

# Municipalization Exploration Project

**City Council Meeting: August 6, 2013**

# Agenda



- Introduction
- Presentation by City/Xcel Taskforce (council questions)
- Summary of July 23 Presentation (council questions)
- Third-Party Evaluator Ordinance (council questions)
- Condemnation Ordinance (council questions)
- Public Hearing on Third-Party and Condemnation Ordinances
- Ballot Ordinances (council questions)
- Public Hearing on Ballot Ordinances

# Report by the City/Xcel Energy Taskforce

# July 16, 2013 REPORT OF THE CITY OF BOULDER & XCEL

## ENERGY COMMUNITY TASKFORCE July 16, 2013

Presented to the Boulder City Council, August 6, 2013

On Behalf of the Taskforce, Presented by:

Pete Lorenzen, IBM V.P., Boulder Senior Location Executive

Sam Weaver, President, CEO and a co-founder of Cool Energy, Inc



TASKFORCE

CLEAN LOCAL ENERGY

low-cost. reliable. possible.

# Agenda

- Taskforce Methodology and Timeline
- Taskforce Proposed Partnership Structures (NO TASKFORCE CONSENSUS)
- Xcel Proposal Outline (TASKFORCE RECOMMENDATION IS FOR THE CITY OF BOULDER & XCEL TO DISCUSS)
- Taskforce Recommendations
- Taskforce Involvement Going Forward

# What We Will Not Cover This Evening

- Details of Xcel proposals – details still preliminary enough that we would not be able to accurately represent
  - We will only provide outline of concepts
- Appearance of Xcel Energy in front of council with more detailed proposal at some future date
  - Expected in the Fall timeframe

# Taskforce Methodology

- Heard goals and principles from the City and Xcel
- Heard and discussed Xcel ‘products and services’ initial proposals
- Discussed potential alternative partnership structures to the current PUC regulated monopoly governed by a franchise agreement
- Requested partnership and products and services proposal from Xcel – where were the limits?
- Concluded that, at this stage, Xcel could not discuss alternative partnership arrangements; but could discuss new models that might allow entire city to opt into different rate structures, services, and generation mixes (products and services)
- Gave input to Xcel Energy products and services
- Ultimately, a number of options were acceptable to Xcel Energy and supported by the Task Force as worthy of further exploration by the City and Xcel directly.

# Taskforce Timeline

- First meeting April 9, 2013 – 10 meetings total
- Two week intervals to begin
- After April 22, met weekly through May 20
- After May 20, took off until June 10 for Xcel to work up partnership and product/services proposal
- On June 10, group consensus was that Xcel was willing to focus only on products and services, and should continue developing product/ services options
- On June 24, Xcel presented initial draft of 8 product and services options to be considered by Boulder
- Group feedback to July 8, final report delivered July 16

# Task Force Member Partnership Proposals

The taskforce motivation for discussing partnership structures was to address all elements of City evaluation criteria. There was NOT taskforce consensus to recommend specific proposals, nor were Xcel members willing to support any partnership proposals.

1. “Xcel Boulder - Muni Version” – the City would form a municipal utility but then contract with Xcel Energy to provide generation, transmission and distribution services under City direction.
2. “Xcel Boulder - Investor Owned Utility Version” – Xcel Energy would form a separate subsidiary to provide electric utility services to Boulder, under separate PUC jurisdiction.
3. City of Boulder Supplemental Utility – the City would form a municipal utility to develop energy efficiency, demand reduction programs, and renewable energy, but not to supply electricity. Similar to BLEU.

# Task Force Member Partnership Proposals

4. Community Choice Aggregation – the City would have the opportunity to aggregate all City load and acquire power supply for the aggregated load. Xcel Energy would deliver the power
5. Phased Community Choice Aggregation – the City would aggregate load and provide additional products and services.
6. Aggregated Community Coal Plant Retirement – communities would agree to pay the cost of retiring a coal plant and replacing coal generation with clean energy. The retirement cost would be securitized with state-issued revenue bonds, with the debt being paid by participating communities.
7. Boulder-Xcel Energy Service Agreement – the City and Xcel Energy would enter into a service agreement to meet Boulder objectives of more DSM, expanded distributed generation, more renewable energy, and other City program objectives.

