP activity by leveraging existing City and utility programs as well as new initiatives. The work plan is composed of Partnership and Potential Collaboration Activities:

Partnership Activities	Potential Collaboration Activities
A Partnership activity: 1. Helps the City reach its *Climate Action Plan* and *Energy Vision for 2040* goals, 2. Initiates an action that would not happen absent the Partnership, 3. States roles for the City and at least one utility, and 4. Identifies a lead Partner.	The Partners may identify certain individual Partner activities that clearly advance the City's climate and energy goals and may become areas of future collaboration. Previously existing and/or new utility programs near deployment may be considered for this section with a planned collaborative effort to leverage the Partners' resources. These collaboration items may fully develop and become priority initiatives of the Clean Energy Partnership, turning into Partnership activities.

The criteria above will be used when establishing the work plan.

Priority will be given to accomplishing and reporting on Partnership activities over the course of a work plan timeline.

Amending a Work Plan

In the rare event that the Partners deem it necessary to amend a work plan activity, the substance of the amendment shall be presented by the Planning Team at an EVAC quarterly meeting for input prior to Board consideration.

Any amended or new Partnership activity must meet the work plan principles. If the Partnership determines an activity does not or no longer meets the work plan principles, it will take action to eliminate the activity from the work plan.

Process for creation of subsequent work plans

- The City shall bring forth its priorities with enough time to allow the utilities to fully research the potential of each priority.
- Each Partner shall present a list of potential work plan activities with enough time to adequately discuss and assess the concepts.

- The board shall prioritize potential work plan items with consideration to cost/benefit, city equity goals and potential for scalability.
- EVAC may advance recommendations that meet the established work plan principles for consideration by the Planning Team.

Attachment B

CLEAN ENERGY PARTNERSHIP
BOARD MEETING ON PRIORITIES – REPORT

March 15, 2018

Overview

This is a report summarizing the Clean Energy Partnership (Partnership) Board Meeting on Priorities, which took place on March 1st, 2018 from 3:30 to 5:00 p.m. at Minneapolis City Hall, 350 S. 5th Street, Conference Room 333. The meeting was facilitated by Rolf Nordstrom (facilitator), President & Chief Executive Officer at Great Plains Institute. The meeting provided an opportunity for Board members to receive a report on Partnership progress to date, establish priorities, and prepare for decision making discussions on development of the next work plan.

The facilitator, with assistance from the Planning Team, proposed the following meeting goals:

1. Provide board members the opportunity to understand one another's perspective on what success would look like for the Partnership,
2. Make sure there is alignment among the city's Climate Action Plan, its interest in 100% renewable energy, and the Partnership's priorities for action, and;
3. Develop consensus on a *manageable number* of top priorities for the Clean Energy Partnership's next work plan that advance the city's climate and energy priorities.

Board Participation

The Board members marked present attended the meeting and participated in the facilitated exercise to discuss and select Partnership priorities.

Present	Name	Title	Board Position
☒	Jacob Frey	Mayor	City of Minneapolis (Board Chair)
☒	Jeremy Schroeder	Ward 11 Council Member	City of Minneapolis
☒	Cam Gordon	Ward 2 Council Member	City of Minneapolis
☒	Mark Ruff	Chief Financial Officer	City of Minneapolis
☒	Brad Tutunjian	Vice President Regional Operations	CenterPoint Energy
☒	Adam Pyles	Director Regulatory Affairs	CenterPoint Energy
☒	John Marshall	Director Community Relations	Xcel Energy
☐	Laura McCarten	Regional Vice President	Xcel Energy
☒	Steve Fletcher	Ward 3 Council Member	City of Minneapolis (Alternate)
☐	Todd Berreman	Director Energy Efficiency	CenterPoint Energy (Alternate)

Staff Attendance

Luke Hollenkamp, City of Minneapolis Sustainability Program Coordinator, provided a progress update of the Climate Action Plan's relevant goals as they align with the Partnership and responded to clarifying questions. Other staff from the partners were in attendance but did not participate in the facilitated exercise to establish priorities.

