

COMMUNITY GUIDE / 2013
FULL VERSION

CLEAN
RELIABLE
LOW-COST
LOCAL
ENERGY

WHAT'S POSSIBLE?

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City of Boulder

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Dear Community Member,

On Nov. 5, Boulder voters will be asked—once again—if they support moving forward with the creation of a local electric utility. This process, called municipalization, would require the city to purchase parts of the system that Xcel Energy currently owns to provide electricity to businesses and residents in the city, as well as a small percentage of customers in unincorporated Boulder County.

As a result of unprecedented analysis, we have learned that Boulder is in a unique position to increase renewable sources of energy and lower greenhouse gas emissions by significant amounts while also providing comparable or better rates and reliability than those offered by our current provider, Xcel Energy. The analysis also shows a very positive track record that other municipal utilities have in giving their customers a say in decisions that affect them.

Some members of our community have expressed concern that creating a local electric utility would subject the city to unnecessary risk; they are worried about unforeseen costs, reliability, and Boulder's ability to operate the necessary systems.

Whether you are in support or skeptical of a local electric utility, we're eager to share what we've learned through our vetted analysis, so you have a clear picture of our community's energy options. We invite you to find out more, become involved, and share your views with us.

Sincerely,
Heather Bailey, executive director
Energy Strategy and Electric Utility Development

A Little History and Context

Why did Boulder begin exploring municipalization in the first place?

Boulder has one of the most carbon-intensive energy supplies in the country.

In 2002, Boulder became one of the first cities in the nation to pass a resolution in support of the Kyoto Protocol, establishing the goal of reducing greenhouse gas emissions to 7% below 1990 levels by 2012.

Our community has worked hard to get there. In 2006, Boulder voters approved the Climate Action Plan Tax, the nation's first "carbon tax." We have created innovative, nationally acclaimed programs that help our community reduce energy use and greenhouse gas emissions—programs like Energy Smart, curbside composting, and expansion of our bike trail system.

But, as 2012 approached, it became clear that we were not going to meet our Kyoto goal just by changing the way we use our power, even though most of the programs have been very effective.

We realized we had to shift our dependency away from carbon-intensive coal and change the source of our power in order to meet our carbon goals.

Through the approval of ballot measures 2B/2C in 2011, voters directed the city to explore different options that could deliver clean, reliable, local energy to our community in a cost-effective manner.

Over the past two years, teams of city staff, consultants, and community stakeholder working groups undertook a rigorous and detailed analysis of the challenges and opportunities of creating a local power utility as a path to achieving our community energy goals.

Why can't we just work with Xcel?

The city has been and remains open to a new form of partnership with Xcel Energy, either in addition to or instead of municipalization. Twelve Boulder citizens—from business, university, federal labs, energy and non-profit sectors—were selected by the city and Xcel to participate in a taskforce to explore these options. (A list of the members and the group's complete report are available at BoulderEnergyFuture.com).

However, it became clear during the discussions that the ideas that taskforce members were proposing were not acceptable to Xcel Energy. Xcel would prefer to meet with customers on a more regional level and work on developing products and services that communities interested in green energy could purchase. As a result of these differing viewpoints, the group suggested that it would be more effective for Xcel to present a proposal for consideration by the Boulder public and City Council, which it did in July.

Unfortunately, due to time constraints, there was insufficient time to fully discuss or analyze the Xcel proposal prior to the publication of this guide. At a meeting on July 31, the taskforce agreed to continue its work, to advise the city and Xcel regarding these and additional proposals, and to act as a sounding board on behalf of the community. Staff suggested performing quantitative and qualitative analyses of the Xcel options, as similar as possible to those conducted for municipalization, to determine how much emissions could be reduced and the associated costs of the proposal.

As a result, City Council has directed this work to continue on a parallel track even as the city prepares to enter into negotiations with Xcel Energy about the possible acquisition of necessary assets to form a local utility.

But isn't Xcel increasing its renewables, especially wind?

As an investor-owned utility that is regulated at the state level, Xcel Energy must comply with a state-required mandate to increase renewables to 30% of its supply by 2020. But, because of an in-state multiplier that allows Xcel to count more for using renewable energy generated in Colorado, their supply will actually contain closer to 24% renewables.

Xcel has been making steady progress toward this goal, especially in recent years, because of favorable market conditions. Based on projections, the company expects to meet its renewable energy commitment early. And, Xcel has reduced its total emissions by 20% from 2005 to 2012, mostly through purchasing gas and wind power.

