

# 2021 WORK PLAN

Denver and Xcel Energy – Colorado  
Energy Future Collaboration



**DENVER**  
THE MILE HIGH CITY



**Xcel**Energy®

## 2021 Work Plan – Energy Future Collaboration between the City and County of Denver and Xcel Energy

### BACKGROUND

On February 28, 2018, the City and County of Denver, Colorado (“Denver”) and Public Service Company of Colorado, a Colorado corporation and an Xcel Energy company (“Xcel Energy”), entered into an Energy Future Collaboration - Memorandum of Understanding, as amended from time-to-time (“MOU”). For Denver and Xcel Energy, the MOU provides a strategy and framework for cooperation and achievement of a shared vision through broad collaboration, focusing on innovation, clean energy, economic development opportunities, customer choice programs and technology – known as the Energy Future Collaboration Partnership (“EFC Partnership”).

In August 2020, Denver and Xcel Energy amended the MOU to clarify the role of the Denver International Airport (“DEN”) in the EFC Partnership by providing a list of DEN-focused projects for illustrative consideration. The amended MOU is attached and incorporated into this Work Plan as Exhibit A. Section 4.1 of the MOU contemplates that upon execution of the MOU, the Parties will develop a plan to advance the EFC Partnership, which is this Work Plan for 2020. Denver and DEN are collectively referred to as Denver or the City, unless specifically stated otherwise. Denver and Xcel Energy are collectively called the “Parties” in this Work Plan.

This Work Plan details the governance structure and anticipated deliverables under the EFC Partnership for 2020 and follows the guiding principles in the MOU (see Section 3 of the MOU). Exhibit B to the Work Plan outlines the Parties’ planned EFC Partnership governance structure. The structure includes an “Executive Group,” “Core Team,” and “Technical Team(s)” all as defined in Exhibit B and as summarized below.

Group Level	Functions
<b>Executive Group</b> (Leadership representing all EFC Parties)	<ol style="list-style-type: none"> <li>Promote and ensure consistent communication throughout the hierarchies of Denver and Xcel Energy.</li> <li>As appropriate, provide additional guidance or review policies that require a formal process with the Core Team.</li> </ol>
<b>Core Team</b> (Primarily working group leads)	<ol style="list-style-type: none"> <li>Support the Technical Working Groups.</li> <li>Keep the Executive Group informed.</li> <li>Encourage knowledge sharing and collaboration.</li> </ol>
<b>Technical Working Groups</b> (Subject matter experts)	<ol style="list-style-type: none"> <li>Establish a clear purpose for each group as it relates to a city-wide climate/clean energy objective.</li> <li>Implement strategies towards measurable near-term goals.</li> <li>Topic-specific knowledge sharing and collaboration.</li> </ol>



Michael B. Hancock  
Mayor, City and  
County of Denver



Alice K. Jackson  
President, Public Service  
Company of Colorado

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This is not a legal or binding governance structure, but rather provides a framework and process for how the Parties envision the large and diverse organizations they represent interacting together to successfully identify and implement EFC Partnership projects. In prioritizing the items to be performed in this Work Plan, the Parties have considered their shared vision in the MOU as well as regulatory requirements in Colorado. Recognizing the new nature of the EFC Partnership, the Parties are focused on building a track record and gaining greater experience for this collaboration. Considering this, Denver and Xcel Energy have outlined short-term and longer-term goals, organized by six technical working groups as follows.

Technical Working Group	Purpose
1. Renewable Electricity, Policy, and Regulatory	Lead engagement in policy and regulatory activities. Ensure that 100 percent of electricity use community-wide contributes to a carbon-free electric grid by 2030.
<i>Implementation Project #1.1 – Municipally Hosted Community Solar Gardens</i> <i>#1.2 – Establishment of Solar + Storage Program Options through the Public Utilities Commission</i>	
2. Strategic Electrification	Study and implement strategies to decarbonize all buildings and homes in Denver. Reduce heating emissions by 25% in residential buildings and homes, and 50% in commercial buildings by 2040.
<i>Implementation Project #2.1 – Complete Denver’s Building Decarbonization Planning Efforts</i> <i>#2.2 – Promote Incentives for Fuel Switching from Natural Gas to Electric Appliances</i>	
3. Resilience and Reliability	Collaborate on opportunities to enhance the resilience and reliability of critical infrastructure in Denver.
<i>Implementation Project #3.1 – Community Resiliency Initiative Projects</i> <i>#3.2 – Pursue Grant Funding for Renewable Energy + Storage Microgrids at Critical Facilities</i>	
4. Municipal Operations	Implement CCD’s municipal facility strategic energy plan. Ensure that 100 percent of electricity use at municipal buildings contributes to a carbon-free electric grid by 2025.
<i>Implementation Project #4 – Decarbonization of Municipal Facilities</i>	
5. Streetlights	Convert streetlights to LEDs community-wide for Denver.
<i>Implementation Project #5 – LED Streetlight Conversions</i>	
6. Electric Vehicles	Achieve a clean, carbon-free transportation system that improves the health and livability of our communities. Drive efforts towards the 2030 target that 30 percent of all vehicle registrations in Denver are electric vehicles.
<i>Implementation Project #6 – Make Ready Support for City Charging Stations</i>	

The Parties have other day-to-day dealings that will continue to occur in their course and not as part of this Work Plan. Additionally, the Parties recognize that this is an iterative process and the Parties may need to update and modify this Work Plan from time to time.

Denver will seek to implement EFC Partnership projects values at strategic locations and across Denver agencies and offices. These include, but are not limited to, Denver’s municipal facilities, DEN, the National Western Center, and the Denver Arapahoe Disposal Site. Representatives across Denver’s municipal agencies and offices will participate in the EFC Partnership as necessary to achieve its goals.