Attachment B

Present	Name	Title	Organization
☒	Luke Hollenkamp	Sustainability Program Coordinator	City of Minneapolis
☒	Bridget Dockter	Manager, Policy & Outreach	Xcel Energy
☒	Emma Schoppe	Local Energy Policy Manager	CenterPoint Energy
☒	Heidi Ritchie	Policy Director, Mayor's Office	City of Minneapolis
☒	Robin Garwood	Policy Aide, Ward 2	City of Minneapolis
☒	Karlee Weinmann	Policy Associate, Ward 11	City of Minneapolis
☒	Laura Dorle	Policy Associate, Ward 3	City of Minneapolis
☒	Al Swintek	Manager, Local Government Relations	CenterPoint Energy
☒	Nick Mark	Manager, Regulatory Affairs	CenterPoint Energy
☒	Sara Barrow	External Affairs and Community Relations	Xcel Energy
☒	Louis Mondale	Project Manager New Partners	Xcel Energy

Meeting Preparation

In advance of the meeting, Board members were asked to respond to the following survey questions:

1. How do you define success for the Partnership?
2. Is the Partnership achieving your definition of success?
3. Given the city's climate and energy goals, *specifically* how would you evaluate the success of the Partnership three years from now? What tools would you use to evaluate it?

Meeting Activities

The facilitator guided the Board discussion of the Partnership priorities by first asking for individual Board member's priorities and then grouping similar priorities. The Board reviewed this list and a voting exercise identified the following top three priorities:

- Lower energy consumption and maximize energy efficiency in all building sectors (commercial, industrial and residential).
    - Leverage utility CIP programs to achieve 20% energy efficiency savings in commercial and industrial buildings by 2025.
    - Focus on big impact GHG activities (e.g., commercial energy efficiency of NRG's downtown district heating and cooling system).

Total Votes Received: 7

- Make more clean energy (renewable energy and energy efficiency) accessible and available through new inclusive financing tools.
    - Create an on-bill financing program to empower residents/property owners to invest in energy efficiency upgrades and clean energy.

Total Votes Received: 7

- Make the city more sustainable/resilient through increased local renewable energy
    - Significantly expand the use of clean, renewable energy, including alternatives for heating our buildings.

Total Votes Received: 3

The Board agreed that the following approaches will help to achieve the Partnership's priorities:

- Go as a Partnership with a set list of meaningful agreed-upon asks to the state and Public Utilities Commission that would help the city reach our climate goals. Find pathways for more synergy with lobbying efforts at the state and federal level,
- Consider both Return on Investment and equity in making investments that lead to reduced energy consumption and energy efficiency,
- More clearly identify and inventory each partner's key attributes/strengths and pick one project that demonstrates how the Partnership can leverage these respective strengths, and;
- Improve operations of this Partnership through role clarification and a structured prioritization of goals and activities.

The following is a list of proposed priorities that did not receive enough votes to be amongst the top three:

- Consider Renewable Natural Gas (RNG) as a way to help the city meet its energy and climate goals (need more knowledge on RNG before setting it as a CEP priority—concerns about what constitutes renewable),
- Broaden carbon/pollution data tracking to include wider swaths of commercial, industrial & residential properties—publish that data,
- Focus on transportation including electrified vehicles, buses and potential CNG applications,
- Enhance focus on city's priority of housing for energy efficiency and deployment of renewable energy, and;
- Consider how clean energy goals/programs might be replicated across the state and nation.

Next Steps

The Board directed Planning Team staff to return to the Q1 Board meeting with the following deliverables:

1. A report on the meeting for review by the Board, and
2. An analysis of current work plan activities mapped to three priorities.

At the Q1 Board Meeting the Board will vote to establish the three top priorities and direct staff on next steps.

Minneapolis Clean Energy Partnership
Energy Vision Advisory Committee
Q2 2018
Work Plan Concepts

On May 7, 2018, the Energy Vision Advisory Committee (EVAC) discussed potential future Clean Energy Partnership Work Plan Activity Concepts at the 2nd Quarter Meeting of 2018. EVAC submitted the following Partnership Activity concepts for consideration.