However, these measures have limited impacts. Large, coal-fired generators do not adjust easily to variable renewable energy. Without significant changes in how Xcel dispatches power, it is more likely that wind power will be curtailed (i.e., shut down) than it is that coal power will be reduced below a certain point.

On the Ballot

Last time we voted ...

Measures 2B/2C, approved by voters on the 2011 ballot, included several conditions that must be met before moving forward with creating a local electric utility. The requirements are:

- Rates must be equal or less than those offered by Xcel Energy at the time of acquisition.
- The utility must have sufficient revenue to cover operating costs and debt, plus carry a reserve of 25% of the debt amount, referred to as “Debt Service Coverage Ratio.”
- Reliability must remain comparable to that being offered by Xcel Energy.
- There must be a plan to increase renewables.
- There must be a plan to decrease greenhouse gas emissions.

The analyses conducted to date and reviewed by an independent third-party reviewer have demonstrated that these requirements can be met given currently available information.

This November, you will be asked to vote again.

A group petitioned to place a ballot item on this year’s ballot in opposition to the authority that was granted in the 2011 vote. As a result, voters will see TWO ballot measures related to creating a local energy utility on the ballot this November.

One measure was created in support of a local utility. It provides the city flexibility in moving forward with the initial voter-approved path toward exploring the creation of a local electric utility, while also recognizing concerns about unforeseen costs and customer representation. It specifically:

- Sets a debt limit of \$214 million for acquisition of Xcel’s assets, but does not limit the issuance of other debt, as long as previous charter requirements can be met *Subject to council’s final determination on August 20. Check BoulderEnergyFuture.com for updates.*

- Allows potential out-of-city customers to serve on the advisory board of a potential local electric utility
- Facilitates utility choice on a neighborhood by neighborhood basis to those potential out-of-city customers
- Sets standards, including explicit language that prohibits differences in rates, for how the city would serve out-of-city customers
- Limits brokerage fees associated with acquiring debt to industry standards

The other measure is an initiative by petition that limits the city’s ability to carry out the previously approved vote by requiring additional approval by all utility customers before the issuance of any debt, regardless of whether charter conditions are met. It specifically:

- Requires future voter approval of any debt prior to issuance
- Limits such votes to November of odd-numbered years, in effect delaying all debt issuance until after November 2015
- Limits the ability of the city to serve out-of-city customers unless they vote in any city election related to utility debt (but does not set up a legal procedure to allow this)
- Limits brokerage fees on issuing any debt to 1% of proceeds

The City’s Analysis of Municipalization

The city staff team, with the help of legal, technical, and engineering experts, stakeholders and over 100 community volunteers have been conducting an unprecedented analysis to better understand the benefits and challenges of creating a local electric utility. Here’s a summary of what we’ve learned:

- A local utility, free from state utility regulations and shareholder pressures, would be able to meet voter-approved requirements of increasing renewables and decreasing greenhouse gas emissions by significant amounts, while maintaining reliability and rates. A local utility, in fact, would have a strong probability of lowering rates, on average, for a period of 20 years.

- A local power utility would offer at least comparable reliability to what is offered by Xcel Energy, and the community could choose to use revenues from the utility to make service dependability even better.
- Because a local utility would not have pre-existing investments in coal, it would be more agile in responding to favorable market conditions and technology that support the use of cleaner energy sources.
- While the city would issue debt to pay for the acquisition and start up of a local electric utility, repayment of this debt would be included in rates. Xcel uses this exact same system to pay off debts it has incurred over the years, so customers are already feeling the impact of making these payments.
- The city has identified possible risks and developed a variety of strategies for eliminating or mitigating them.
- For reliability purposes, and due to the current system's configuration, acquisition of Xcel's system would require acquisition of facilities that currently serve approximately 5,800 non-city residents and some businesses.

Possible benefits of a local utility:

- A local electric utility based on Boulder values would be uniquely positioned to increase renewable sources of energy and decrease harmful greenhouse gas emissions, with progress starting on the first day of operation.
- Revenue collected from customers would stay within the community, supporting local businesses, and Boulder residents and businesses would have much more direct say in how and where their energy dollars are invested.
- A local utility would stimulate Boulder's economy by providing partnership opportunities and enhancing Boulder's reputation as a hub for clean energy innovation.

Possible concerns associated with a local utility:

- Some costs related to acquisition and start up are still unknown and could come in higher than the city has projected. This might result in higher costs for customers.
- The process to determine these costs is likely to include lengthy and expensive court disputes, utilizing financial resources that might be used in other ways.