## 2021 Work Plan – Energy Future Collaboration between the City and County of Denver and Xcel Energy

### 1. Renewable Electricity, Policy, and Regulatory (REPR)

**Objective #1.1:** Enable Denver to achieve its [80x50 Climate Action Plan](#) goal that 100 percent of electricity use community-wide contributes to a carbon-free electric grid by 2030. Decarbonizing Denver’s electric grid can be accomplished through Xcel’s grid mix, deployment of distributed resources, and community participation in renewable programs.

Long-term vision and ongoing support activities

- A. Increase access to and encourage community participation in voluntary renewable programs.
- B. Pursue opportunities for municipally backed renewable energy projects that empower Denver residents and businesses with access to reliable and affordable electricity.
- C. Evaluate policy strategies from other jurisdictions that could help to incentivize investment in local renewable electricity generation and energy storage systems.



**Objective #1.2:** Act as a knowledge resource and lead, organize, or support policy and regulatory activities for the EFC Partnership. The Parties will seek areas of mutual alignment regarding policy matters such as support for statutory recognition of the principles in the EFC Partnership.

Long-term vision and ongoing support activities

- A. Denver will be provided with more information about Xcel Energy’s regulatory and resource planning process and requirements.
- B. Xcel Energy will be provided with more information about how Denver views these processes and how they relate to Denver’s priorities and objectives through the EFC Partnership.
- C. Denver will participate in regulatory proceedings to promote a rapid and equitable decarbonization of the Colorado grid mix.

### 2021 Implementation Projects

#### Project #1.1: Municipally Hosted Community Solar

Denver will continue to advance the Renewable Denver Community Solar initiative to host community-solar projects on municipal property. In this approach, the power will be shared between the City’s municipal facilities and low- and moderate-income households. Additionally, the program enables the deployment of highly visible projects across Denver, workforce training, expanded access to energy support services for income-qualified households; and a partnership with the Denver Public Schools to engage students. Denver will pursue community solar capacity through Xcel Energy’s Solar\*Rewards Community (S\*RC) program offerings. Denver will recommend changes to the S\*RC program through stakeholder meetings and at PUC to increase the program’s emphasis on community benefits.

#### Project #1.2: Establishment of Solar + Storage Programs

Denver and Xcel Energy will collaborate towards the establishment of a significant solar + storage program as encouraged by Commission decision No. C20-0749. Denver will work with Xcel Energy to build stakeholder consensus for a program or programs that may be presented to the Commission for approval individually or as part of another upcoming proceeding, such as the Clean Energy Plan.

### 2020 Progress Update

#### Progress on Objective #1.1

Denver released its 100% Renewable Electricity Action Plan in August 2020 ([www.denvergov.org/solar](http://www.denvergov.org/solar)). Key priorities include maximizing investments in local renewable energy sources and ensuring that energy investments produce co-benefits such as workforce development, bill savings, and resilience. The following metrics track Denver’s progress:

- System Renewables 20.7% (2019)
- Distributed Solar 1.2% (2019)
- Utility-Scale RE Subscriptions 0.8% (2019)

#### Progress on Objective #1.2

Denver filed comments in more than a dozen proceedings at the PUC to advance its objectives.

#### 2020 Project #1: Municipally Hosted Community Solar

The Renewable Denver Initiative strives to make renewable electricity more accessible to low- and moderate-income members of the community and enabling energy cost savings. Denver was selected to receive a \$1 million grant award from the Colorado Department of Local Affairs.

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### 2. Strategic Electrification

**Objective #2.1:** Study and implement strategies to decarbonize all buildings and homes in Denver. The group is working towards Denver’s [80x50 Climate Action Plan](#) goal to reduce greenhouse gas emissions from heating by 25% in residential buildings and homes, and 50% in commercial buildings by the year 2040. The group is also studying how Denver could achieve carbon neutrality in buildings and homes by 2050 to align with the latest science and recommendations from the Intergovernmental Panel on Climate Change (IPCC).

Today nearly all our buildings and homes are heated with natural gas. This results in greenhouse gas emissions from carbon dioxide via on-site combustion and fugitive methane emissions upstream. Strategic electrification of buildings is one potential option for decarbonizing heating energy as we move to a 100% renewable electricity grid. The group is studying the most cost-effective options for building decarbonization in Denver including, but not limited to electrification, energy efficiency, storage, renewables, grid interactive systems, and other new technologies.



Longer-term and ongoing support activities:

- A. Educate the community regarding the importance and opportunities that building electrification represents.
- B. Collaborate on the opportunity to evaluate if electrification is an option as Xcel Energy conducts steam system engineering studies and develops transition plans for buildings.
- C. Partner to shape workforce training programs on heat pumps.
- D. Partner to ensure Xcel Energy’s Energy Design Assistance program complements Denver’s stretch/green code and other climate goals.

### 2021 Implementation Projects

#### Project #2.1: Complete Denver’s Building Decarbonization Planning Efforts

The Strategic Electrification Working Group will complete the Existing Building Strategic Electrification and Net Zero Energy New Buildings & Homes Implementation Plans. The plans will assist in passing new code every three years, creating clean energy jobs, driving economic recovery and improving energy equity. Net zero energy in Denver means that a building is highly energy efficient, all-electric, powered by 100% renewable energy and electricity, and provides demand flexibility to the grid.