# Xcel Proposal Outline

Regarding the Xcel offerings: Given time constraints, Taskforce did not (1) take an accept or reject position and (2) did not conduct quantitative analysis of the proposed offerings.

The Taskforce recommends that the City of Boulder and Xcel meet to further develop and analyze the proposed offerings. We have been informed that an initial meeting took place on August 5, 2013.

1. Conducting research using the SmartGrid installed in Boulder to test the impacts of distributed generation on local distribution systems (and other related R and D)
2. Expanding energy efficiency and demand response programs, with the City contributing funds to augment Xcel Energy funds to create additional (EE) and (DR) opportunities.
3. Expanding local distributed generation in Boulder by having the City offer incentives in addition to the incentives offered by Xcel Energy to attract more participation.

# Xcel Proposal Outline (con't.)

5. Forming with the City an energy efficiency/distributed generation incubator to encourage local Boulder businesses and investments in new technologies.
6. Unbundling Xcel Energy electric rates to provide better price signals to encourage further adoption of EE, DR, DG
7. Offering a “Green City Rate” that would allow communities to help design rates that encourage energy efficiency.
8. Providing an environmental re-dispatch option where customers and/or communities could pay the incremental cost of Xcel Energy burning gas instead of coal to generate electricity, cutting in half the carbon emissions for the megawatt hours produced.
9. Providing a mechanism for communities to cause more wind and/or solar resources to be added to the Xcel Energy system and dedicated to the participating community.

# Taskforce Recommendations

In general, Taskforce members believe that there is opportunity for the City and Xcel Energy to work together to discuss creative concepts that could achieve some City goals. We recommend that:

1. The City of Boulder and Xcel Energy engage in direct discussion / negotiation to further develop the Xcel Energy proposals
2. The City of Boulder explore forming the Boulder Local Energy Utility (BLEU), to focus on DSM and DG
3. Continue the Taskforce as an advisory working group to the City (and Possibly Xcel Energy)
4. Xcel Energy and the City pursue talks in parallel to any other actions that make take place

**Note:** The task force is taking no position on whether the parties should continue with or avoid other actions outside of holding ongoing discussions

# Future of the Taskforce

- The initial objectives of the taskforce have been met
- City staff and Xcel will need to interact going forward
  - Consideration of Xcel proposals
  - Condemnation / FERC process / transmission/ mutual aid, etc.
- The Taskforce offers to remain in place
  - Focus on the relationship between the City of Boulder and Xcel
  - Serve as a sounding board for new ideas
- Requires
  - Willingness on the part of city council and Xcel
  - Clarification of objectives and ground rules going forward

# Summary of July 23, Study Session Presentation

# Key Takeaways on Modeling

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- Charter metrics have been met
- Model was stress-tested
- Risks can be managed

# Did You Know?



## The metrics can still be met:

- Without carbon pricing
- Without wind subsidies
- Without capitalized interest
- Without out-of-city customers
- With equal or better energy efficiency incentives
- With equal or better solar incentives