- The benefits to municipalization could be outweighed by risks, as well as by potential negative impacts on business customers, in particular. High debt amounts could limit the local utility's ability to innovate and acquire clean energy while still meeting financial requirements in the charter.

Detailed information on this analysis is available at BoulderEnergyFuture.com.

Can We Do It?

Is it possible to form a local electric utility?

Yes. When voters agreed to proceed with the exploration of municipalization in 2011, they set several conditions (described previously in the section *On the Ballot*) that must be met before council could issue bonds. The city staff team began to conduct a quantitative analysis building on research and analysis performed in 2011.

Can a local electric utility meet voter requirements?

Based on the modeling the city has done so far, there are a variety of conditions under which the local electric utility is likely to meet—and exceed—voter requirements. This is especially true of the renewables and emissions goals. Renewables could make up about 50% of the community's supply on Day 1 of a local electric utility, and emissions could be cut in half.

What kind of modeling did the city do, and why is modeling a valuable step in analyzing the possible creation of a local electric utility?

Models help lay out assumptions and predict results. The city's modeling looked at possible future outcomes for Xcel Energy and for a local electric utility. The city used different models to address several key questions:

- What resources would be needed to meet Boulder's demands over 20 years?
- How much would an electric utility cost to run?
- What is the likelihood that resource prices and market conditions could change due to a variety of factors?

The city's modeling was reviewed by industry experts, including an independent third-party reviewer, and the model, its assumptions, and the results were determined to be sound.

How were the models measured?

The City Charter specified that a local electric utility’s performance needed to be measured against Xcel Energy’s. So, it was important for the city to determine what the future might look like for Xcel. This was a challenge, as the company doesn’t generally share many of its projections. But the staff team did have access to data from Xcel’s publicly available filings at the Colorado Public Utilities Commission (PUC), the Federal Energy Regulatory Commission (FERC), and the Securities & Exchange Commission (SEC). In instances where the data was incomplete or unavailable, the city’s consultants used historic trends to inform their analysis.

This “Xcel Baseline” forecasted the revenues Xcel would need to collect from now until 2037 to cover power generation, transmission, customer service, operations and maintenance, capital investment, taxes, depreciation, profit and other operational requirements. A share of that amount was attributed to Boulder based on the community’s share of Xcel’s overall revenues. That cost was compared to the cost required to run a local electric utility that would serve the same customers.

What risks do the models analyze?

Broadly, the modeling results show whether, if market conditions are very favorable or very unfavorable, the local utility is able to meet the charter requirements. Because there are a variety of conditions under which the charter requirements can be met, staff recommended to council that the city continue to move forward with the exploration of municipalization. The next steps would provide more certainty about areas that have been modeled as uncertain, such as resource prices and eventually debt levels.

How accurate can a model be?

While useful, no cost model is proof positive that a potential utility’s plans would be financially feasible. All cost models include estimates; however, the city’s Energy Future team used conservative estimates to ensure this model is as reliable as possible. The team then confirmed these estimates with working groups and numerous utility experts. By law, Xcel Energy is not required to provide detailed data regarding purchase of its system and other related expenses until legal proceedings are underway.

Is the modeling complete?

Modeling is never 100% done, but the city believes it has modeled as much as is possible until Xcel provides more detailed information.

Should We Do It?

In addition to evaluating whether the city could create a local electric utility, given the requirements of the charter, the Energy Future team also committed to answering another question: Should we create one? A qualitative analysis was performed to identify potential added value of a local utility, as well as benefits associated with remaining with Xcel Energy.

One of the concepts that guided this analysis was the desire to develop what we call “the Electric Utility of the Future.” This is a utility that is developed to support the community’s goals of clean, reliable, cost-effective energy and increasing levels of efficiency. In other words, a utility that is less focused on selling electricity and more focused on meeting customers’ energy needs.

Whether run by the city or by Xcel Energy, this utility would be:

- Flexible, customer-service oriented, and able to provide customized energy solutions
- Adaptable to new information and new expectations without unsustainable investments in nonrenewable resources or inefficient regulatory practices
- Able to provide high reliability to reduce customers’ costs
- Committed to securing increasingly clean power, while offering customers enhanced opportunities to manage their energy and save money
- Agile and competitive, while promoting local innovation and engaging local industry and institutional leaders in partnerships that will further enhance service
- Offer a new business model that provides energy as a service and is able to adjust to a decreasing demand, rather than relying on increasing electricity sales and building more generation plants as the path to profitability

How was this analysis conducted?