#### Project #2.2: Promote Incentives for Fuel Switching from Natural Gas to Electric Appliances

Denver and Xcel Energy will share data and analysis pertaining to the electrification of space and water heating and other appliances. The outcomes of the beneficial electrification programs proposed in the 2021/2022 DSM Plan (20A-0287EG) will be evaluated and used to inform program changes (via 60/90 Day Notice) and to build stakeholder support for electrification objectives in the next DSM Strategic Issues proceeding (anticipated in 2022).

### 2020 Progress Update

#### Progress on Objective #2.1

Denver has been working with Xcel Energy and several other partners toward the release of its Existing Building Strategic Electrification Implementation Plan.

Denver is working concurrently on a Net Zero Energy New Buildings & Homes Implementation Plan.

#### 2020 Project #2.2: Collaborate on Denver’s Existing Building Strategic Electrification Implementation Plan

The Implementation Plan will create a clearly defined, step-by-step plan for how to decarbonize Denver’s existing homes and buildings by reducing heating emissions by 25% in residential buildings and homes, and 50% in commercial buildings by the year 2040, and 100% by 2050.

Xcel Energy provided data to inform the load curve analysis and peak heating needs in Denver and worked with the Implementation Plan team on the analysis to ensure the plan finds the lowest cost path to decarbonization.

#### 2020 Project #2.2: Collaborate to understand incentives for fuel switching from natural gas to electric heat

Denver participated in proceeding 20A-0287EG, the 2021-2022 Demand Side Management Plan. Xcel Energy has requested a variance to allow for fuel switching incentives.

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### 3. Resiliency and Reliability

**Objective #3.1:** Collaborate on opportunities to enhance the resiliency and reliability of critical infrastructure in Denver.

Longer-term and ongoing support activities:

- A. Develop inventory of critical infrastructure and roadmap to enhance resiliency and reliability. Establish a framework to evaluate and prioritize energy resiliency and reliability projects. Create implementation roadmap for highest priority opportunities.
- B. Collaborate to develop new solutions/programs to reduce the frequency and severity of power disruptions to critical infrastructure in Denver (i.e. accelerated undergrounding of electric distribution facilities under the Franchise Agreement, improved coordination on construction projects, annual development of a rolling three-year program to discuss critical needs and system upgrades, and natural disaster preparedness planning that addresses resilient infrastructure), as appropriate.

#### 2021 Implementation Projects

##### Project #3.1: Community Resiliency Initiative Projects

DEN and the National Western Center will work with Xcel Energy to implement the Community Resiliency Initiative energy storage micro-grid projects.

- The Denver International Airport AGTS is the primary means to move passengers between the main terminal and the airport’s three main concourses. Even a short disruption to AGTS’s electrical service can cause delays at one of the busiest airports in our nation — impacting in the process DEN’s ability to continue aircraft operations, provide adequate care and services, and evacuate passengers from areas that pose dangers to health and safety.
- The National Western Center is a multi-building and multi-purpose campus currently under construction in northeast Denver. In addition to hosting regional and national events, the National Western Center is planned to be a hub for emergency management purposes — as its indoor and surrounding outdoor spaces are ideal for a variety of emergency management needs (e.g., food distribution, medical services, sleeping quarters, etc.).

##### Project #3.2. Pursue Grant Funding for Renewable Energy + Storage Microgrids at Critical Facilities

Denver and Xcel Energy will collaborate to research and evaluate potential grant programs to support the deployment of renewable energy + storage microgrid projects at key City facilities, including but not limited to the National Western Center, Colorado Convention Center, and Denver International Airport. Microgrid projects will (1) provide reliable back-up power in the event of a grid outage, enabling the City to continue providing essential service to the community during an emergency, and (2) provide grid benefit during normal operation. The workgroup will review project scopes, develop a grant strategy, and coordinate a multi-agency grant application for the 2021 grant cycle.



#### 2020 Progress Update

##### Progress on Objective #3.1

Denver’s Hazard Mitigation Plan was approved by the Federal Emergency Management Agency (FEMA) on May 2017 and adopted by Denver in Executive Order No. 85B. Denver’s Office of Emergency Management continues to update the City’s programs to provide for Continuity of Government (COG), Continuity of Operations (COOP), Business Continuity, and Critical Infrastructure Protection (CIP).

##### 2020 Project #3: Community Resiliency Initiative Projects

Decision No. R20-0732 approved Xcel Energy’s Community Resiliency Initiative, which consist of seven energy storage micro-grid projects totaling approximately 6 MW and 15 MWh of capacity. Two projects submitted by Denver were selected:

- Denver International Airport Automated Guideway Transit System (2MW/4MWh)
- National Western Center (2MW/4MWh)



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### 4. Municipal Operations

**Objective #4.1:** Implement Denver’s municipal facility strategic energy plan. The group is specifically working on how Denver can achieve its [80x50 Climate Action Plan](#) goal that 100 percent of electricity use at municipal buildings contributes to a carbon-free electric grid by 2025.

Longer-term and ongoing support activities:

- A. The Parties will collaborate on an engineering study and a regulatory and resource plan for Xcel Energy’s steam business (19AL-01231ST).
- B. Support the Resiliency and Reliability working group on relevant initiatives that may include accelerated undergrounding of electric distribution facilities, improved coordination on construction projects, and annual development of a rolling program to discuss critical needs and system upgrades, as appropriate.

#### 2021 Implementation Project

##### Project #4: Decarbonization of Municipal Facilities

Denver and DEN will continue work to implement cost-effective energy conservation measures as part of ongoing energy performance contracts. These opportunities include but are not limited to energy efficiency savings and the deployment of on-site solar generation.