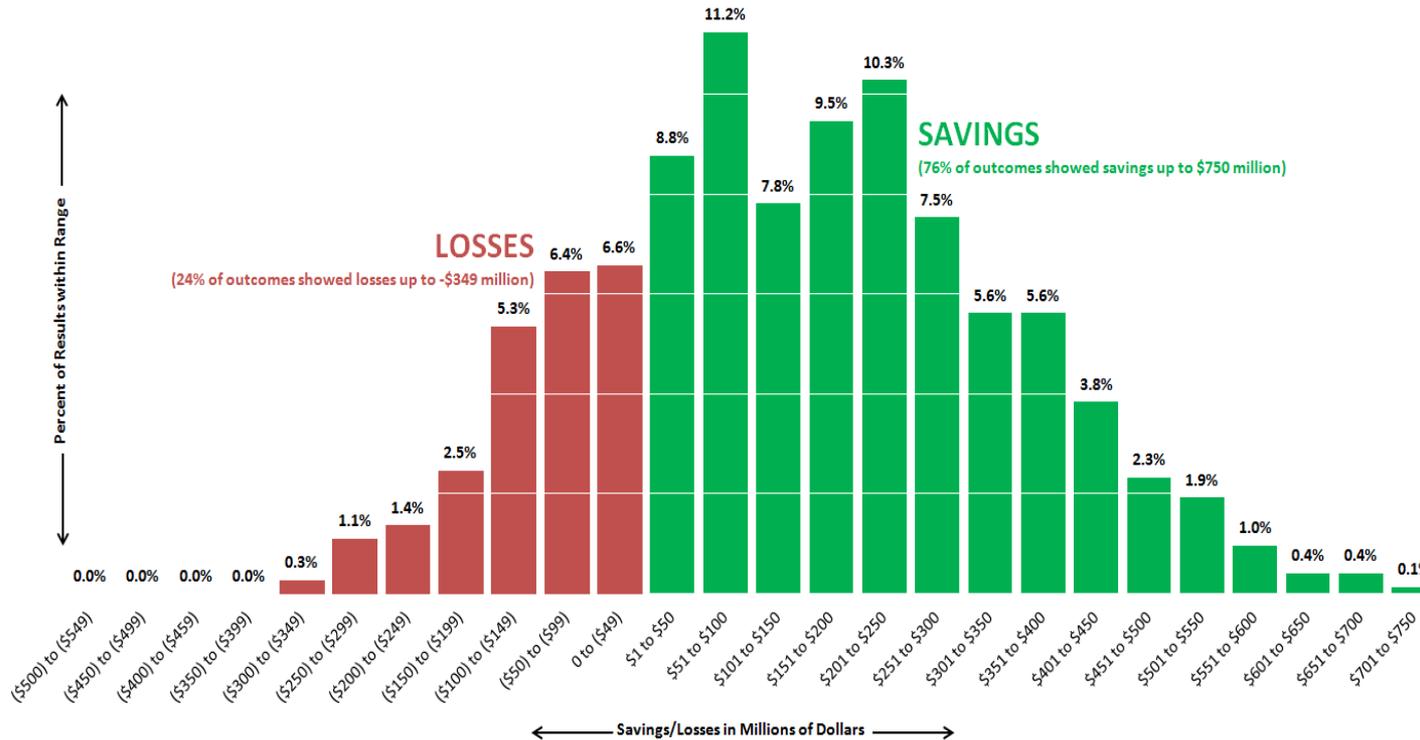
# What if Things are more Favorable than Expected?



## Distribution of Amounts of Cost Savings or Losses Over 20 Years for a Local Electric Utility Compared to Xcel Energy

Low Cost Option at \$150 Million in Stranded and Acquisition Costs

729 model runs were conducted with varying levels of natural gas prices, wind prices, interest rates, carbon prices, operations and maintenance levels, and debt coverage levels.