The analysis was divided into two distinct components:

1. An assessment of benefits and concerns associated with two distinct paths: remaining with the status quo or creating a local electric utility. This assessment compared the options against the community’s energy goals and identified risks associated with each.

2. A review of “Utility of the Future” practices. This review examined progressive electric utility technologies and practices already in use in parts of the US and the world that could advance the city’s energy future goals.

What conclusions can be drawn from the modeling and analysis?

A number of key conclusions became clear through the modeling and analysis.

Potential benefits and concerns associated with staying with Xcel Energy, without a new form of relationship:

Potential Benefits:

- The large scale of Xcel’s assets, financial resources, industry knowledge, and service area benefits from economies of scale.
- Xcel has an established organizational and management structure.
- Xcel is generally viewed as a reliable provider of power and has a record of responding effectively in emergencies.
- Xcel’s rates are currently below the national average.
- Xcel’s philanthropic foundation contributes to Boulder-area nonprofits.

Potential Concerns:

- Efforts to increase renewable energy in the supply are hampered by Xcel’s current and planned investments in coal. While Xcel emphasizes its leadership in wind energy, it still invests heavily in coal—so much so, that Boulder customers continue to use one of the most carbon-intensive energy supplies in the nation.
- Individual Xcel customers have little say or impact in long-term decisions that impact them.
- Due to its service territory, Xcel must operate in the regulatory regimes of eight different states, which can make it difficult to respond to the needs of different communities or a rapidly changing energy environment.
- As a for-profit corporation, Xcel must meet shareholders’ desires to maximize profit, and selling less electricity through efficiency and distributed generation negatively impacts that.

Potential benefits and concerns associated with the creation of a local electric utility:

Potential Benefits:

- The city’s modeling indicates that a local electric utility could meet a significant portion of Boulder’s energy needs with renewable energy sources and could dramatically reduce the community’s coal dependency while maintaining the same (or better) costs and reliability as Xcel.
- A local electric utility could tailor its operations to reflect local values and achieve community-specific goals. A Boulder utility would not have pre-existing investments in outdated technology, infrastructure, and generation methods, which would provide more flexibility to invest in innovative technologies and services.
- Because of their smaller scale and tax-exempt status, municipal utilities have lower capital costs. A local utility would have access to less expensive financing, through tax-exempt bonds, than is available to Xcel and would not need to provide a return on investment to shareholders, as is required of Xcel.
- As a not-for-profit entity, a municipal utility would have the ability to re-invest any excess revenues locally, which could include reducing rates, increasing programs and services, and improving reliability.
- A local electric utility is better positioned to engage in public-private partnerships that support business innovation and economic vitality.

Potential Concerns:

- Financial impacts associated with creating a local electric utility have been carefully modeled. However, actual outcomes are unknown due to: **1.** a lack of data requested from Xcel; and **2.** stranded and acquisition costs will be determined through upcoming legal proceedings.
- Acquiring and starting the system will require taking on a large debt. The financing terms, which are currently unknown, would be set by bond rating agencies.

For more detailed information on the modeling and analysis of Boulder’s energy options, see BoulderEnergyFuture.com.

A Closer Examination of Reliability and Rates

Reliability

What is reliability?

Reliability describes the level of uninterrupted service an electric power utility provides. It depends both on the quality of the physical infrastructure as well as the ability of the utility to control the system and respond to failures. Certain elements of reliability are governed by federal and regional regulations.

How would a municipal utility take reliability into account?

Given the importance of reliability to businesses and residents in the community, staff worked internally and with a Reliability Working Group made up of industry professionals and experienced engineers to develop a separate analysis and plan. The engineers evaluated the system and its current condition, provided recommendations on needed improvements, identified regulatory reliability requirements, and recommended best practices to ensure reliable electrical service. All municipalization options were designed to meet the charter metrics related to reliability.

What about emergency response? Even with the best systems, power goes out sometimes. What would a local utility do to get it back on quickly?

A local utility would hire seasoned crews or companies to maintain its system. It would also enter into mutual aid agreements, just like the water utility has today, with local and regional partners to bring customers back on line quickly after bad weather or other emergencies. These are very similar to successful partnerships the city has with regional entities who respond to wildfires and other large-scale public safety incidents.

I've heard that some communities have even better reliability than Boulder. Are there ways a local utility would be able to improve reliability?

Yes. Municipal utilities can take advantage of opportunities more quickly than their large-scale, investor-owned counterparts because they are managed differently.