Denver’s municipal facilities are also supporting strategies and contributing to efforts to ensure that 100 percent of electricity use at municipal buildings contributes to a carbon-free electric grid by 2025. This includes supporting the Renewable Denver Initiative (i.e., hosting and subscribing to local community solar gardens) and working with Xcel Energy to leverage municipally hosted distributed energy resources to support demand flexibility and grid management. Denver (excluding DEN) participates in Xcel Energy’s Partners in Energy (“PIE”) program.

#### 2020 Progress Update

##### Progress on Objective #4.1

Denver has been working with Xcel Energy to conduct building walkthroughs in support of the engineering study and resource plan for the steam business. A report is due to the PUC on or before May 1, 2022

Denver released a public dashboard to track progress on its municipal renewable electricity target. As of 2019, Denver was at 18% of its goal of having 256 municipal buildings powered by 100% renewable electricity by 2025.

##### 2020 Project #4: Decarbonization of Municipal Facilities

Denver and DEN completed investment grade energy audits across their respective facility portfolios as part of energy performance contracts. The audits have generated a list of possible energy conservation measures that Denver and DEN are evaluating and considering for investment.

Denver’s municipal facilities and DEN were integral to the advancement of the Renewable Denver Community Solar Initiative, contributing to activities including but not limited to solar developer selection, site evaluation, community programing design, and the application to Xcel Energy’s 2020 Community Solar RFP.



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### 5. Streetlights

**Objective #5.1:** Convert streetlights to LEDs community wide.

Longer-term and ongoing support activities:

- A. Ongoing conversion of streetlights in priority areas as well as exploring a community-wide conversation for Denver.
- B. DEN and Xcel Energy will initiate discussion of DEN-specific streetlight needs.

#### 2021 Implementation Project

##### Project #5: LED Streetlight Conversions

Xcel Energy and Denver will continue to collaborate and work to convert the streetlights to LEDs to the greatest extent possible. The Parties will collaborate and share information with that will improve customer service for both Denver and Xcel Energy by sharing and improving their streetlight inventory databases.

#### 2020 Progress Update

##### Progress on Objective #5.1

By early 2020, approximately 34,000 out of 44,000 streetlights have been converted to LED bulbs.

DEN and Xcel Energy have worked to convert streetlighting along Peña Blvd to LEDs.

##### 2020 Project #5: LED Streetlight Conversions

Xcel Energy and Denver are working to convert the existing high-pressure sodium streetlights to LED Lights saving money, reducing energy usage and avoiding millions of pounds of CO2.

Approximately 10,000 poles with curvilinear lights remain that require LED adapters at a cost of about \$80 per pole. The LED rollout has been put on hold as the City evaluates its budget constraints and determines a pathway to completion.





## 2021 Work Plan – Energy Future Collaboration between the City and County of Denver and Xcel Energy

### 6. Electric Vehicles

**Objective #6.1:** Guide Denver toward a clean, carbon-free transportation system that improves the health and livability of our communities.

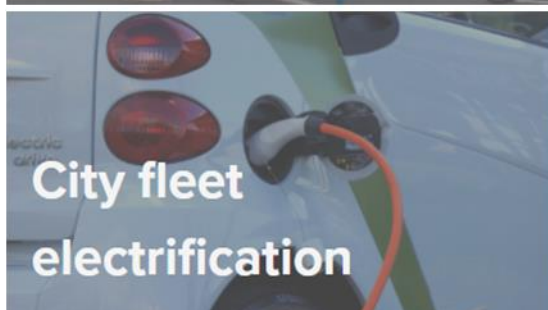
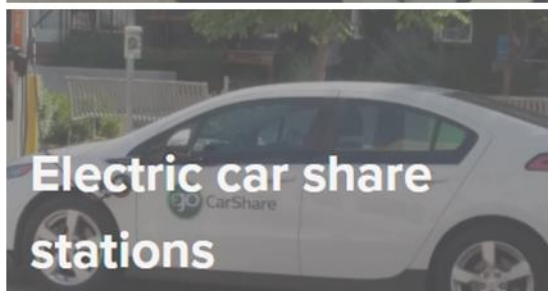
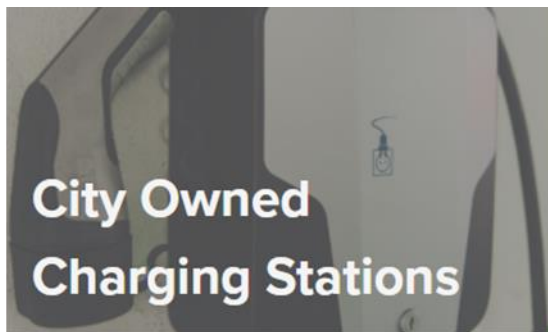
Longer-term and ongoing support activities:

- A. Xcel Energy and Denver will establish areas of mutual alignment regarding EV policy matters, including related to enhancing EV adoption, and work to advance them. This includes but is not limited to DEN’s EV Charging Master Plan and opportunities to leverage SB-077 electric vehicle infrastructure transportation planning.

#### 2021 Implementation Project

##### Project #6: Make Ready Support for City Charging Stations

Xcel Energy and Denver will work together to implement the electrical infrastructure upgrades at City facilities and across Denver to support the installation of electric vehicle charging stations. Focus areas include but are not limited to support for City fleet vehicles, public EV charging stations, community charging hubs, and other publicly available fast charging infrastructure at DEN and other major transportation hubs. Denver and Xcel Energy will continue to support each other and actively participate in the necessary proceedings to obtain approvals from the PUC.



