Boulder's Energy Future: Municipalization Exploration Study

Sustainable Energies Law Center Webinar

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www.BoulderEnergyFuture.com

Introduction

- How we got here and why it matters
- Boulder's distributed generation efforts
- What's Next
- Lessons Learned

Boulder's Path to Sustainability

- **A History of Climate Action in Boulder**
  - **2002 – Resolution passed to meet Kyoto Protocol**
    - Reduce greenhouse gas (GHG) emissions 7% below 1990 levels by 2012 – Boulder needed to cut emissions by 24% from 2005 to 2012
  - **2006 - Climate Action Plan (CAP) created**
    - Addresses climate change and manages GHG emissions
    - Programs and services designed to help meet Kyoto Protocol
  - **2006 – CAP Tax overwhelmingly approved by voters**
    - First community in the nation to tax own energy use
  - **2012 – Tax overwhelmingly re-approved for 5-years by Boulder Voters (82% approval)**

Boulder's Path to Sustainability

- **What CAP means for renewable energy in Boulder**
  - CAP tax incentivizes use of DSM and renewable energy technology
  - Boulder customers represent a substantial share of participants in Xcel's Windsource program
  - As part of Xcel's total base - Boulder customers represent (2011 figures):
    - 16% of Windsource purchases
    - 20% of rooftop solar installation
    - 7% of energy efficiency rebates
      - 9% of rebates to business customers
      - 3% of residential load management installations

Boulder's Path to Sustainability

- **Where Boulder's renewables are today**
  - Boulder's generation included 15% renewables in 2011 – 26% by 2018
    - 12 MW of installed solar capacity – 20+% of Xcel's Solar Rewards energy generation
  - Xcel providing resources to meet 30% state-mandated RPS – no more
    - Xcel in 2011
      - 57% coal
      - 29% natural gas
      - 14% renewable sources
    - Xcel in 2018
      - 45% coal
      - 30% natural gas
      - 25% renewable sources

Increasing Boulder Distributed Generation Capacity

- **Solar Gardens State Legislation**
  - HB1342 signed into law on June 5, 2010
  - Boulder played big role in it's passage
  - Allows people to own an interest in solar panels that are not on their own property.
  - Ideal for locations that are not ideal for solar panels or live in areas that limit panel numbers
  - David Eves, Xcel Energy, "You have a lot of good ideas coming out of Boulder. Thank you for pushing us."

Increasing Boulder Distributed Generation Capacity

- **Boulder's Municipalization Exploration Study**
  - **OBJECTIVE -** To evaluate options for a city-owned electric utility that support community goals and guiding principles, determine whether those options can meet city charter test for municipalization, and to provide City Council with a preferred option(s) and recommendation on whether to proceed with municipalization, or not.

- **CAP programs and services cannot do enough alone to meet community goals**
  - Must address the city's electricity supply

Increasing Boulder Distributed Generation Capacity

- **Municipalization Exploration Study History**
  - **2005** – City started researching power supply options
  - **2010** – Franchise with Xcel expires; no renewal after extensive negotiations
  - **Nov. 2010** – Boulder voters approve utility occupation tax – replaces franchise fee
  - **2011** – Negotiations continue
  - **Nov. 2011** – Voters pass municipalization measures that establish Charter requirements
  - **Jan. 2012 – April 2013** – Analysis to determine whether municipalization can meet strict Charter requirements

Increasing Boulder Distributed Generation Capacity

- **Municipal Electric Utility Charter Requirements**
  - Absolute conditions that must be met prior to creating a local electric utility – AKA -"The Floor" or baseline requirements
    - Rates
    - Reliability
    - Renewables
    - Revenues
  - Aren't the only criteria measured
  - Answered the "Can We?" question
  - Now must answer the "Should We?" question
    - Is enough value added to the Boulder Community

Increasing Boulder Distributed Generation Capacity

- What's the disconnect with Xcel Energy?
  - Coal-based resource portfolio with Limited renewable resources in current supply
  - PUC Regulation vs. Local Control
  - Business model is out-dated

Increasing Boulder Distributed Generation Capacity

- **Creating the "Electric Utility of the Future"**
  - "The unifying entity that connects the wants, needs, and desires of the user with the core values of the community in the most efficient and sustainable way possible"
- **How can Boulder:**
  - Be positioned for a low-carbon future?
  - Focus on customer choice and treat energy as a "service," rather than a "commodity?"
  - Become a hub of innovation and technological advances?
  - Leverage infrastructure and ensure reliability?
  - Change the business model to reflect 21st century values and economics

Creating Options for the Future

- **What do we mean by an "Option?"**
  - How and where we get our energy resources
  - What business structure meets financial targets
  - What assets do we need to serve customers and the community
  - What infrastructure investments need to be made
  - How we will achieve excellent reliability
  - Any other component needed to support community goals and objectives

Analysis: Key Findings from Modeling

A local electric utility is likely to:

- Under some options, offer customers equal or lower rates over 20 years
- Maintain or exceed current reliability
- Reduce GHG emissions by more than 50%
- Obtain more than 50% of electricity from renewable resources
- Provide path for strong economic development

Next Steps: Work Plan

- **Work with Xcel on partnership ideas**
- **Phase 2: Before the Acquisition Ordinance (April – July)**
  - Analyze "value add" of municipalization
  - Proceed with legal steps
  - Initiate financing discussions with bond agencies
  - Explore governance options
  - Additional modeling with new inputs
  - 3rd-Party Independent Evaluation
- **Phases 3 and 4 depend on outcome of each prior phase**

Lessons Learned: So Far

- Boulder must address supply as well as load
- Not all options are currently cost effective, but technological improvements could soon help
- Must be flexible in the supply, both in terms and types of Power Purchase Agreements (PPAs)
- Ability to meet objectives exceeded our expectation – even while being conservative
- There will always be naysayers regarding renewable integration, costs, reliability, rates, etc.
- Do your homework – The world is rapidly evolving

Want to Know More?

- www.BoulderEnergyFuture.com
  - All consultant reports, including Climate Action Plan Report, Baseline Report and Muni Feasibility Study
  - Modeling inputs/outputs
  - City Council documents
  - Historical information
- Email: baileyh@bouldercolorado.gov
- Email: energyfuture@bouldercolorado.gov