They can bolster reliability by dedicating funding to local infrastructure improvements, such as:

- Burying overhead lines.
- Replacing aging equipment.
- Creating and enhancing system backups.
- Moving the power supply closer to the user (i.e. more self-generation by customers).
- Investing in emerging technology like enhanced storage and two-way communications.

Rates and Financing

The analysis shows that a local electric utility can meet all Boulder's goals related to cleaner, reliable, and local energy under a variety of conditions. Additionally, the charter metric of offering comparable or better rates on Day 1 can also be met under a variety of market conditions with several different options for clean energy resource mixes, provided that stranded and acquisition costs can be managed.

How will Boulder pay for the utility? How much will it cost?

Xcel customers in Boulder are currently paying debt related to the electricity they receive. Xcel passes on costs to its customers for all investments it has made and continues to make in its infrastructure, including the distribution, transmission, and generation systems the company owns. According to company records, Xcel has plans to spend about \$1 billion on their system over the next few years, and this debt is likely to be passed on to customers as well.

If the city creates a local electric utility, it, too, will issue debt. The initial debt would be to buy key portions of the electric system serving Boulder. This would be incorporated into the rates we all pay on our energy bills, just as this type of debt is now in our Xcel bills. There would also be some debt necessary to cover start-up costs. The final price tag will not be known until a purchase price is reached with Xcel Energy, either through negotiation or a condemnation process.

Debt is important, but the city is estimating that repaying the debt related to acquisition and start-up will account to between 14% and 15% of a local utility's overall costs. The reality is that for all utilities, the majority of expenses (65% to 70%) are related to what it costs to buy power.

It seems like there is an emphasis placed on “Day 1.” What will happen to rates in the days that follow?

The charter metric refers to the local utility having rates equal to or less than Xcel's costs “at the time of acquisition.” The modeling shows that this can be done under many conditions, even when the utility faces higher costs for debt or power. Since many people have raised questions about what happens after the first day, the city also conducted a 20-year forecast to assess the long-term savings or losses associated with different options. The most recent analysis, which took into account several factors that could have an adverse impact on a local utility, focused on the results under two levels of initial debt: \$150 million and \$214 million. Under both of these scenarios, the local utility is more likely to save customers money over 20 years, compared to staying with Xcel. With a low-cost resource portfolio (42% renewable energy on Day 1, compared to Xcel's 23%), those savings could be around \$140 million. At the \$214 million debt level, those savings could be around \$45 million.

I've heard the city is planning to defer making debt payments for the first 18 months. Why is this?

It is a common industry practice for start-up enterprises to defer initial debt payments for a period of time to establish reserves and operating revenues. The model includes an 18-month period of deferred debt (capitalized interest). While the city has modeled scenarios without this practice and could still meet charter requirements, the team believes it is more fiscally prudent to build up reserves before concentrating on debt payments.

What about capital improvements to the system?

The city would have to make ongoing improvements and replacements to the electric system, just as Xcel would over time, but the city would be able to be more innovative and flexible with these improvements. The model includes a robust long-term capital improvement and undergrounding plan that is funded through bonds over the 20-year model period. This amounts to approximately \$104 million over 20 years. The plan to repay this capital-improvement-related debt is included in the modeling presented so far.

How will a municipal utility pay for ongoing, day-to-day operations?

Similar to any other utility, Boulder would pay for day-to-day operations through revenues collected by the sale of electricity. The general fund, which covers core city services, such as police, fire, roads, libraries, parks, etc., would not be used to support the electric utility. However, 4% of the utility's revenues would go into the city's general fund to replace a Utility Occupation Tax that Xcel used to pay to the city (this allocation, by the way, is significantly lower than what other municipal utilities pay to their general funds). This provides a balance between ensuring that the rest of the city organization remains whole, while dedicating most utility revenues to funding and improving utility services.

What would the creation of a local electric utility mean for my home's monthly bills?

The municipal utility would prioritize keeping bills lower—and analysis shows this can be done. The process for determining how much customers pay for electricity is known as “ratemaking.” It is complex, expensive, and, for Boulder, it would be a public process that requires community input and guidance from the advisory board to inform City Council's final decision.

While the city has not yet engaged in a ratemaking process, the team looked at overall average costs per kWh to estimate what the impact would be on your monthly bill. Xcel recently released an average rate per customer class for 2013 with a corresponding average usage for each class. Based on the projections in the model for increasing costs over time, the city used these proportions to look at the average impact on a monthly bill. In the Low Cost resource portfolio option (42% renewable energy) at \$150 million of initial debt, an average home (632 kWh/month) would pay approximately \$18/month less than Xcel's projected bill in 2017 and \$2/month less in 2022.