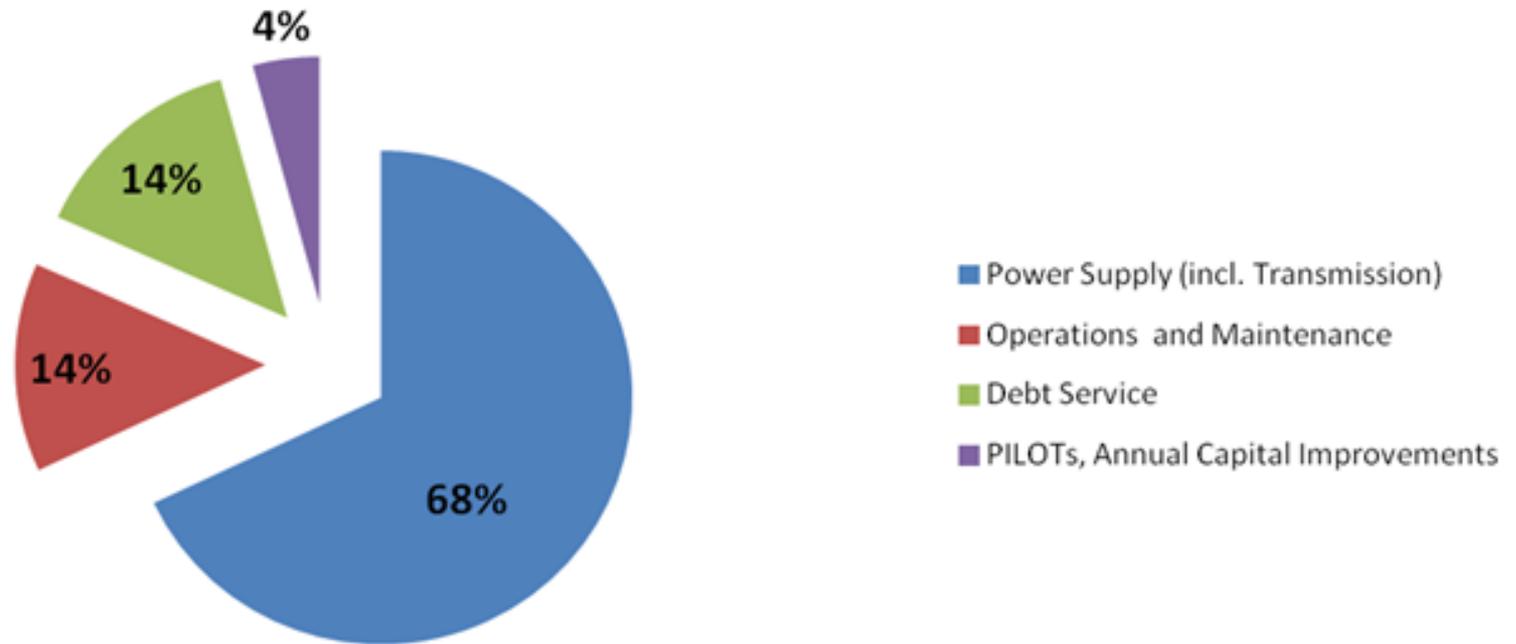


Modeling reflects conservative approach, but there are large potential upsides

# Distribution of Costs



### Proportion of Local Utility Costs (average over 20 years)\*



\*Approximate Values, Modeled at Low Cost Option; \$150M Acquisition and Stranded Costs

# Did You Know?



Boulder Utilities	Assets	Annual Revenue	10-Year CIP
Boulder Water/ Wastewater Utility	\$1 Billion	\$43.4 Million (2012)	\$169 Million (historic)
Boulder Electric Utility	\$150 Million	\$146-195 Million (2017-2019)	\$75 Million (projected)

Remember that approximately 70% of annual revenue goes to power supply costs (\$102-\$136 M)

# What Happens when Load is Reduced?



- Increased demand-side management and distributed generation will reduce Kwh sold
- Reduced power supply cost
- Allocation of remaining cost to all customers