I. Universal city-wide clean electricity program (with customer opt-out)

This approach includes two models for creating a universal renewable electricity program in which all Minneapolis energy users would receive renewable electricity by default and could opt out if they did not want to participate. This approach generates much higher participation rates than an opt-in program.

A. Develop and opt-out green power purchase program offered by City through Xcel Energy. All businesses and residents in Minneapolis would be automatically signed up for green power purchase programs like WindSource or Renewable*Connect and could opt-out of participating. This would require PUC approval to allow Xcel to automatically enroll Minneapolis customers based on municipal approval.
B. Implement opt-out Community Choice Aggregation (CCA) program where City purchases electricity from renewable sources on behalf of residents/businesses via the MISO market. This would require legislation to enable CCA, which is active in other states and was evaluated as one option in the City of Minneapolis Energy Pathways Study.

The two models are similar in their overall goal, but are quite different in structure and decision-making roles (in A., Xcel Energy provides a pre-defined renewable electricity offer to all Minneapolis customers, in B. the City of Minneapolis seeks offers for energy supply on the market delivered through Xcel Energy's utility bill). Pros and cons in terms of costs/savings to customers, flexibility to market changes, complexity of regulatory/policy lift required, and time involved will need to be evaluated and compared.

Climate:

- Would allow the city to meet its 100% renewable electricity goal
- Would meet the 10% in-boundary purchase goal in CAP

Workforce:

- Stipulate local hire for new renewable energy development projects where possible

Equity:

- Everyone has access by default
- In options where the proposed renewable energy source will represent an incremental cost on customer bills, need to ensure low-income households and small businesses are not hurt by higher bills

Roles

- EVAC develop pros and cons of options
- Xcel Energy and Minneapolis collaborate on policy changes
- Xcel Energy and Minneapolis determine equitable cost
- Minneapolis create hiring policy

II. Accelerate solar development within Minneapolis

A series of related strategies around harnessing available space, including rooftops, parking lots, and other available areas, to develop solar energy within Minneapolis.

A. **Residential campaign (bulk purchase)**
Establish a consistent bulk-purchase program to negotiate standard rates and coordinated financing to simplify the process for residential solar and create a consistent pathway for Minneapolis residents to participate in solar.

B. **Large commercial solar in collaboration with businesses**
Coordinate with large commercial businesses to accelerate use of commercial rooftops for both net-metered solar offsetting business use and community solar gardens available for other energy users. Minneapolis and Xcel could engage large commercial businesses within Minneapolis with clear models for solar development and engage major Minneapolis companies in highlighting their leadership in moving to solar. This approach can utilize the solar incentive and solar advisor models below.

C. **Urban CSGs (large rooftops, parking canopies, etc.)**
Promote municipal, corporate, and institutional hosting of urban community solar gardens with a priority to developers and projects that ensure widespread access and community benefit. Minneapolis could lead by example through hosting community solar projects on municipal property and Minneapolis and Xcel could collaborate with community solar garden developers to promote the model to potential project hosts.

D. **Solar incentives**
The City of Minneapolis could provide various incentives for solar, such as property tax incentives and production incentives like green business cost share. Like the current green business cost share, there should be higher incentives in low-income neighborhoods and/or green zones.

E. **Implement a solar advisor model**
Potential solar customers need a trusted navigator to help understand the technology, financing, and service providers in the sector. Partnering with Xcel Energy, the City of Minneapolis could establish a solar navigator program, particularly for small and mid-sized businesses.

Climate:

- Would help meet the 10% in-boundary purchase goal in CAP

Workforce:

- Stipulate local hire for new renewable energy development projects where possible

Equity:

- Need to ensure that incentive and promotion programs are equitable. Without effective financing and opportunities that do not require property ownership like CSGs, solar programs risk benefiting middle and upper income users primarily.

