Minneapolis Energy Systems Pathways

A Framework for Local Energy Action

Mike Bull and Jennifer Edwards
Minnesota Public Utilities Commission
April 29, 2014
Energy Systems Pathways Study

Energy Vision
- Inventory of City Policies
- Climate Action Plan
- Stakeholder Input

Pathways
- Enhanced Franchise
- Partnerships
- CCA
- Municipal Utility

Programs & Strategies
- Evaluated based on Energy Vision
- Metrics: Cost, Equity, CO2, etc
Pathways Study Consultant Team

**Regulatory and Technical Evaluation:** Center for Energy and Environment
- Sheldon Strom – President/Founder
- Mike Bull – Policy Director
- Jennifer Edwards – Program Manager
- Carl Nelson – Manager of Residential Programs
- Megan Hoye – Engagement Coordinator
- Clark Koenig – Analyst

**Legal Analysis:** McGrann, Shea, Carnival, Straughn & Lamb
- Joseph Bagnoli
- Kaela Brennan

**Energy Vision:** CR Planning
- Brian Ross

**Financial Assessment of Municipalization:** Campbell Consulting
- Ken Campbell
City has set aggressive goals for climate and clean energy

Franchise agreements with Xcel Energy and CenterPoint expiring in 2014

The utility business model is evolving, to be more responsive to customers, communities and to better align with public purposes

Controversial energy issues unlikely to pass in 2014

Sustained City engagement at the Minnesota Public Utilities Commission critical regardless of the Pathway selected
Status Quo

• Status Quo: Very little coordinated action or planning on energy issues between City and Utilities
  • Franchise agreement limited to issues related to use of public rights of way for utility infrastructure, traditionally every 20 years

• Status Quo will not allow the City to meet its climate and clean energy goals:
  • 15% increase in energy efficiency in residential buildings from the growth baseline by 2025
    • Also, have 75% of homeowners & rental property owners participate in whole-building retrofit programs by 2025
  • 20% increase in energy efficiency in commercial and industrial buildings from the growth baseline by 2025
  • Increase electricity from local and directly purchased renewables to 10% of the total consumed by 2025
  • 1.5% annual reduction in greenhouse gas emissions from City facilities
## Pathways Evaluation

<table>
<thead>
<tr>
<th>Pathway</th>
<th>Description</th>
<th>Notes</th>
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<tbody>
<tr>
<td><strong>1. Enhanced Franchise Agreement</strong></td>
<td>• Broader franchise agreement than traditional (Needs legislative authorization) <strong>Or</strong></td>
<td>• City can engage on a broader set of issues beyond those involving public rights of way</td>
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<td></td>
<td>• Traditional franchise agreement with separate agreement on clean energy issues (Does not need legislation)</td>
<td>• However, engagement on these issues would be still limited to negotiation of an agreement once every so many years, rather than on-going</td>
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<tr>
<td><strong>2. City-Utility Partnerships</strong></td>
<td>• Establish a formal, on-going partnership between the City and the utilities, requiring significant collaboration on energy services within the City</td>
<td>• “Formal, on-going” to ensure the effort is sustained over time</td>
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<td>• “Partnership” to reflect City and utilities have to act as willing partners toward meeting shared goals</td>
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</table>
| 3. Community Choice Aggregation              | - Developed in states that have deregulated their electric industries  
- CCA allows municipalities to choose electric suppliers on behalf of City residents/business  
- Leaves all other aspects of energy services to the incumbent utility | - City would take over a major portion of energy services in the City, that of arranging for power supply  
- CCA is creature of electricity deregulation which Minnesota has long ago rejected  
- Significant evaluation required to determine whether, how CCA could be implemented here                                                                                                                                 |
| 4. Formation of a Municipal Utility          | - City acquires utility infrastructure, and takes over all aspects of energy services in the City.                                                                                                                                                                                                                                          | - Would give City greatest amount of control over energy services  
- Process of acquiring utility infrastructure, and establishing a new municipal utility would be long, contentious, expensive, risky                                                                                                                                              |
Pathways: Recommendations

Near Term: Dual Strategy, blending Pathways 1 and 2

**Franchise Agreements**
- Focused on use of public rights of way
- Shorter term, with possible renewal
- Broadened to include targeted related issues such as reliability reporting, infrastructure investment

**Clean Energy Agreements**
- City agrees not to municipalize during term of the agreement, in exchange for utility commitments in meeting City energy goals
- Use agreement to form City-utility Clean Energy Coordinating Partnership to jointly plan and prioritize clean energy activities in the City

Negotiated and Signed Together!
Clean Energy Coordinating Partnership

- Municipality
  - City
  - Regulatory and Relationship Assets

- Energy Utility
  - Utility Expertise and Programs

Clean Energy Coordinating Partnership
Planning and Coordination of Clean Energy Activities
“First in the Nation” Partnership would:

• Increase the amount of renewable energy and energy efficiency in the City
• Not increase energy costs to ratepayers in Minneapolis or elsewhere
  • Partnership would operate within the current regulatory framework
  • Assist utilities meet their state EE/RE requirements, not impose additional requirements
• Allow opportunities for innovation
• Stand as an example for other cities
## Pathways: Recommendations