What about commercial and industrial customers that use—and pay—significantly more for their power?

Based on the methodology described in the previous question, a small business could pay approximately \$35/month less in 2017 and \$4/month less in 2022. It is estimated that industrial customers would pay approximately \$9,400/month less in 2017 and \$1,100/month less in 2022. However, large commercial and industrial customers typically have complex billing structures for energy, demand, and other services, and those impacts have not been precisely modeled because not all of the necessary information has been made available, and the city has not yet undergone ratemaking.

What about stranded costs?

In documents filed with the city in 2011, Xcel Energy indicated that the city would owe stranded costs—money the utility may be able to collect for investments in generation assets—totaling \$255 million, if the city leaves its system in 2017. In order to have a consistent date for modeling, all of the modeling done by the city assumes that a local utility would not start until then.

However, there are limitations to an investor-owned utility’s ability to collect this money. Stranded costs apply only to generation assets, like coal plants. They do not apply to lost customer revenue, and they are only “stranded” if the company is unable to sell the power to other customers. Xcel Energy has indicated, in filings with the PUC, that it plans to invest in new generation assets because there is more demand than it can currently meet. If Boulder reduces the power it receives from Xcel, other customers would be able to tap into energy that is already available. The company could avoid building new plants or entering into new contracts, and ratepayers throughout Xcel’s service territory could avoid paying for them.

Note: The city has additional legal arguments that support its position that it should not owe stranded costs; however, not all of these have been made public because the city does not want to jeopardize its ability to succeed if this case is heard by the FERC.

Third-Party Independent Review

The importance of the analysis the city has conducted cannot be overstated. City Council and voters addressed this in 2011 with an additional charter requirement that a third-party independent evaluator assess the work. The city manager selected a third-party firm called PowerServices, Inc. to verify whether the materials prepared by staff and presented to council on Feb. 26 and April 16, 2013, demonstrated that the city could form an electric power and light utility while meeting the conditions set by voters.

What did this assessment show?

In a presentation to City Council on July 23, a representative of PowerServices, Inc. said that the materials prepared by staff adequately demonstrated that the charter conditions could be met. During the presentation, the City Council was told that the utility modeling conducted by city staff and the Energy Future team was among the most robust that the PowerServices team has reviewed. The evaluator concluded that Boulder could operate a municipal utility that meets the charter

conditions under current modeling assumptions. Further, Boulder’s assumptions match benchmarks to other utilities across the country. A PowerPoint presentation of the findings can be found at BoulderEnergyFuture.com. The firm is also working on a written report, which is expected to be completed soon. It will also be posted on the project website.

How was this firm selected?

After advertising a Request for Proposals (RFP), interviewing applicants, and receiving comments from the public as specified, the city manager selected PowerServices, Inc. to serve as the independent reviewer. PowerServices has been providing engineering and management services to the electric utility industry, including electrical municipalities, for more than 45 years and to nearly 300 clients in 40 states. The firm’s proposal, resume, and scope of work can be found at BoulderEnergyFuture.com.

What did they review?

The purpose of the third party review was to make sure that the city modeling included all of components necessary to accurately analyze the feasibility of municipalization and was based on assumptions commonly accepted in the industry.

PowerServices reviewed the city’s materials, including the financial model, and asked numerous questions to the staff and consultants, all under the supervision of the designated project manager. No written or verbal communications happened between PowerServices and city staff or consultants without a designee of the city manager in attendance.

Was there anything the evaluator did not review?

PowerServices was not asked to prepare its own model to compare results with the city’s modeling. Instead, they analyzed all of the assumptions and inputs used by the city to verify whether or not they were complete, accurate, and consistent with industry standards. In addition, PowerServices was not asked to prepare its own appraisal of the value of Xcel’s system or stranded costs. Instead, it was asked to assume that the numbers provided by Xcel for acquisition and stranded costs were accurate. PowerServices did compare, however, the amounts the city used as assumptions for stranded and acquisition costs with its indices to make sure they were in a reasonable range.

Did the third-party evaluator raise any concerns?

PowerServices raised a concern that, given the uncertainty around a carbon tax/

regulation, the city should show the model results without the carbon tax as well. Staff incorporated this variation in its presentation to council on July 23. The results showed a local utility could still fulfill the charter requirements without this kind of measure.

