



Request for City Council Committee Action from the Department of City Coordinator

Date: September 9, 2013

To: Honorable Elizabeth Glidden, Chair, Regulatory, Energy & Environment Committee

Subject: Energy Pathways Study Deliverable: Energy Vision

Recommendations:
Receive and File.

Previous Directives:

- October 5, 2012: the City Council approved the formation of a utility franchise working group to assist the city in preparing for negotiations regarding its electric and natural gas franchise agreements with public utility companies. The working group includes representation from city staff, the City Council and the Mayor's Office.
- April 12, 2013: the City Council approved the development of an Energy Systems Pathways Study at a cost not to exceed \$250,000 and to be completed by February 2014.
- June 14, 2013: the City Council directed the City Coordinator to enter into agreement with the Center for Energy and Environment for Energy System Pathways Study at a cost not to exceed \$250,000.

Department Information

Prepared by: Gayle Frest, Sustainability Director
Approved by: Paul Aasen, City Coordinator
Presenters in Committee: Paul Aasen, Mike Bull (CEE), Brian Ross (CR Planning)

Financial Impact: none

Supporting Information:

The City of Minneapolis currently has utility franchise agreements with Xcel Energy for electricity and CenterPoint Energy for natural gas. These agreements, which were signed in the early 1990s, both expire at the end of 2014. The City is preparing for negotiations to establish new agreements.

In June 2013 the City Council approved a contract with Center for Energy and Environment (CEE) for a Future Energy Systems Pathways Study that is to be completed by February 2014. The study will explore options to achieve its energy goals outside the existing franchise agreement structure, including, but not limited to changes to state legislative or State Public Utility Commission rule changes, unique utility partnerships, changes to the way the City uses franchise fees, and municipalization of one or both energy utilities.

One of the major deliverables is developing a draft Energy Vision based on input from the Community Environmental Advisory Commission and others to develop the goals. These goals will help shape the study of alternative options that will be presented by February 2014.

While the City has many adopted goals and targets that relate to the energy system, there is currently not one set of goals that detail what the City desires from a future energy system.

The CEE team first did a literature review on many of the City's adopted plans including the Climate Action Plan, Comprehensive Plan and Sustainability Indicators to understand all existing energy related goals. They also met with the Community Environmental Advisory Commission (CEAC) in July to collect feedback on a draft of the Energy Vision. The consultant team also conducted interviews with other stakeholders who were not represented at CEAC such as low-income advocates, business community representatives, neighborhood organizations and labor groups. Using feedback gathered from CEAC, the interviews, and city staff, the consultant team developed a final Energy Vision.

The Energy Vision outlines a desired future condition for the city's energy system in 2040. The Vision identifies desired characteristics for reliability, affordability, environmental performance, social equity, and use of local resources. A completed Vision is necessary for the consultant team to complete work on the "pathways", which will identify potential strategies and approaches to achieve the City's goals.

Attached are the Energy Vision Statement, Narrative and Conditions.

Next steps:

- By November 2013, update the Regulatory, Energy & Environment Committee on the status of the project and identify potential legal and statutory issues for possible inclusion in City's 2014 legislative agenda.
- By February 2014, deliver to the Regulatory, Energy & Environment Committee a report and presentation addressing the current legal landscape, existing models and examples, municipalization review, and alternative pathways to meet the City's Energy Vision.

City of Minneapolis

Energy Vision 2014

This Energy Vision identifies Minneapolis' long-term energy goals that guide the Minneapolis Energy Systems Pathways Study, authorized by the City Council on April 12, 2013. The Energy Vision was developed after a thorough inventory of existing City policies, actions, and programs, then enhanced and clarified through stakeholder discussions. It is an aspirational document, intended to bring City residents and businesses together around a common set of goals, serve as a foundational document for the Pathways work to follow and may guide future decision-making about Minneapolis' energy system.

I. Vision Statement

In 2040, Minneapolis's energy system will provide reliable, affordable, local and clean energy services for Minneapolis homes, businesses, and institutions: sustaining the city's economy and environment and contributing to a more socially just community.