### Longer Term: CCA and Municipalization

<table>
<thead>
<tr>
<th>Pathway 3</th>
<th>Pathway 4</th>
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<tbody>
<tr>
<td><strong>Community Choice Aggregation</strong></td>
<td><strong>Municipalization</strong></td>
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<tr>
<td>• Support legislation for state evaluation of CCA</td>
<td></td>
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<tr>
<td>o Rate impacts, supply mix, local resource development, etc. in other states</td>
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<tr>
<td>o Barriers to implementation in fully regulated state like Minnesota</td>
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<td>o Provide recommendations</td>
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<td></td>
<td>• Continue to support legislation to strike lost revenues from current utility compensation law regarding municipal acquisition of utility infrastructure</td>
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<td>• If continued interest in forming a municipal utility, seek robust feasibility study to build on Pathways financial assessment</td>
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Minneapolis Carbon Targets

Source: Minneapolis Climate Action Plan
City-Utility Program Opportunities

City Assets
- Energy Upgrade Requirements
- Disclosure and Information Requirements
- Existing Outreach Networks
- Skilled Residents and Businesses

Utility Assets
- Technical Resources
- Existing Program Channels
- Energy Data
- State Policy Incentives
- Funding
Minneapolis 2012 Electricity Usage

Total Use = 4,500 GWh
Minneapolis 2011 & 2012 Natural Gas Use

2011 Total Use = 324 million therms

2012 Total Use = 363 million therms

Source: CenterPoint Energy
Commercial Programs and Strategies

- Large Commercial Buildings
- Public Building Energy Partnership
- Streetlights
- Small Business Efficiency Programs
Residential Programs and Strategies

- Rental Energy Efficiency Program
- Green Zones Neighborhood Pilot
- Neighborhood-Focused Program Delivery Strategies
- Home Energy Certificate Program
Renewable Energy Programs

- Local Solar Development
- Expanded Green Tariff
- Expand Combined Heat and Power Opportunities
- Innovative Energy Supply Arrangements

Credit: Minnesota Solar Challenge via cc
Estimated Carbon Reductions in 2025

The graph illustrates the estimated carbon reductions in 2025 across various programs. The metrics are measured in metric tons of CO2e per year. The programs are categorized into commercial, residential, and renewables and CHP. The bars indicate the anticipated reductions for each program, with commercial programs showing the highest reductions. The note at the bottom of the graph states that program savings may be lower because of additional start-up time.
Program Contribution to Minneapolis’ 2025 Carbon Goal
Planning at the “Distribution Edge”

- Beyond 2025, significant clean energy innovation will happen at the distribution level.
- Local governments can help coordinate and plan for these larger transformations.
Examples of Local Distribution Opportunities

• Major additions of clean distributed generation
• The emergence of “intelligence” in the distribution system
• Electrification of the transportation system
• Utility business model that supports customer choice and locally tailored resources
California Assembly Bill 327

California’s AB 327 requires that utilities:

1. Submit plans to the California Public Utilities Commission that identify optimal locations for the deployment of distributed resources, defined broadly

2. Propose policies and programs to achieve this deployment

3. Include any necessary distribution grid spending to accomplish their plans in their next general rate case

THANK you!

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# Pathways: Cost of Municipal Utility

<table>
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<tr>
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<th>Low Cost ($/kWh)</th>
<th>Mid Cost ($/kWh)</th>
<th>High Cost ($/kWh)</th>
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<tbody>
<tr>
<td>Municipal utility total revenue requirement</td>
<td>0.104</td>
<td>0.141</td>
<td>0.196</td>
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<tr>
<td>Less franchise fees</td>
<td>(0.004)</td>
<td>(0.004)</td>
<td>(0.004)</td>
</tr>
<tr>
<td>Less debt service on compensation to Xcel Energy for revenue loss and re-integration</td>
<td>(0.006)</td>
<td>(0.024)</td>
<td>(0.051)</td>
</tr>
<tr>
<td>Adjusted muni. utility revenue requirement</td>
<td>0.094</td>
<td>0.113</td>
<td>0.141</td>
</tr>
<tr>
<td>Xcel Energy's overall weighted-average retail electric rate</td>
<td>0.092</td>
<td>0.092</td>
<td>0.092</td>
</tr>
<tr>
<td>Difference between adjusted municipal utility revenue requirement and Xcel Energy's average rate</td>
<td>0.002</td>
<td>0.021</td>
<td>0.049</td>
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Traditional Franchise Agreement Topics

- Right and privilege to operate and maintain utility within city limits
- Right to occupy and use the public ways and public grounds within city limits
- Franchise Fee
- Right of Way Placement / Field Locations
- Right of Way Management
- Undergrounding of certain facilities
- Reports/records
- Relocation of certain facilities
- Abandoned Infrastructure
- Vacation of public ways
- Tree-trimming
- Street Lights
- Erosion Control Management
- Restoration
- Permits
- Graffiti
- Customer Service
- Project Management
- Contractor Management

Potential Franchise Agreement Topics

- Distribution Infrastructure Projects (planning & investment)
- Community Engagement
- Outage Reporting