III. City develops its own renewable electricity

The City has some limited opportunities for developing its own net metered renewable energy, especially solar (see solutions in Priority 2). However, in many cases a combination of limited space or limited load minimize what can be done on site. For the City to develop and own a substantial amount of renewable energy, the City and Xcel Energy would collaborate to develop a mechanism by which the City can own its own renewable energy and deliver the benefits to the City and its residents using Xcel Energy's grid. This could be used both for large areas within Minneapolis that do not have adequate load to use the energy generated (potentially solar on the reservoir sites) and for large off-site wind and solar projects. Two main routes are:

A. The city owns renewable energy facilities and generates power transmitted through Xcel's grid for use in City operations or through one of the opt-out programs identified in Priority 1. This would require development of a utility tariff for allowing municipalities to transmit power through a utility's grid at fair rates.
B. The city owns renewable energy facilities offsite and sells the electricity to Xcel Energy but retains the Renewable Energy credits to meet its 100% renewable energy goals. This would require establishment of a clear and adequate price for the electricity provided, either through negotiation or use of the existing requirements for Xcel to purchase energy at an avoided cost, which may require PUC clarification.

Either option offers potential for city revenue and savings and dramatically expands the scope of city renewable energy beyond what net metering can offer. Both will require integration with Xcel's grid and substantial evaluation of policy framework, establishment of clear and stable pricing, and evaluation of pathways to finance projects.

Climate:

- Would allow the city to meet its 100% renewable electricity goal
- Could help meet the 10% in-boundary purchase goal in CAP if a solution was used that allowed Minneapolis to provide part of the energy for an opt-out program (see priority 1).

Workforce:

- Stipulate local hire for new renewable energy projects where possible

Equity:

- Will benefit all customers to the extent that it provides cost benefits to city operations, especially if mechanisms are created to ensure those benefits are shared with energy users.

Roles

- EVAC develop pros and cons of options

- Xcel Energy and Minneapolis collaborate to identify pathway for each option and collaborate to secure any necessary policy changes
- Xcel Energy and Minneapolis determine fair pricing, potentially with PUC approval and clarification of compliance with federal law
- Minneapolis create hiring policy

IV. Pay-As-You-Save Model on Inclusive Financing

What's being done:

CenterPoint Energy on-bill repayment mechanism, loan buydown programs, May 21 study session on PAYS model, feasibility study of inclusive financing for Minneapolis

Intended audience:

all three partners; all customers (public property, public housing, EV chargers, residential, etc)

Impact:

1. Accelerate adoption of on-site energy efficiency and renewable energy via a higher acceptance rate of retrofit opportunities and deeper investments
2. Improve workforce development by aligning with city workforce efforts, hiring Minneapolis residents, esp. people of color and low-income folks. If aligned with training, could address shortages of qualified workers.
3. Addresses equity if well-aligned with workforce goals. Also provides more accessible energy savings opportunities for multi-family residents, low-credit households, and public entities that are capital-constrained.

Thinking systemically, what it addresses:

- Convenience: on-bill, instant rebate or point-of-sale rebate
- Upfront cost: instant rebate or point-of-sale rebate, non-credit capital access (PAYS)
- Access to capital: low-income programs (limited), credit score buydown, PACE, inclusive financing
- Cost of capital: loss reserve, PACE with senior lien (n/a), city subsidy, disconnection option (PAYS)

Other notes:

- PAYS model is crucial for the tariff mechanism and the principles of repayment that preserve at least 20% of savings and repay within 80% of measure life
- Could use funds from loan subsidy programs, too (to buydown co-pays for measures that may not payback within the usual term)
- Could pilot in city Green Zones
- For energy efficiency group: how can rebates be transformed into point-of-sale discounts to increase customers opting

Feedback on Energy Efficiency Partnership Activity concepts

EVAC:

- Item #1: Emphasize different strategies for different building types – focusing primarily on building envelopes may preclude action in multifamily buildings. Set target for how many high NG users will receive customized interventions.
- Item #2: The item should include an action component, not just targeted outreach and discussion.
- Item #3: More information needed to understand the program design and expected outcomes.

Board:

- What additional feedback and comments do you have?