#### 2020 Progress Update

##### Progress on Objective #6.1

Xcel Energy filed its first Transportation Electrification Plan (20A-0204E) to create twenty programs that seek to increase information and awareness regarding EVs, reduce the upfront costs associated with purchasing EVs and reduce the costs of charging infrastructure, and provide incentives for EV charging when it is most beneficial to the grid. Denver is an intervener in the proceeding.

Xcel Energy announced its Electric Vehicle Vision to power 1.5 million EVs across the communities it serves by 2030. Denver signed on as a community supporter.

Denver released its EV Action Plan in April 2020 ([www.denvergov.org/passgas](http://www.denvergov.org/passgas))

Denver’s Building and Fire Code, which took effect on July 31, 2020, includes requirements for EV ready, EV capable, and EV supply equipment installed spaces.

##### 2020 Project #6: Make Ready Support for City Charging Stations

As of December 2020, Denver installed 92 out of a target of 180 charging ports and procured 170 out of a target of 200 electric vehicles in the City’s fleet.

Denver was included as an applicant and beneficiary in Xcel Energy’s Application for EV Make-Ready Infrastructure Projects (19A-0471E):

1. Six sites submitted by Denver were accepted in the “Make Ready Public EV Charging Application”
2. Denver identified sites for City fleet charging requiring up to 200 charging points. Xcel Energy will incur approximately \$1.3 million in capital costs in support of the projects.
3. Major transportation hubs, including DEN, may receive up to \$960 thousand in investment to support infrastructure development that could encourage more electric shared mobility services.

## 2021 Work Plan – Energy Future Collaboration between the City and County of Denver and Xcel Energy

### EXHIBIT A – Energy Future Collaboration Memorandum of Understanding Between the City and County of Denver, Colorado and Xcel Energy

This Memorandum of Understanding (“**Memorandum**”), dated August 3, 2020, outlines various overarching values, goals, and shared principles between the City and County of Denver (“**Denver**”) and Public Service Company of Colorado, a Colorado corporation and an Xcel Energy company (“**Xcel Energy**”). The Memorandum provides a strategy for cooperation and achievement of a shared vision through broad collaboration, focusing on innovation, clean energy, economic development opportunities, customer choice programs and technology (“**Energy Future Collaboration**” or “**EFC Partnership**”). Denver and Xcel Energy are each a “**Party**” and collectively the “**Parties**” to this Memorandum.

#### BACKGROUND

- A. Denver is a Colorado home rule municipality and the State of Colorado’s capital. It is responsible for protecting the public health and safety of its residents.
- B. Denver has various clean energy, economic development, public works and innovation goals and desires, including 100% renewable energy and 80% reduction in greenhouse gas emissions, which have been developed in collaboration with the community.
- C. Xcel Energy is a statewide, integrated public utility energy provider, which is regulated by the Colorado Public Utilities Commission (“**PUC**”). Xcel Energy provides electric, natural gas, steam and chilled water (unregulated) service to Denver and its residents.
- D. For over 100 years, a strong tradition of working together has progressed between Denver and Xcel Energy, resulting in an interwoven history linked to Denver’s growth, development, planning and energy needs and objectives.
- E. Over the past decade, Denver has reduced its greenhouse gas emissions while growing its economy and leading in energy innovation.
- F. Denver and Xcel Energy have many aligned interests at a local, state and federal level and desire to advance those interests in a new way, capitalizing on each entity’s strengths and expertise via partnership.
- G. To do this, Denver and Xcel Energy are creating a holistic, collaborative and mutually beneficial relationship that supports the community.
- H. Denver and Xcel Energy memorialized, in a Memorandum dated February 28, 2018 (“**2018 MOU**”), their shared vision, guiding principles, values and goals regarding the EFC Partnership.
- I. Denver and Xcel Energy desire to update the 2018 MOU to clarify the role of Denver’s Department of Aviation in the EFC Partnership.

#### MUTUAL COLLABORATION

##### Vision

Aspirations and goals, which drive a desired future, represent a person or organization’s vision. Denver and Xcel Energy have their own visions and, as part of the EFC Partnership, we also have identified a shared vision.

- 1.1 *Denver’s Vision:* Denver will be a global leader in clean and local energy that comes from the sun, wind, or other innovative renewable technologies. Denver residents and businesses will have access to reliable and affordable energy that is produced, distributed and consumed in a manner that progresses consistently toward Denver’s goals and desires described above. Denver will consider all applicable costs and benefits when investing taxpayer dollars in any EFC Partnership projects.
- 1.2 *Xcel Energy’s Vision:* Xcel Energy will be the preferred and trusted provider of the energy its customers need. As such, Xcel Energy wants to partner with Denver to support Denver’s energy vision, goals and objectives and also advance its plans that align with those of Denver and Xcel Energy’s customers.
- 1.3 *Shared Vision:* Through the EFC Partnership, Denver and Xcel Energy will work to support and achieve each other’s vision and objectives in areas of mutual alignment, for the benefit of residents, businesses, and the broader community. Denver and Xcel Energy will separately and also collaboratively pursue innovations in technology and consumer communications that accelerate achievement of the visions described above. Both parties acknowledge that Xcel Energy’s ability to implement innovations rapidly may be constrained by regulatory requirements. We will work toward minimizing both external and internal barriers to the rapid implementation of proven innovations.



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### Values

We seek to lead with our values. The standards that define what the community, Denver and Xcel Energy determine are important and desirable are the values. In essence, values help shape the “why” of what we do on a daily basis. Overall, the community has a large impact on determining both Denver’s and Xcel Energy’s values. Below are Denver and Xcel Energy values related to the EFC Partnership.

