

Boulder's Energy Future Today

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Municipalization Charter Requirements

The city must meet these criteria, at a minimum, to form a local electric utility:

- Rates cannot exceed Xcel's rates at the time of acquisition.
- Revenues must be sufficient to pay for operations and debt, plus an amount equal to 25% of debt payments.
- System reliability must be ensured.
- The city must have a plan to show it can reduce greenhouse gas emissions and increase renewable energy sources.
- The city's information must be verified by an independent, third-party analyst.

Read the entire Charter at: www.colocode.com/boulder2 Under Article XIII



May/June 2013
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Director Bailey: Facts matter when considering energy paths

The city's analysis into the possibility of creating a local electric utility has been unprecedented, and we're eager to share what we've learned.

Key decision dates are coming up, and I am pleased to let you know that city staff, our consultants and volunteers have been working hard to make sure we are providing the community with the very best information possible.

As you should expect from a thorough analysis, work is occurring on several fronts at once. These efforts include: refining models to reflect new data and feedback; meeting with financial advisors; preparing detailed appraisals of Xcel's system and compiling a comprehensive list of assets the city would need to acquire; preparing for potential litigation; providing information to the third-party evaluator who is diligently checking our analysis; convening a community committee to make governance recommendations, and participating in partnership discussions with Xcel Energy.

Sounds like a lot for what might typically be sleepy summer months, I know. But each of these steps is critical to honoring the commitment we made to you when I was hired in 2012. The city, at the direction of voters, pledged to conduct an objective and rigorous evaluation into ways our community could achieve its energy goals.

We are doing just that.

Not unexpectedly, as we approach milestones in this exploration, there have been questions. Some have doubted the motivations of the city's efforts. Others have challenged the sufficiency of the city's analysis. Officials with Xcel Energy have mounted significant public relations

and legal campaigns to persuade Boulder customers their company can get us where our community wants to go.

We welcome this discourse. We've been open and transparent, posting a wealth of detailed information on BoulderEnergyFuture.com, and because facts matter – especially with decisions of this magnitude – we have created a site that boils our work down in clear terms and responds to misinformation. You can find this at BoulderEnergyFacts.com.

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Meanwhile, let's remember where we started – and why.

Boulder has shown time and again that we are a community that cares about our environment.

In 2002, we became the first city in the country to pass a resolution in support of the Kyoto Protocol establishing the goal of reducing greenhouse gas emissions to 7 percent below 1990 levels by 2012.

Since adopting this goal, 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 such as Energy Smart, curbside composting, and expansion of our bike trail system. Participation in these programs

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CO₂ levels pass feared milestone

According to a recent article in the NY Times, the long feared milestone for carbon dioxide levels was passed on May 8, 2013, when the atmosphere reached a daily average of over 400 parts per million (ppm) – a CO₂ concentration not seen on earth for at least 3 million years. These measurements came from Mauna Loa, the Hawaiian volcano that has long been ground zero for monitoring worldwide trend of carbon dioxide. A level of 400ppm has been seen before in the Arctic and at Mauna Loa in hourly spikes. However, not until May of 2013 did the average reading for an entire day surpass 400 ppm.

Carbon dioxide levels have been relatively stable for most of human civilization until the start of the industrial revolution; levels have since increased by 41 percent. This period is a “mere geological instant” and scientists say we should expect far larger and possibly detrimental changes in the future as temperatures increase and the sea level continues to rise.

The adopted official target to limit damage from global warming 450 ppm. Reaching 400 ppm in 2013 is a sobering milestone demonstrating that 450 ppm is coming up sooner than expected. “It means we are quickly losing the possibility of keeping the climate below what people thought were possibly tolerable thresholds,” says Ralph Keeling, program monitor at Scripps Institution of Oceanography in San Diego, “Unless things slow down, we’ll probably get to it [450 ppm] in well under 25 years.” Without drastic or binding policy changes, limiting global warming may become impossible and severe economic disruption inevitable.

Learn how you can help reduce carbon dioxide emissions at www.bouldercolorado.gov/CAP.



(Left) City staff presentation to Gunbarrel Energy Future citizens group on June 6. Let us know if we can come present to your group.

has been strong, and these efforts are making a difference.

Our progress, however, has been hampered by a startling fact: Under Xcel Energy, we have one of the most carbon-intensive energy supplies in the nation.

As we approached 2012, it had become clear that we were not going to meet our Kyoto goal just by changing the way we use our power. We realized we had to shift our dependency away from carbon-intensive coal and change the source of our supply.

We turned to Xcel Energy with this challenge. We re-engaged in talks that had been going on since at least 2005. The company shot down suggestion after suggestion while, at the same time, continuing to make heavy investments in coal and share handsome profits with shareholders. Xcel executives repeatedly told us that because of state regulations and the company’s business model, they were unable to make necessary changes.



(Above) Members of the community working group on governance talk about the formation of an electric utility advisory board at a meeting on June 12, 2013.