1

Feedback on Renewable Energy Partnership Activity concepts

EVAC:

- Item #1: Be more clear about the scope of what is being piloted and what it will lead to. Is the ultimate goal to create infrastructure for the City fleet or the broader community?
- Item #2: The ultimate goal should be to create an approach that will work community-wide.
- Item #3: In addition to Solar*Rewards qualification, consider a more comprehensive approach to address various barriers facing 4D NOAH buildings (financing, etc.).

Board:

- What additional feedback and comments do you have?

2

Feedback on overall list of Partnership Activity concepts

EVAC:

- More details will help make it easier to assess projects.
- Include near-term objectives (ie. % of actions taken in target sector) and an expected two-year project outcome that will lead into future work plans (ie. a plan for how successful programs and activities will be expanded).
- The work plan as a whole doesn't seem ambitious enough at the current level of detail provided. At least one item in each section should be expanded to have a broader reach and larger expected impact.

Board:

- What additional feedback and comments do you have?

3

Meeting Summary:

Clean Energy Partnership Workplan Activities Meeting

Monday, September 17, 2018
9:00-11:30 AM
Great Plains Institute Board Room
2801 21st Ave S, Minneapolis, MN 55407

This document captures the results of a meeting amongst stakeholders in the Minneapolis Clean Energy Partnership to discuss the Partnership's 2019-2020 workplan.

NOTE: This document is intended to capture the collective insights of the group, and as such, comments should not be attributed to any particular individual or organization.

Attendees:

- **Energy Vision Advisory Committee Members:**
  - Timothy DenHerder-Thomas (Cooperative Energy Futures)
  - Trevor Drake (Great Plains Institute)
  - John Farrell (Institute for Local Self Reliance)
  - Abby Finis (Great Plains Institute)
  - Matt Kazinka (Lake Street Council)
  - Rebecca Olson (Center for Energy and Environment)
- **Staff from Clean Energy Partnership Member Organizations:**
  - Bridget Dockter (Xcel Energy)
  - Patrick Hanlon (City of Minneapolis)
  - Kim Havey (City of Minneapolis)
  - Luke Hollenkamp (City of Minneapolis)
  - Nick Mark (CenterPoint Energy)
  - Louis Mondale (Xcel Energy)
  - Emma Schoppe (CenterPoint Energy)
  - Al Swintek (CenterPoint Energy)
  - Karlee Weinmann (City of Minneapolis)
- **Other Attendees on Behalf of EVAC Members:**
  - Samuel Calahan (Renewable Energy Partners)
  - Jenna Greene (Great Plains Institute)

Meeting Goals:

1. (Optional) Better understand CenterPoint Energy's Renewable Natural Gas offering
2. Identify stakeholders' desired minimum and ideal characteristics for the package of CEP workplan activities
3. Identify whether and how the current draft workplan activities fit those characteristics
4. Discuss whether and how workplan activities might be tweaked or improved to better meet those characteristics (within the limits of what's possible given timing constraints)

Desired Characteristics for Workplan Activities

Attendees were asked to identify "need to have" and "nice to have" criteria for the *package of workplan activities* (not every workplan item needs to meet these criteria, unless otherwise noted).The list generated during the meeting has been reformatted and broken into the following three sub-lists.

1) "NEED to have" criteria for how to present the activities (to aid with evaluation):

a) All activities should have metrics, tied to overall GHG savings and other goals in Climate Action Plan and Energy Vision. (*Note: the CAP and Energy Vision have quantifiable goals and less quantifiable strategies; we may need to find a way to measure the less quantifiable items.)*

i) Every activity should have one or more specified outcomes, tied to CAP and Energy Vision, some of which should be related to equity and workforce development.

ii) Address ALL of the goals of the CAP and Energy Vision, even if substantial achievement is not feasible at this time. Articulate which items are not within purview of CEP or not being addressed, and why.

iii) Directly identify workforce development and workforce participation opportunities, where applicable.

b) If an activity is not highly ambitious, then the proposal should identify how the activity gets us to the next step towards highly ambitious activities

c) All activities should have defined audiences and geographies. (*Note: utilities are required provide equitable service to full customer base; pilots are one strategy to address this*.)