- 2.1 *City Environment:* Denver must foster and protect a healthy environment for all residents, including access to clean water, clean air, and a stable climate.
- 2.2 *Energy Provider:* Xcel Energy must deliver safe, reliable, and affordable energy that its customers need and expect, including adding cost effective renewable energy to its system.
- 2.3 *Emission Reductions:* Reducing air pollution and greenhouse gas emissions will benefit City residents, visitors, and businesses, through improved public health, additional economic opportunities, and long-term energy price stability.
- 2.4 *Economic Development:* Innovation and technology, as well as investment in clean energy resources, will provide opportunities to boost the local and state economy and support the retention, growth and attraction of businesses.
- 2.5 *Community and Stakeholder Engagement:* Denver and Xcel Energy value community and stakeholder feedback and engagement and will strive to bring these voices into the implementation of the EFC Partnership.
- 2.6 *Thriving Energy Provider:* A healthy and thriving energy provider (*i.e.* Xcel Energy) is conducive to Denver achieving its goals and objectives – ranging from Denver advancing its environmental goals to advancing economic development efforts – as well as to the success of the EFC Partnership.
- 2.7 *Thriving City:* A healthy and thriving community (*i.e.* Denver) is conducive to Xcel Energy achieving its goals and objectives as well as to the success of the EFC Partnership.
- 2.8 *Regional Collaboration:* EFC Partnership solutions should be sought through regional collaboration whenever feasible.

### Guiding Principles

As Denver and Xcel Energy, in conjunction with the community, seek to achieve our shared goals, we will follow certain tenets. These principles will supply the “how” of implementing our shared vision and executing the EFC Partnership.

- 3.1 *Collaboration:* Denver and Xcel Energy will work collaboratively to achieve the shared vision, with respect, transparency and innovative thinking as well as by establishing open and effective channels of communication to further our shared vision.
- 3.2 *Prioritization:* The Parties will make the EFC Partnership and its successful implementation a priority. As part of this, the Parties will prioritize their goals and objectives.
- 3.3 *Scalability:* The EFC Partnership developed between the Parties will be scalable and available to other communities in Colorado.
- 3.4 *Avoidance of Cost Shifts:* Pursuit and execution of the EFC Partnership, including renewable energy and sustainability targets, will be cost effective to City residents given the anticipated costs of the proposal, along with its anticipated benefits and will avoid shifting costs, except to the extent approved, and deemed reasonable, by the PUC.
- 3.5 *Public Policy Support:* Denver and Xcel Energy will collaborate to advance public policy matters at the state and local level where they share common interests.
- 3.6 *Colorado Regulatory Model:* The state regulatory model will be fully utilized to support the EFC Partnership and the Parties support using this model to achieve the shared vision. The Parties also agree that this model supports Xcel Energy being a thriving energy provider.
- 3.7 *Leveraging City Efforts:* The EFC Partnership will support Denver’s efforts that buttress Denver’s goals, such as collaboration on federal and private grants and funding opportunities that align with the partnership efforts.
- 3.8 *Leveraging Xcel Energy Statewide Efforts:* The EFC Partnership will support Xcel Energy’s efforts that buttress Denver goals, such as Xcel Energy’s proposed Colorado Energy Plan, which provides a jump start on Denver achieving its sustainability and environmental objectives in an economic manner.

### Collaboration for Renewable Energy, Advanced Technology and the Economy - Planning, Progress and Execution

- 4.1 *Planning and Deliverables:* The Parties will develop a plan to advance the EFC Partnership, typically on a biennial basis (the “**Work Plan**”). The Work Plan for each time period will detail the deliverables to be presented and will follow the guiding principles outlined in this Memorandum. The Parties will use their best efforts to achieve such deliverables. An overview of the work performed and the results achieved will be prepared by the Parties on an annual basis. In

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prioritizing the items to be performed in a specific Work Plan, the Parties will consider the shared vision as well as regulatory requirements in Colorado and will focus on selecting the top two to three priorities. Initial ideas for Xcel Energy and Denver agencies other than the Department of Aviation to consider for the Work Plan are outlined in Attachment 1 to this Memorandum. Due to the size, scale, and complexity of Denver International Airport (“DEN”), which is operated by Denver’s Department of Aviation, different considerations will apply to DEN-related aspects of the Work Plan. Initial ideas for consideration for DEN are outlined in Attachment 2 to this Memorandum. These ideas are not exhaustive or controlling, but illustrative.

- 4.2 Meetings and Staffing: Denver and Xcel Energy will meet at least quarterly. The Parties will provide staff and resources appropriate to support the work. A working structure within Denver will be established as part of the Work Plan.
- 4.3 PUC: The Parties recognize that future action taken by Xcel Energy to support Denver’s goals and the EFC Partnership may be subject to state regulatory utility requirements under Colorado law. If the Parties agree on certain actions in support of the EFC Partnership that require state regulatory approval, they agree to cooperatively work together to facilitate such regulatory approvals. EFC Partnership program costs and incentives for Denver customers, above and beyond what is then offered by Xcel Energy to all of its customers will be the responsibility of Denver or another party that has accepted responsibility.
- 4.4 Legal Applicability and Waiver: The Parties agree that this Memorandum is to memorialize the intent of the Parties regarding the EFC Partnership, but does not create a legal agreement between the Parties. It is agreed by the Parties that nothing in this Memorandum will be deemed or construed as creating a joint venture, trust, partnership, or any other legal relationship between the Parties. This Memorandum is for the benefit of the Parties and does not create third party rights. Nothing in this Memorandum constitutes a waiver of Denver’s ordinances, Denver’s regulatory jurisdiction or Colorado’s utility regulatory jurisdiction.
- 4.5 No Fiscal Obligation. Xcel Energy understands that this Memorandum is not a funding mechanism, that Denver has not encumbered funds for activities contemplated in this Memorandum, and that Denver cannot and does not create any fiscal obligation by executing this Memorandum.
- 4.6 No Impact on Franchise Agreement: Denver and Xcel Energy are parties to a Franchise Agreement, effective as of January 1, 2007 and adopted as ordinance no. 342 Series of 2006 (“**Franchise Agreement**”). This Memorandum has no impact on, nor does it alter or modify, the Franchise Agreement.
- 4.7 Duration: The EFC Partnership is a new endeavor and therefore the Parties want to provide adequate time to develop the partnership and successfully implement its goals and Work Plans. It is anticipated that the duration will coincide with the term of the Franchise Agreement, but either Party may end the EFC Partnership at any time in the event it elects to do so.