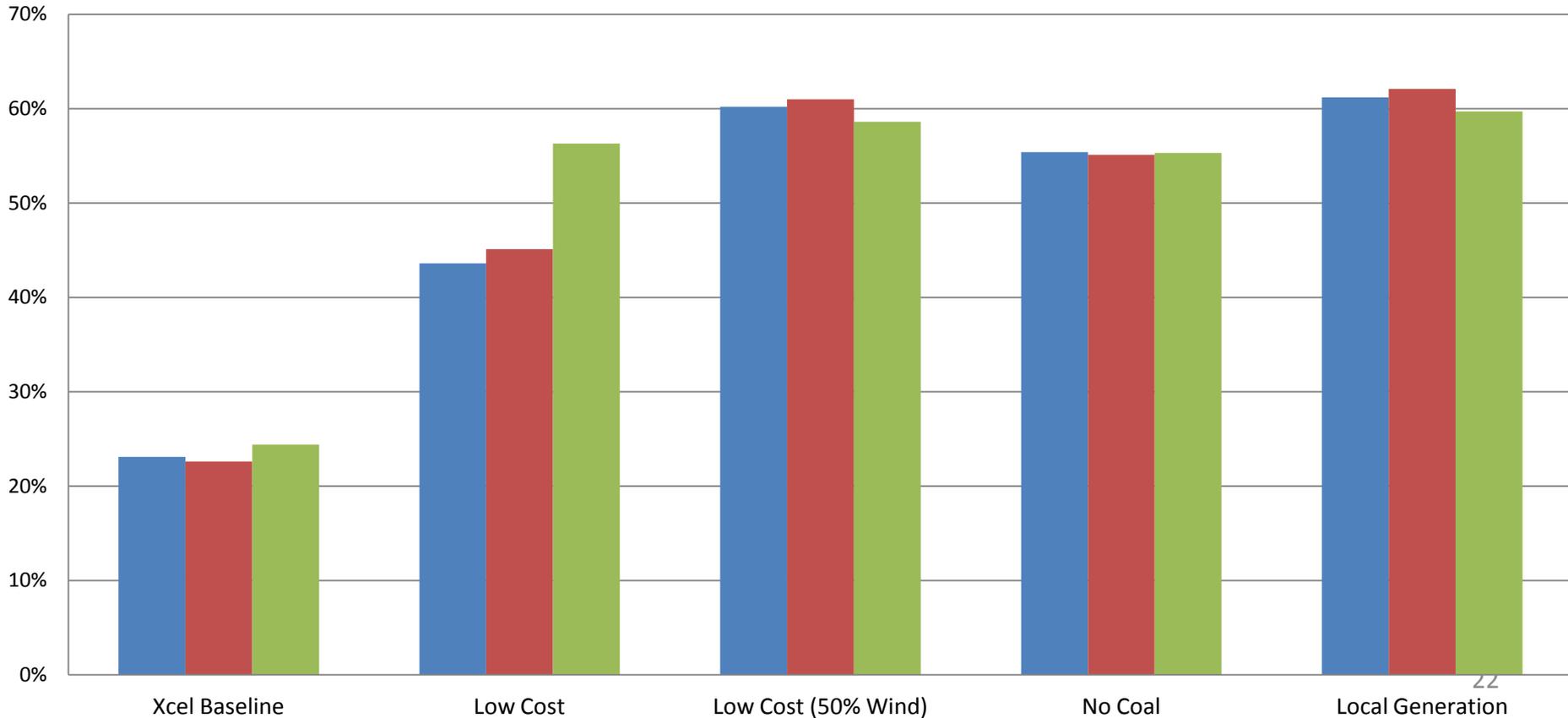
2% reduction	.3% impact
5% reduction	.9% impact
10% reduction	2% impact