2) **"NEED to have" criteria that should be reflected in the final package of workplan activities:**

a) Energy efficiency should be a major component of the package

b) The package should expect to generate significant energy and cost savings for residents and businesses, with a focus on marginalized energy users. (*Note: may require discussion about the costs of achieving this, with attention to costs vs rates.)*

c) The package should be balanced by customer sector

d) The package should be balanced by energy type (e.g., electricity, natural gas, transportation). (*Note: transportation may require some discussion about the role of the Partnership vs. CEAC and other transportation committees.)*

e) Activities should not be in direct conflict with existing utility mandates and regulatory requirements.

f) Activities should leverage community engagement practices (previously developed by EVAC and the CEP) and new opportunities where applicable.

g) The workplan term (e.g., # of years) should be sized appropriately to facilitate the best progress, with consideration to EVAC terms and associated opportunity for input.

3) **"NICE to have" criteria that should be reflected in the final package of workplan activities*:***

a) Collaboration that's brag-worthy and reflects ambition.

b) Facilitates and supports successful evolution of utility business models as we're transitioning to lower carbon energy (may need to define success)

Suggested Amendments to Workplan Activity Template

Attendees were provided a draft version of the template document that CEP staff will use to present information for each workplan activity. Upon reviewing the template and considering the aforementioned objectives, attendees suggested the following template amendments:

1) **Identify applicable CAP and Energy Vision goals and strategies for each activity.** (*Note: template should be the same for each activity, even if there is no or minimal impact.)*
    a) Include information about workforce development, equity, and cost savings for each activity. Note potential for energy and cost savings for marginalized energy users.
2) **Provide a comparison of what the activity is trying to achieve with where we're at, and how it sets us in the right direction.** Declare unknowns where they exist (i.e., if the path is not clear, state that and list any key questions).
3) **Provide a very brief narrative on ambition and innovation** (e.g., compared to peer cities or relative to progress on meeting CAP and Energy Vision Goals). (*Note: we will be revisiting EVAC metrics in 2019, which is another opportunity to discuss this; maybe annual report is a better venue for this.)*
4) **Explicitly define the audience and geography for each activity**
    a) Note whether applicable to Green Zones (to help meet objective to focus on marginalized energy users).
5) **Name coordination and resources that are planned/needed for each activity** (*Note: this item may need more discussion; this may need to happen after activities are approved, as part of implementation planning.)*
    a) Describe needs and opportunities around community engagement

Comments on Specific Draft Workplan Activities

Attendees were provided a draft list of workplan activities currently under consideration. In response, attendees raised the following questions and comments on specific activities:

1) Some items call out numerical goals, and some do not – suggestion to make them consistent
    a) Will numbers be available before the set is finalized?
        i) Yes, staff are working to estimate impacts of all items
2) Would like to have a conversation about getting more useful information to better target activities to customer needs (e.g., thermal imaging flyover). First workplan activity is meant to do this, in part. Possibly could be an EVAC workgroup.
3) First three items under EE, and 2nd and 3rd under RE – looking for more information around whether they're ambitious enough, and how they get us to our end goals (compared to other possible options).
4) Would like to see a goal around how the City obtains access to RE
5) Does EV charging item have an RE component?
    a) Yes, staff will add that information to the description
6) #2 under EE – would like it to address intense energy users in ALL commercial buildings (incl. small commercial). Currently only applies to benchmarked buildings (>150k sq. ft.)

7) EV stations activity – will stations will be open to the public?
    a) They will not, for pilot measurement quality
8) EE #3 – Xcel is leading on this, but looking to work with CenterPoint
9) RE #4 – Would like City to compare RNG to alternative of electrification.
10) RE #3 – Low income CSG -- Concern about ambition and long-term pathway for creating solar access city-wide
11) Would like more details on “inclusive financing” activity (e.g., what approach to inclusive financing is being deployed?)