This Memorandum has been signed on the date first above written.

CITY AND COUNTY OF DENVER

By: 

Michael B. Hancock, Mayor

PUBLIC SERVICE COMPANY OF COLORADO, A COLORADO CORPORATION AND AN XCEL ENERGY COMPANY

By:   
Alice K. Jackson, President



## 2021 Work Plan – Energy Future Collaboration between the City and County of Denver and Xcel Energy

### ATTACHMENT 1

- 1. Smart technology:** With emerging cutting-edge technology comes significant opportunities to change the way Denver and Xcel Energy operate. The EFC partnership will pursue opportunities to test, pilot and utilize smart technology to achieve the shared vision. Projects may include multi-use poles and lighting, battery storage, smart grid solutions and the like. The EFC partnership may also explore various options regarding a provider of smart technology appurtenances.
- 2. Energy efficiency:** Lowering energy consumption reduces operating costs for Denver businesses and residents while lowering air pollution and greenhouse gas emissions. Energy efficiency is the lowest cost energy resource and should be utilized across all sectors to achieve the shared vision. For example, LED street lights provide a significant opportunity to reduce energy consumption across Denver while increasing safety, piloting smart technologies, and enhancing resident experiences and the natural environment. Valuing energy efficiency as a long-term resource better ensures that the lowest cost resource is used to help meet emissions reduction requirements and goals.
- 3. Fuel switching-Mobile Sector:** Accelerated electrification of the transportation sector is critical to achieve Denver’s 2050 climate goal. As part of this, an aggressive transition plan toward such a clean, carbon-free transportation system utilizing a largely de-carbonized grid program is essential. Investments by the appropriate parties in electric vehicle ready infrastructure, charging stations, fleet applications and charging depots could be a focus area of the EFC partnership.
- 4. Fuel switching-Stationary Sector:** Electrification of space and water heating, along with waste heat capture, has been identified by Denver as a critical step to achieving Denver’s 2050 climate goal. In line with recommendations to reduce emissions from space and water heating 50% or more by 2050 in Denver, long-term the EFC Partnership could conduct assessments to understand the feasibility, impact, and costs of potential space and water heating electrification opportunities.
- 5. Resilience:** Microgrids, understanding emergency islanding options, district energy and battery storage all help boost resilience, especially for critical infrastructure. Priority projects should be identified and piloted to align emergency preparedness, climate, health, economic and social goals.
- 6. Transparency and data access:** The success of this relationship will depend, in part, on cooperative sharing of information and data in a timely manner. Sharing should be in alignment with EFC partnership activities and be to the full extent permitted by law and data sharing capabilities.
- 7. Reliability and operations:** A priority should be placed on identifying ways to boost reliability. Initial ideas include accelerated undergrounding of electric distribution facilities under the Franchise Agreement, improved coordination on construction projects, annual development of a rolling three-year program to discuss critical needs and system upgrades, and natural disaster preparedness planning that addresses resilient infrastructure, as appropriate.

### ATTACHMENT 2

- 1. Smart technology:** DEN’s size, scale, and complexity make it a valuable pilot site for emerging technologies that support energy efficiency, reliability, and related grid services. DEN is committed to innovation that will improve operations and enhance the passenger experience, and as the leading economic development driver in Colorado can provide high visibility to Xcel Energy’s business partners. The concentration of commercial and industrial customers at DEN provides Xcel the ability to generate data to support rate cases based on innovative technologies, which can benefit ratepayers and customers throughout Colorado.
- 2. Energy efficiency:** DEN is one of the largest energy consumers within Xcel Energy’s Colorado service territory, and working directly with a large and committed consolidated entity like DEN would allow Xcel to make considerable progress towards its emissions reduction, energy efficiency, and resource planning goals. Opportunities include maximizing DEN’s participation in existing and future incentive programs and continued energy support for new construction and major renovation projects.
- 3. Fuel switching – Mobile Sector:** DEN’s status as an employment center and vehicle destination separate from the downtown core creates unique opportunities for partnerships to advance electric vehicle infrastructure. Providing more charging opportunities at a location like DEN will alleviate range anxiety that limits electric vehicle adoption and will support our customers’ transition to low-emissions transportation options.