The one time Xcel entertained the possibility of doing something differently was short-lived. In 2011, the company offered a deal that would allow the Boulder community to tap into more wind power. The proposal wasn’t without risk – in fact, some believed

a tie-in to the natural gas market put the city in too vulnerable of a financial position. Nonetheless, the city was interested in continuing this discussion. Xcel Energy rescinded the offer when Boulder City Council said it would not ask voters to consider locking into a 20-year franchise.

Around this same time, we turned to you with this challenge. In contrast to Xcel’s response, you outlined a clear set of goals for our future.

You told us you want clean, reliable, low-cost and local energy. And with voter approval of 2B and 2C in 2011, you gave us the ability to explore the possible creation of a local electric utility as a way to make this happen.



From the first day of our analysis, the city has remained open to the idea that we could achieve our goals another way. We’re still open to this.

We’ve come to recognize, however, that there could be a variety of benefits to charting a new course. Chief among these is economic vitality. Boulder is a national hub for innovation, with a flourishing start-up, academic and government research, outdoor recreation, and clean-tech community. It’s no coincidence that these companies seek out Boulder—and thrive here.

Boulder attracts the finest and most innovative companies in world—from IBM, to Ball Aerospace, to Google. They are here for more than just the vistas and sunshine (although that helps). They are here because of Boulder’s business-not-as-usual attitude. Boulder’s business culture fosters innovation, collaboration, and forward thinking, and our economic-vitality engine depends on keeping up with the businesses of the future by continuing to do

things in a different way. While Boulder's Energy Future goals emerged because of our community's underlying environmental commitment, the business case for clean, reliable, low-cost, local energy is compelling.

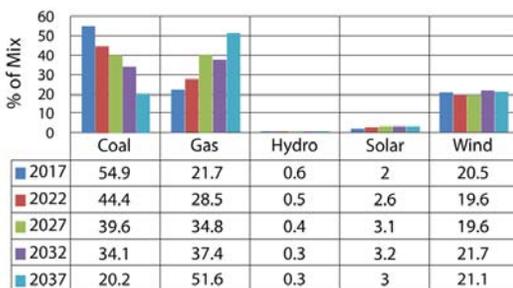
Other communities with municipal electric utilities are offering low rates and top-notch reliability. Other communities with municipal electric utilities are driving economic growth with the very resource that powers them and are leveraging the resulting revenue to build systems, like high-speed wireless networks, that will make them attractive to employers.

Our task is to determine if Boulder can too.

The city's analysis has taken into account a wide variety of factors associated with an industry that is rapidly changing. Despite assertions by Xcel Energy, we have looked at what happens if coal prices go down or level off and if they go up, either because of a possible carbon tax or a continuation of the rising costs that have marked the past few years.

We've looked at what our resource mix would look like if we stay with Xcel. While our current provider emphasizes its leadership in wind energy, it still has significant investments in coal. Real change would mean decommissioning more coal plants than the company has planned and an end to building new ones. Here is the resource plan the company has filed with the Public Utilities Commission:

Xcel Energy Colorado Electrical Resource Plan - 5-year increments starting in 2017

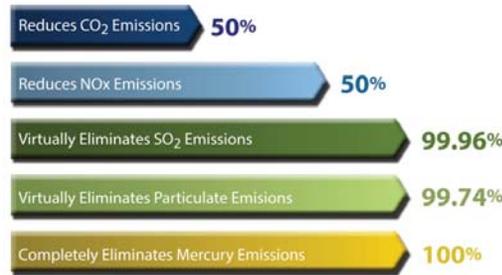


It is important to understand that while Xcel may generate a significant amount of wind energy, this is spread out over one of the largest service areas in the country, and if you look at the previ-

ous chart, the company doesn't plan on putting much more into use in Colorado over the next 20-plus years.

Through our research, we've learned that a local utility could meet more than 50 percent of Boulder's energy needs with renewable sources and reduce our reliance on coal (using natural gas) while maintaining the same (or better) costs and reliability as Xcel.

Natural Gas = Fewer Emissions



Source: "Nat Gas 101," America's Natural Gas Alliance, 2012

We've looked at the potential volatility of the natural gas market and calculated the impacts highs or lows would have on overall costs. We've considered the possible end to wind and solar incentives. We've also added cost obligations that reflect the city's steadfast commitment to funding efficiency and renewable incentive programs that match or exceed what are currently offered.

After all this, we then took our analysis a step beyond what most electric companies – including Xcel Energy – do. With the help of experts in the field, we made probability calculations that show the potential impact of areas where a municipal utility might be most vulnerable.

The results are promising.

We encourage you to learn more, either by checking out our online resources, reaching out with questions or inviting me or one of my colleagues to speak to a group or organization to which you belong.

The future is coming and we'd like you to help shape it today.

- Heather Bailey, executive director of Energy Strategy and Electric Utility Development

City receives sustainability grant from Boulder County

The City of Boulder recently received a \$15,000 Boulder County Sustainability Grant that will be used to enhance the SmartRegs Program. Boulder was one of six recipients of the award presented by Boulder County. Longmont, Lyons, Nederland, Jamestown, and Lafayette were the other recipients.

The city will use the money to develop a SmartRegs training simulation program that will replace the in-person training currently required to become a SmartRegs licensed inspector.