Minneapolis Clean Energy Partnership
Energy Vision Advisory Committee
Q4 2018
Work Plan Recommendations

The Energy Vision Advisory Committee (EVAC) reviewed the proposed 2019-2021 Work Plan Partnership Activities and made the following recommendations at the 4th Quarter Meeting of 2018 on October 9th.

1. Proposed Work Plan activities should demonstrate a greater level of ambition and innovation, in consideration of achieving GHG reductions. Activities that are a pilot or one-time project should have a clear purpose that leads to larger scale impacts over time.

2. Partners should adopt a net new activity – "WD.1" -- to collaborate with educational institutions (high schools, trade schools, community colleges, etc.) to develop clean energy job training programs, and job pipelines.

3. Structure and Metrics Motion
    a. A key for the metrics should be included
    b. Should include the EVAC criteria and Board criteria for work plan items
    c. Performance metrics in the anticipated impact table for each work plan item should include a description (for example what does the number of participants mean – households? Individuals?)
    d. Request that the work plan include a wedge chart showing:
        i. The GHG trajectory that we need to hit vs the GHG trajectory we are on now
        ii. How does each item contribute to getting from here to there
        iii. How do other activities of Partners in Minneapolis (Collaboration activities) contribute to these reductions
        iv. What "outside forces" (state policy, market conditions, etc) contribute to getting to these reductions
    e. Include in impact table for each workplan item how annual impact correlates to an existing target (fuel use, GHG reductions, participation, workforce)
    f. Each work plan item needs to define its ambitiousness in terms of:
        i. Will this close the 2025 GHG gap? How much?
        ii. Does it go further, faster in comparison to other municipalities across the US (Portland index)
        iii. Actions that need to happen but existing market actors are not addressing
        iv. How will this work in connection with non-Partnership activities to amplify complementary efforts to achieve the above ambitions
    g. List relevant collaboration activities for each work plan activity