## 2021 Work Plan – Energy Future Collaboration between the City and County of Denver and Xcel Energy

4. **Fuel switching – Stationary Sector:** DEN’s Central Utility Plant uses natural gas as a fuel source to heat several million square feet of airport facilities. Long-term partnerships to evaluate fuel-switching opportunities as the electric grid continues to decarbonize have the potential to support carbon reduction at a massive scale.
5. **Resilience:** DEN and Xcel Energy have worked together on the development of a microgrid at Peña Station NEXT, and the lessons learned from that project may inform opportunities for additional microgrid applications on the DEN campus. Microgrid evaluation is a key element of DEN’s Energy Master Plan, and the airport would be an ideal location for additional research considering the criticality of DEN operations and infrastructure. Additionally, DEN provides an ideal proving ground for the integration of renewable energy generation and storage technologies to improve the resiliency of the overall grid and address challenges associated with renewable energy intermittency.
6. **Transparency and data access:** Data accuracy, integrity, timeliness, and availability are key elements of an effective energy management program, and support DEN’s participation in the international Airport Carbon Accreditation program. DEN and Xcel Energy will work collaboratively to establish documented protocols to improve the efficiency of routine data requests as allowable under data privacy rules, including requests related to business partners operating out of DEN-owned facilities.
7. **Reliability and operations:** As the fifth-busiest airport in the United States servicing over 64 million passengers each year, secure and reliable energy supplies are an operational necessity for DEN and impact the performance of the entire National Airspace System. DEN and Xcel Energy will proactively share information about our respective capital improvement programs and jointly analyze the costs and benefits of solutions that will improve reliability for critical airport facilities, with a goal of improving DEN’s energy reliability to the maximum achievable level.
8. **DEN Real Estate:** DEN is embarking on the commercial development of thousands of acres of airport-owned land that is not required for future aeronautical use. Many of these projects will require collaboration between DEN and Xcel Energy to achieve ambitious sustainability goals such as net-zero energy. Opportunities for engagement include analyzing the energy infrastructure needs of proposed developments, considering impacts to the DEN grid such as the need for a new electrical substation, sustainable energy infrastructure planning for greenfield and low-infrastructure sites, and investigating custom rate structures and incentive programs to value Distributed Energy Resources in ways that will maximize economic development benefits.



## 2021 Work Plan – Energy Future Collaboration between the City and County of Denver and Xcel Energy

### EXHIBIT B – EFC PARTNERSHIP GOVERNANCE STRUCTURE OVERVIEW

The purpose of the EFC Partnership Governance Structure (“**Structure**”) is to provide a framework and process for how the Parties envision the large and diverse organizations they represent interacting together to successfully identify and implement EFC Partnership projects. The Structure is not a legal or binding governance document for either of the Parties. Specifically, the Structure provides a means of ongoing communication between the Parties and allows for meaningful input to projects, policy, and/or strategies that the Parties may pursue as part of the EFC Partnership. The Structure is a recommendation for implementing the EFC Partnership; however, the process is not intended to be the only means for communication or project coordination and implementation. To the maximum extent possible, the Parties intend to utilize the Structure in pursuit of the projects listed below and other projects that may arise as part of the EFC Partnership.

#### EXECUTIVE GROUP

- Purpose and Membership: The “**Executive Group**” is intended to provide high level guidance, as needed, to the Core Group. The Executive Group is comprised of Denver agency Executive Directors from Public Health and Environment, General Services, and Public Works, a representative from the Mayor’s Office, up to two City Council representatives, DEN executive(s) & Xcel Energy executive(s).
- Scope: As appropriate and related to the EFC Partnership, the Executive Group may provide additional guidance and consent to pursue projects or review policies that require a formal process (e.g., PUC actions, legislative support) via their own internal approval processes. The Parties intend to use their normal internal channels for matters that don’t require full Executive Group discussion. The intent is not to restrict any Party, collectively or independently, from pursuing action without Executive Group consent; rather, the Core Group will use the Executive Group to better ensure communication is consistent through each Parties’ hierarchy. As needed, and when applicable, policy or PUC involvement may require more timely action on the part of either Party. In lieu of a formal meeting, the Executive Group may simply acknowledge and consent to the needed action.

#### CORE TEAM

- Purpose and Membership: The “**Core Team**” consists of Denver, DEN and Xcel Energy staff serving as the main points of contact among the Parties related to the EFC Partnership. The Core Team consists of representatives from Denver’s Department of Public Health and Environment, Public Works, General Services, DEN, City Attorney’s Office, Office of Economic Development and others as determined by the Core Team. For Xcel Energy, the Core Team will include the Denver Area Manager, any head of EFC Partnership efforts as well as other staff as deemed appropriate by Xcel Energy given the scope of the EFC Partnership.
- Scope: The Core Team will meet regularly with a prepared agenda and recording of prior meeting minutes or summaries. These meetings may include reports from various Technical Teams (defined below) and/or updates may be provided from previous reports to Core Team members. The Parties intend that the Core Team also do the following:
  - Support the Technical Teams (e.g., related to resources and tools, etc.).
  - Prepare materials to update the Executive Group, as needed.
  - The Core Team will regularly provide updates and communicate efforts about the projects listed in the Work Plan in the following function areas: (1) ongoing knowledge and baseline sharing and (2) updates on any ongoing pilot projects.

#### TECHNICAL TEAMS

- Purpose and Membership: The “**Technical Team(s)**” consist of project team members within a specific project or effort, including the staff members of the Parties that have applicable subject matter expertise. These Teams will meet according to EFC Partnership project needs.
- Scope: The Technical Teams will be focused on the Work Plan priority projects and will report to the Core Team, as needed.
  - **Ongoing Pilot Project Identification:** With emerging cutting-edge technology comes significant opportunities to change the way Denver and Xcel Energy operate. The EFC Partnership will identify opportunities to test, pilot, and utilize smart technology to achieve the shared vision. The Parties will seek to identify pilots related to resiliency as well. As part of this process, they will also consider related implementation processes and steps. In addition, the Parties will explore ways that projects can also further education, and possibly leverage existing low-income assistance programs.



**DENVER**  
THE MILE HIGH CITY



[denvergov.org/climate](http://denvergov.org/climate) | [xcelenergy.com](http://xcelenergy.com)