# Value Added: Renewables



## Renewable Resource Mix by Option

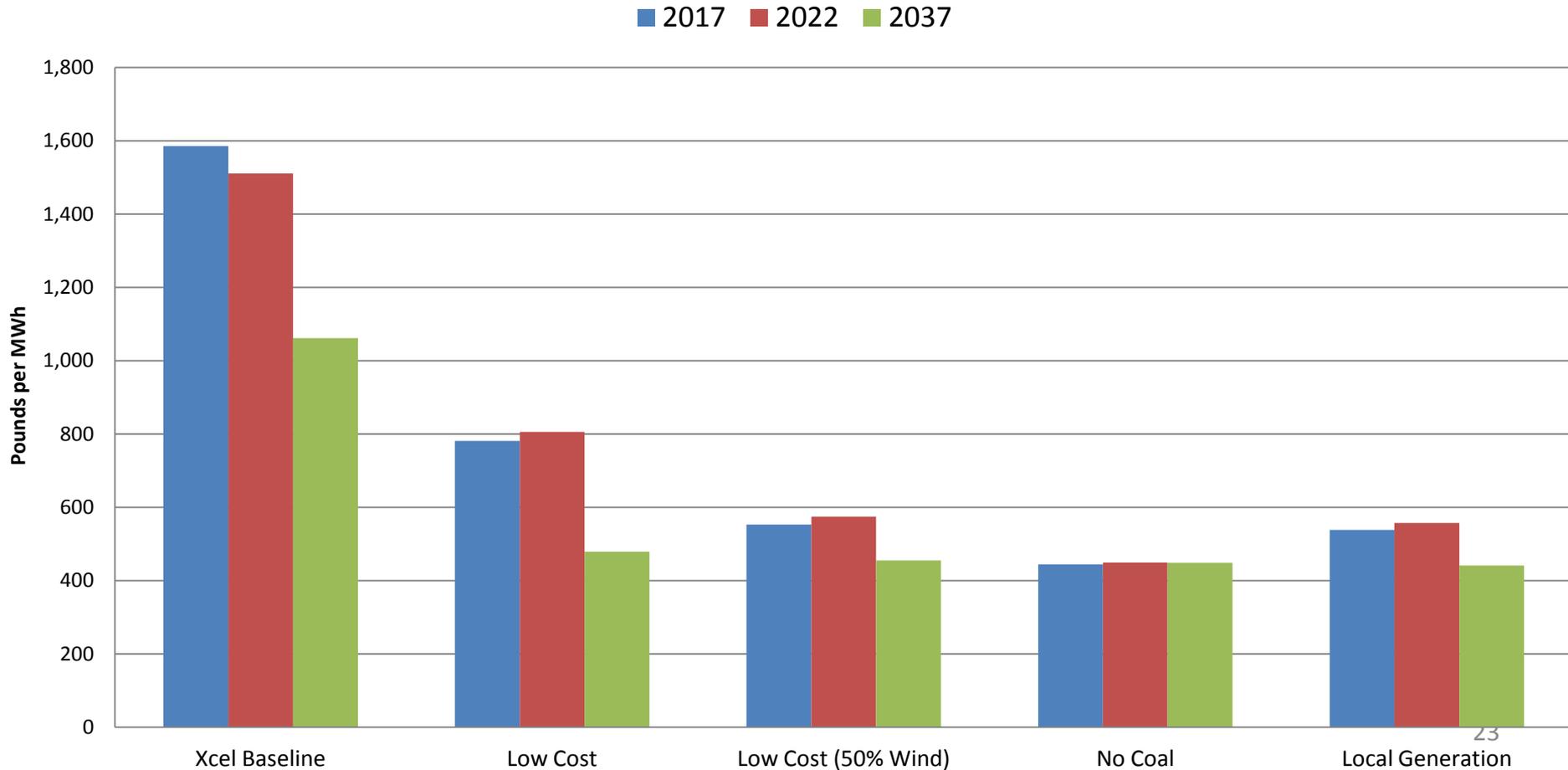
■ 2017 ■ 2022 ■ 2037



# Value Added: Reduced GHGs



## Carbon Intensity by Option



# Identifying & Managing Risks



## RISK

No carbon tax/GHG regulation

Gas price fluctuations

Availability of resources

No renewable energy incentives



## MITIGATION

Fuel source choices and increased distributed generation

Adequate reserves; impact on Xcel as well

New resources available, over 6500 MW of wind in response to Xcel RFP

Modeled impact, technology advances could mitigate

# Identifying & Managing Risks



## RISK

Stranded costs

Can't serve out-of-city customers

Transmission constraints

Ability to respond to emergencies

Electric utility operations experience



## MITIGATION

Power Purchase from Xcel

2-3% loss in revenue; not a risk

Capacity exists today to Boulder, Xcel as TSP must provide open access

Mutual Aid Agreements

Outsourcing and leveraging existing resources

# Qualitative Analysis



- Purpose to look at merits of proceeding, not just feasibility
  - Explores the “should we” versus “can we”
1. Assessment of Benefits and Concerns:
    - Status Quo with Xcel
    - Local Electric Utility
    - Partnership (TBD)
  2. “Utility of the Future” Practices

# Qualitative Analysis



## Xcel Status Quo

Key Concerns	Key Benefits
Heavy investment in fossil fuel generation	Large scale of assets
Customers have little say in decisions	Established organizational structure
Required to treat all customers equally	Small changes have large impacts

## Local Electric Utility

Key Concerns	Key Benefits
Some costs are currently unknown	Focus on flexible and clean energy sources
Significant undertaking	Structured around local values and goals
Outcomes are based on modeling	Profits reinvested locally

# Utility of the Future



The Qualitative Analysis shows that a Local Utility could:

- Be flexible and customer-service oriented
- Be adaptable and focused on existing and emerging clean energy technologies
- Provide extremely high reliability to reduce customers' cost
- Provide customers enhanced opportunities to manage their energy and save money
- Be agile and competitive while promoting local economic vitality through innovation and engaging local institutional leaders
- Design a business model that provides energy as a service rather than a commodity