Clean Energy Partnership 2019-2021 Work Plan

Climate Action Plan & Energy Vision Alignment Matrix

	2019-2021 Partnership Activities	EE.1 RESIDENTIAL NATURAL GAS USE	EE.2 COMMERCIAL HIGH USE INTENS	EE.3 CITY FACILITIES	EE. 4 CARBON CAPTURE TECHNOLOG	EE. 5 ENERGY DISCLOSURE TOOLS	RE. 1 ELECTRIC VEHICLE INFRASTRUC	RE. 2 100% RENEWABLE ELECTRICITY	RE. 3 LOW-INCOME SOLAR	WD.1 WORKFORCE EQUITY	IF.1 INCLUSIVE FINANCING
Climate Action Plan Goals											
Implementaton Goals (Ch.5)											
1	Prioritize high impact, short timeframe, equitable, and cost effective strategies.	✓	✓	✓		✓			✓	✓	✓
2	Seek strategies with multiple benefits.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3	Advance equity in infrastructure and environmental benefits between neighborhoods and communities.	✓				✓			✓	✓	✓
4	Monitor progress annually and based on results and new developments, revisit goals and strategies at minimum every three years.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
5	Begin assessing and building resiliency to climate changes and impacts.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
GHG Reduction Goals: Buildings & Energy (Ch.6)											
1	Achieve 15 percent energy efficiency in residential buildings from the growth baseline by 2025.	✓				✓			✓		✓
2	Achieve 20 percent energy efficiency in commercial/industrial buildings from the growth baseline by 2025.		✓	✓	✓				✓		
3	Increase electricity from local and directly purchased renewables to 10 percent of the total consumed by 2025.						✓	✓	✓		
4	Achieve a 1.5 percent annual reduction in greenhouse gas emissions from City facilities			✓	✓						
GHG Reduction Cross Cutting Strategies: Buildings & Energy (Ch.6)											
2	Launch a public-private energy efficiency campaign to catalyze action in businesses large and small		✓								
3	Ensure that City facilities and infrastructure, across all neighborhoods, are models of energy efficiency and renewable energy technology.			✓							
4	Continue to expand efforts to promote green jobs that support greenhouse gas emissions reduction goals									✓	
10	Evaluate and expand incentives granted for high energy performance.	✓	✓								
11	Develop tools to finance energy efficiency and renewable energy retrofits for commercial and residential buildings that have low barriers to entry and limited risk for local government.										✓
14	Monitor new technologies and regularly reassess strategies.				✓						
Residential Buildings											
1	Help 75% of Minneapolis homeowners participate in whole-house efficiency retrofit programs by 2025, ensuring distribution reflects the current percentage of low and moderate income home onwership in the city.	✓									
2	Help 75% of Minneapolis renters and rental property ownerrs participate in whole-house efficiency retrofit programs by 2025, ensuring distribution reflects the current percentage of low and moderate income home rental housing in the city.	✓									
3	Create time-of-sale and time-of rent energy label disclosure.					✓					
4	Connect and collaborate with other residential energy efficiency efforts	✓				✓					
Commercial Buildings											
2	Implement the Building Energy Disclosure policy for medium and large commercial buildings.					✓					
GHG Reduction Goals: Transportation and Land Use(Ch.6)											
6	Through local action and federal and state legislation, support a transition to cleaner fuels and more efficient vehicles.						✓				
City of Minneapolis Energy Vision 2014											
Elements of the Energy Vision (III.)											
A. Social and Economic Elements											
1	Improves social equity - The City's energy providers minimize service costs to city residents and businesses, and provide opportunities to: lower energy bills through energy efficiency; to control energy cost volatility; and improve access to energy services that empower low-income residents through efficiency, conservation, and renewable energy.	✓	✓					✓	✓	✓	✓
2	Reduces economic and health disparities – Changes to the energy system reduce the health and economic disparities between Minneapolis communities (racial, ethnic, economic, age) and improve health economic outcomes for all residents.	✓				✓	✓	✓	✓		✓
3	Improves participation – Decision making regarding energy services in the city is structured for all members of society to have opportunity for meaningful participation.	✓									✓
4	Expands economic development – Investment and management of the energy system encourages investment in new local energy-related business and new opportunities for existing businesses without diminishing economic opportunities of others.							✓	✓	✓	✓
B. Energy Supply											
1	Low or no Carbon – Reduced carbon intensity throughout the resource supply line is a primary component of clean energy.						✓	✓	✓		
2	Clean – Energy generation creates few or no waste products or pollutants.				✓			✓	✓		
3	Affordable cost – Supply costs, including life cycle costs, are kept affordable in creating a supply portfolio.							✓	✓		
4	Reliable – The supply mix is protected from unexpected unavailability.						✓	✓			
5	Predictable cost – Supply is minimally subject to price volatility							✓	✓		
6	Diversified - The supply system uses multiple energy sources with different availability and price risks.						✓	✓	✓		
7	Local – Policies maximize opportunities for local generation and ownership.							✓			
C. Distribution System											
1	High level of reliability – The system is redundant and resilient in regard to a wide range of risks.						✓				
2	High level of safety – The system is safe for consumers, utility workers, and contractors.						✓				
3	Supports consumer choice – The system supports on-site generation, on-site energy storage, aggressive energy efficiency implementation, and other distributed and renewable energy resource choices.						✓				
5	Establishes a 21st century distribution system –The system supports opportunities for microgrids, electric vehicles, distributed generation, smart meters and other distributed energy resources						✓	✓			
6	Efficient and accessible –The system efficiently uses space available in rights-of-way and allows access to the distribution system (electric, gas, thermal) for local energy production.								✓		
D. Energy Use											
1	Highest level of efficiency – Buildings and facilities incorporate all lifecycle cost-effective efficiency measures, across all neighborhoods in the city.	✓	✓	✓							✓
2	Maximizes efficiency's societal benefits – Efficiency and retrofit priorities address participation barriers for underserved customer classes, including renters.	✓				✓					✓
3	Supports end-user self-sufficiency –Buildings and facilities can use energy efficiency, on-site generation and onsite energy storage to achieve net-zero energy use.	✓	✓	✓				✓	✓		
5	Transparency –Energy users can conveniently access their own energy consumption data, while ensuring consumer privacy	✓	✓	✓		✓	✓	✓	✓		