Boulder County's matching grant program provides support to governmental organizations to undertake localized environmental sustainability efforts within their communities. It aids in leveraging community resources and setting collective goals for county-wide sustainability initiatives.

With this matching grant, the City of Boulder will be able to put more qualified inspectors on the ground using fewer resources thus increasing the amount of upgrades to meet the city's energy efficiency standards.

SmartRegs, adopted by City Council in September 2010 provides baseline energy efficiency requirements for all existing rental housing within the city. Addressing energy efficiency in rental housing helps reduce greenhouse gas emissions and meet community climate objectives set by the Climate Action Plan. All existing rental housing, representing about half of Boulder's housing stock, is required to meet SmartRegs standards by 2019. Visit www.BoulderColorado.gov/CAP to learn more about the program and the services offered to help landlords and property owners meet the requirements.

Upcoming meetings with City Council

Study Session with City Council

Tuesday, July 23, 2013
6 to 9 p.m.

City Council Chambers -
1777 Broadway

The city will share the following information with City Council and the community:

- Report from the third-party independent analysis
- Qualitative analysis
- Report from the City of Boulder/Xcel Energy Task Force on partnership options
- Refined option analysis
- Refined modeling
- State and federal legal proceedings
- Financial updates
- Ongoing community engagement and outreach

This meeting is open to everyone, but public comment will not be heard. This is an opportunity for City Council to ask questions and request more information from staff before the Aug. 6 meeting. The meeting will be aired live and will be available online at www.BoulderChannel8.com.

City Council Meeting

Tuesday, Aug. 6, 2013
6 p.m.

City Council Chambers -
1777 Broadway

The city will return to council with answers to questions posed on July 23 and address any additional requests for information that council may have. Public comment will be heard. This meeting will also be aired live and will be available online at www.BoulderChannel8.com.

What could a progressive local electric utility do?

There are many progressive utility practices throughout the country, and even more internationally. In response to a rapidly changing industry, utilities and customers are coming together to ensure they are being served as optimally as possible. Some cities are forming publicly owned utilities (65 have formed in the past 30 years) and creating networks to improve quality of service and gain better access to technologies and renewables while developing a local energy economy.

Technological developments such as **advanced metering infrastructure (AMI), or smart meters**, provide dynamic rates as well as increased reliability and effectiveness. This hardware differs from traditional electric meters in that they facilitate real-time, two-way communication between the meter and the electric utility. Tallahassee Utilities, the fourth largest municipally owned utility in the state of Florida, and 25th largest in the U.S., was the first utility in the nation to implement full smart grid and smart metering functionality. Sacramento Municipal Utility District (SMUD) also implemented something similar and is now able to provide dynamic rates; retrieve meter data at regular intervals; and provide signals and messaging to the meter. The ability to communicate directly with customers' meters has reduced the number of times the utility has had to dispatch trucks and crews to resolve issues. According to SMUD, the utility was able to cut the number of "truck roll-outs" by 55,000 in one year.

Distributed generation (DG) is a key component to increasing renewables while improving the grid and local economy. It allows electricity to be generated closer to the load rather than in large, centrally located power plants. Having multiple generation sources improves redundancy, creating possibilities for micro-grid configurations and reduces transmission losses. DG often has legal constraints under IOUs, and some, including Xcel Energy, are reluctant to take this approach because they worry it could impact revenue. But many municipal utilities are thriving while utilizing DG programs. Gainesville Regional Utilities, a Florida municipal utility, cre-

ated a feed-in tariff solar policy that has led it to be among the world leaders in solar installed per capita. Not only does DG increase renewables on the grid while reducing transmission losses; it also increases job opportunities, community engagement and local development.

Some cities and counties are creating networks to take advantage of the opportunity for change. While not currently permitted in Colorado, **Community Choice Aggregation (CCA)** is a program that allows cities and counties to join together to purchase and/or generate electricity for their residents and businesses. These partnerships aggregate the buying power of individual customers looking to secure alternative energy supply contracts. CCAs improve economic efficiency and take advantage of technological improvements in electric generation cost effectively. Sonoma Clean Power (SCP) is an example of CCA effort that is providing green electricity at competitive prices to Sonoma County.

While CCAs provide an outlet to change a community's fuel mix, other programs have been developed to further enhance energy efficiency efforts. **Sustainable Energy Utilities (SEUs)** are programs that work in parallel with the electric utility and provide access, information and support for efficiency and sustainability measures since IOUs often cannot, and sometimes, do not want, to take on this responsibility. SEUs now exist in many areas including Vermont; Delaware; Oregon; and Wisconsin. One Efficiency Vermont, an independent nonprofit provider of energy efficient services helped 60% of the state's electric customers reduce their energy use in its first seven years. The result was a load-growth rate of -1.8%, earning Vermont the distinction of being the first state to achieve its goals through efficiency measures alone.

In conclusion, many technological developments are out there to help meet Boulder's goals. Part of the current analysis is to determine which of these would be the most helpful and how best the community could implement them.



Additional Opportunities to Provide Feedback:

- Online comment form - www.BoulderEnergyFuture.com
- Send an email to energyfuture@bouldercolorado.gov
- Invite city staff to present at your event or meeting