Legal Process

The road to creating a local electric utility will require a number of important legal steps. These could include, but are not limited to, acquisition/condemnation proceedings in state court, service territory certification, the approval of transition plans and other proceedings at the PUC, and stranded cost proceedings with FERC.

What does condemnation mean and how long will it take?

Condemnation is the legal process that is necessary for a city to acquire property of another for a public purpose. This authority is granted by the state constitution (Article II, Section 15 and Article XX). It is not, however, an unrestricted right. The constitution requires that the city pay what the law calls “just compensation” to the property owner before being able to take the property. If both parties can agree on a purchase price, the issue can be resolved through a negotiated settlement. If negotiations are not successful, Boulder would file a petition in condemnation with the Boulder District Court to acquire the property and electric facilities serving the city. If Xcel disputes the city’s authority to acquire its property, the court would first verify that the property was necessary for a legitimate public purpose of the city and that the city had conducted good faith negotiations. If verified, the court would proceed through the process of determining the fair market value of the property that the city must pay. The city estimates it would take 10 to 14 months after a determination that the city has the authority to acquire Xcel’s property before a trial could be scheduled. During the intervening time, there would be discovery by both sides and legal arguments made to the court. At the trial, the jury hears only evidence of the fair market value of the property.

“Just compensation” requires that the city pay, in addition to the fair market value of the property, the property owner’s reasonable costs of an appraisal and expert witnesses to present its case against the city. The law does not require the city to pay the attorneys fees for the property owner unless the city’s last offer before filing the condemnation is less than 130% of the final determination of value by the court. In that case, the city would have to pay the reasonable attorneys fees of the property owner related to the property owner’s efforts to get more money from the city.

What assets would the city seek to acquire?

The city would only seek to acquire property from Xcel that is related to the electric system serving Boulder; the city would not seek to acquire any natural gas facilities owned by Xcel, nor would the city take any condemnation action against individual property owners.

The engineers evaluating the optimal location of separation to maintain reliability for both Xcel and the city recommend that the city also acquire the 115kV transmission loop that serves the city. This loop connects the six substations in the original acquisition plan and includes the Boulder Hydroelectric plant so the city could access electricity it generates. Acquisition of the loop also allows the city to more effectively balance local generation and other electricity distribution, thereby improving reliability within the city. Incorporation of the loop adds approximately \$28 million in costs over 20 years to maintain and update the equipment. This additional amount was incorporated into the modeling. Even with the additional amount to acquire the loop, the city believes the value of Xcel’s assets would be less than the \$150 million that Xcel provided as an estimate in 2011.

In order to operate both distribution and transmission systems, the city would need to file with state and federal regulatory agencies, just like other municipally operated and independently operated utilities do to meet reliability and other systems standards.

How would a city-run system be separated from Xcel’s?

Experienced engineers have analyzed Xcel’s existing electrical system to determine the best place to use or relocate existing interconnections and have identified less than 10 places where new interconnections must be installed to meter the flow of electricity in and out of a Boulder electric utility. Xcel has referred to separation as a literal cutting of wires or “creating an island.” This is not actually the process the city’s engineers are suggesting. Instead, the interconnection locations would be metered to measure the electricity that flows from one provider to another.

Can you explain the acquisition map the engineers have developed? Is it true that it includes some electric meters outside of the city?

This is true. Electrical systems are not created by geographic or political boundaries, rather, they are built as growth occurs. Because Boulder is surrounded by open space, Xcel’s system has developed in a way that properties within the outlying open space are all served by the same system, including some portions of unincorporated Boulder County. In order to ensure the greatest level of reliability,

the city’s engineers are recommending acquiring all or portions of the six substations that serve our area.

This type of separation can be achieved without the need to install a lot of new equipment or replicate facilities. It also ensures that customers will receive their electricity on the same poles and wires they do now, with upgrades possible in the future, so that there will be no impact on service and reliability.

While the city will need records from Xcel to determine the actual number of out-of-city properties currently served by these substations, the city is estimating that it is about 5,800 meters. See page 25 for the proposed service-area map.

Governance: How will important future decisions be made?

Is the city capable of running an electric utility?

Boulder currently operates three utilities. Boulder’s water utility dates back to 1874, when voters passed a bond issue to publicly fund the city’s water works. The city sought and received voter approval for sewer bonds in 1895, and established a municipal flood-control and storm-water management utility in 1973. There is strong history here.

Today, these utilities, with assets valued at approximately \$1 billion, all have AAA ratings and rates are on par with peer utilities across the Front Range. None of Boulder’s current utilities rely on tax revenue—each utility’s rates and fees pay for the services they provide as well as any overhead.