II. Vision Narrative

The vision narrative is an example of how the City's energy system could look in 2040, assuming successful implementation of all elements. The narrative helps define the city's desired future, and along with the vision statement and elements, is a guide for making implementation decisions.

A. Reliable and Affordable Energy Services

All city residents and businesses are supplied with reliable, affordable, and high quality electric and natural gas service. Through a combination of highly efficient end-use of energy and efficient energy delivery and generation, Minneapolis is a national leader in low cost and high quality energy services. Disparities in the relative cost of energy services for low-income households are aggressively mitigated. Rates are

competitive, so that existing businesses in the city thrive and new business activity is attracted to the city.

An efficient and "smart" grid infrastructure seamlessly integrates distributed generation, energy storage, electric vehicles and other distributed energy resources. Smart infrastructure ensures high levels of reliability, promotes energy efficiency, and enables high levels of local interaction and coordination while protecting customer

privacy. High power quality helps make Minneapolis a competitive location for power-sensitive industries.

B. Clean Energy

The total carbon emissions and other waste products from the energy supply that serves the city have substantially declined. Electricity supply is almost carbon emission free in 2040. Heating and cooling services come from a variety of clean and efficient energy sources. Improvements in energy efficiency mean that many buildings can often generate all needed energy on-site.

C. Essential Energy Services for All

The energy infrastructure serving the city affordably meets the basic needs of residents, such as adequate heating, cooling and lighting. Race, ethnicity, income, and age are no longer indicators for who bears pollution impacts or receives economic or environmental benefits.

D. Local Resources

Local renewable energy resources (including solar, biomass, hydro and wind) are increasingly used within the city. Solar contractors are thriving, and the city is home to a number of businesses that provide equipment or services within the energy efficiency and renewable energy supply chain. Academic and business interests choose to locate in Minneapolis because it is seen as a leader in advanced energy infrastructure.

Efficient community scale heating and cooling systems are integrated into many high density developments across the

city. Combined heat and power facilities provide efficient energy in district energy and industrial applications in many areas of the city.

E. Market Integration of Efficiency

Energy use and efficiency data is seamlessly available to building owners/managers, neighborhoods, city government and customers. Businesses and residents consider energy information in economic decisions from making additional energy efficiency investments, making purchasing decisions, or renting or buying property. Residents and businesses have simple and affordable tools to finance energy efficiency and renewable energy improvements. Buildings are constructed with energy efficiency as a primary objective, and new homes and businesses regularly achieve net-zero energy status. Residents and business can participate in community renewable energy projects.

F. Collaborative Progress

The resource planning and investment decisions of the energy utilities that serve the city reflect and support the city's climate action, economic development, and social equity goals. Utility managers and city administrators seamlessly and routinely collaborate to meet those goals. Improvements to or maintenance of energy infrastructure in city rights of way (ROW) are coordinated with other ROW improvements. The city's development and redevelopment plans incorporate protection and development of local energy sources. City infrastructure is a model of energy efficiency and uses largely renewable energy.

III. Elements of the Energy Vision

Minneapolis' energy vision identifies the desired state of the Minneapolis energy system, where the goals of the city and its energy providers are aligned. The vision addresses how energy is supplied, delivered, and used in Minneapolis. Moreover, the energy vision addresses how energy services affect: the climate and other components of the natural environment; the health, social equity and economic opportunity of residents; and, the creation of economic value and Minneapolis' competitiveness as a place to do business. The following are elements of a fully realized energy vision:

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.
- 5. Support current residents and businesses** - Energy system improvements are planned and structured in a manner that provides benefits to residents and businesses in the city at the time of the improvement, and current residents are safeguarded against displacement as a result of those improvements.

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.
4. **Minimizes conflicts** – The distribution system is increasingly underground, location and design of substations and distributed generation reduces nuisances, and natural systems (air, green space, water) are protected.
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 on-site energy storage to achieve net-zero energy use.
4. **Delivers equity in rate structures** – Rate structures for end users set appropriate price signals, maintain competitive rates, recognize residential customers' ability to pay, and minimize cross subsidies.
5. **Transparency** –Energy users can conveniently access their own energy consumption data, while ensuring consumer privacy.