Cities that have leveraged their electric utilities and begun the process of leaving behind the existing outdated utility model have experienced success in attracting new businesses and reducing carbon emissions. Municipal electric utilities close to home are thriving and have invested their revenues in measures that are benefitting businesses and the local economy. In Fort Collins, this has involved undergrounding all of the city’s electric lines to increase reliability. Longmont recently announced that it is planning to use electric utility savings to install fiber for high-speed Internet throughout its community.

What would the governance structure look like?

Boulder’s charter specifies that it would create an electric utilities department

led by a director who would report to the city manager. This department would play a critical role, taking into account advisory board and council input, in deciding where the community gets its power and how to invest a local utility’s considerable revenues. The city could continue to purchase energy from Xcel Energy, or from other providers. Regardless, Boulder would still be “tied” to the regional energy grid, and state and federal law would guarantee Boulder customers maintain access to reliable power.

The city is still studying a variety of models for how to maintain the distribution system. One option is to hire qualified crews. The city has factored in the possibility of hiring 107 employees as part of a local utility in its financial models and also included an operations and maintenance budget that is well above average when compared to other municipal utilities in the US. Another option would be to contract with one of the many firms that exist across the country to provide this service. A potential benefit to this approach is that these companies would bring extensive utility operations experience. This is a decision that would occur later in the planning and implementation phases.

An advisory board, made up of community members and business people will help inform the board of directors, made up of City Council. Existing charter language specifies that three members of this nine-member board could be non-city residents who either work in or own a business in Boulder. A proposed charter amendment that will be on the ballot this November, if passed, would open up utility board membership more broadly to provide for representation by out-of-city residential customers, as well.

What's Next?

While some details will become clearer after City Council takes action and provides additional direction on Aug. 20, it is likely to involve one of the four following scenarios:

1. Council directs staff to move forward with the exploration of municipalization, approves the start of good-faith negotiations and the possible filing of condemnation action in 2014.
2. Council directs staff to move forward and continue evaluating a new business relationship with Xcel Energy.
3. Council decides to approve both of the above options and move them forward on parallel paths for a final determination about which path is best in the future.
4. Council directs staff to wait until the community votes on the issue to take any additional, concrete steps toward creating a local electric utility.

We encourage you to get involved in Boulder's energy future by learning more about the options through this guide and online at BoulderEnergyFuture.com.

Please share your thoughts with City Council by sending an email to council@bouldercolorado.gov, send staff any questions at energyfuture@bouldercolorado.gov, leave a comment on the form provided at BoulderEnergyFuture.com – and perhaps most importantly for this upcoming phase, vote in November.

You have the power!

Some Definitions

This is a technical topic! Here are some quick definitions to help you navigate the terms.

Acquisition Costs – The price Boulder would pay for Xcel Energy's assets that are necessary to provide service to local customers and ensure reliability. The city and Xcel could agree on this number, or the city could file a condemnation action for the court to determine the fair market value.

Carbon Tax/Regulation – A carbon tax, or carbon pricing, is a tax levied on energy generators for creating different sources of greenhouse gases. In Boulder, funding gained from this type of tax, applied to electricity consumption, was used to implement energy efficiency programs to help the community reach energy goals by reducing greenhouse gas emissions. There has been discussion about whether to enact carbon legislation at the federal and/or state levels.

Condemnation – Also known as the right of eminent domain, condemnation is the process by which one party (including the city and Xcel) has the power to take the property of another for a public purpose after it pays fair market value of the property. The purchasing party is required to prove that the property is necessary for a public purpose and that it attempted good faith negotiations to agree to a purchase price with the owner. If those negotiations are not successful, the court will determine the amount of just compensation (defined as fair market value) that the city must pay for the assets acquired. Article II, Section 15 and Article XX of the Colorado Constitution and Part 1 of Article 38 of the Colorado Revised Statutes provide additional information about the authority of governments to take property for public use.

Distributed Generation (DG) - This refers to power generation at the point of consumption. Generating power onsite, rather than centrally, eliminates the cost, complexity, and inefficiencies associated with transmission and distribution. Like distributed computing (personal computers) and distributed telephone (mobile phones), distributed generation shifts control to the consumer. At this stage, DG is primarily solar power, but it can also include combined heat and power and other resources.

FERC – The Federal Energy Regulatory Commission (FERC) is the federal agency with jurisdiction over interstate electricity sales, wholesale electric rates, transmission requirements and tariffs, hydroelectric licensing, natural gas pricing, and oil pipeline rates.

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