# City/Xcel Taskforce Recommendations

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Continue to meet and evaluate Xcel's proposal

Next steps:

- Meeting with Xcel Aug 22
- Target completion of evaluation by mid-Dec
- Ongoing engagement of the Taskforce
- Regular updates to City Council

# Governance Recommendations



## Recommendations for Advisory Board:

1. Make explicit role on advising on electric rates
2. Requirement of one non-city resident costumer
3. Representation of large and small businesses, and residents
4. Best efforts to recruit certain skills
5. Clean energy skill is a must
6. All potentially subject to sunset clauses

# Work Plan: Next Steps



- Move forward with condemnation and partnership discussion
- or
- Pursue alternative path to achieve energy goals

# Federal Energy Regulatory Commission Ruling

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- FERC Declaratory Order
- FERC clarified stranded costs-can be reduced with a purchased power agreement with Xcel
- Ruling on specifics: denied pending filing of more information

# Data Updates

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All of the city's modeled data and assumptions can be found at:

[www.BoulderEnergyFuture.com](http://www.BoulderEnergyFuture.com)

# Third-Party Review Ordinance

# Condemnation Ordinance

# Separation and Acquisition



- Finalized boundary map
- Includes 115 kV transmission loop
- Development of technically optimal separation locations for reliability on both sides of separation

# What Does Separation Mean?



- Does not mean lines are severed
- Does not mean creating an island
- Interconnections used at boundaries to meter flow while maintaining reliability
- Interconnection points either:
  - Exist as Xcel operates the system now; or
  - Existing equipment relocated several yards; or
  - Additional equipment added (<10 locations)

# How the Map Was Developed



## Instructions city gave engineers:

- Serve all properties in city boundary
- Serve all city properties with electric needs, where feasible
- Separate the system at the technically optimum locations to maintain reliability for Xcel's system and the new utility

# How the Map Was Developed



## Engineers' list of criteria:

- Interconnection points maintain or enhance quality of service, redundancy and capacity
- Maintain the primary geographic area presently served
- Serve contiguous geographic areas
- Utilize existing points of interconnection as currently operated by Xcel

# How the Map Was Developed

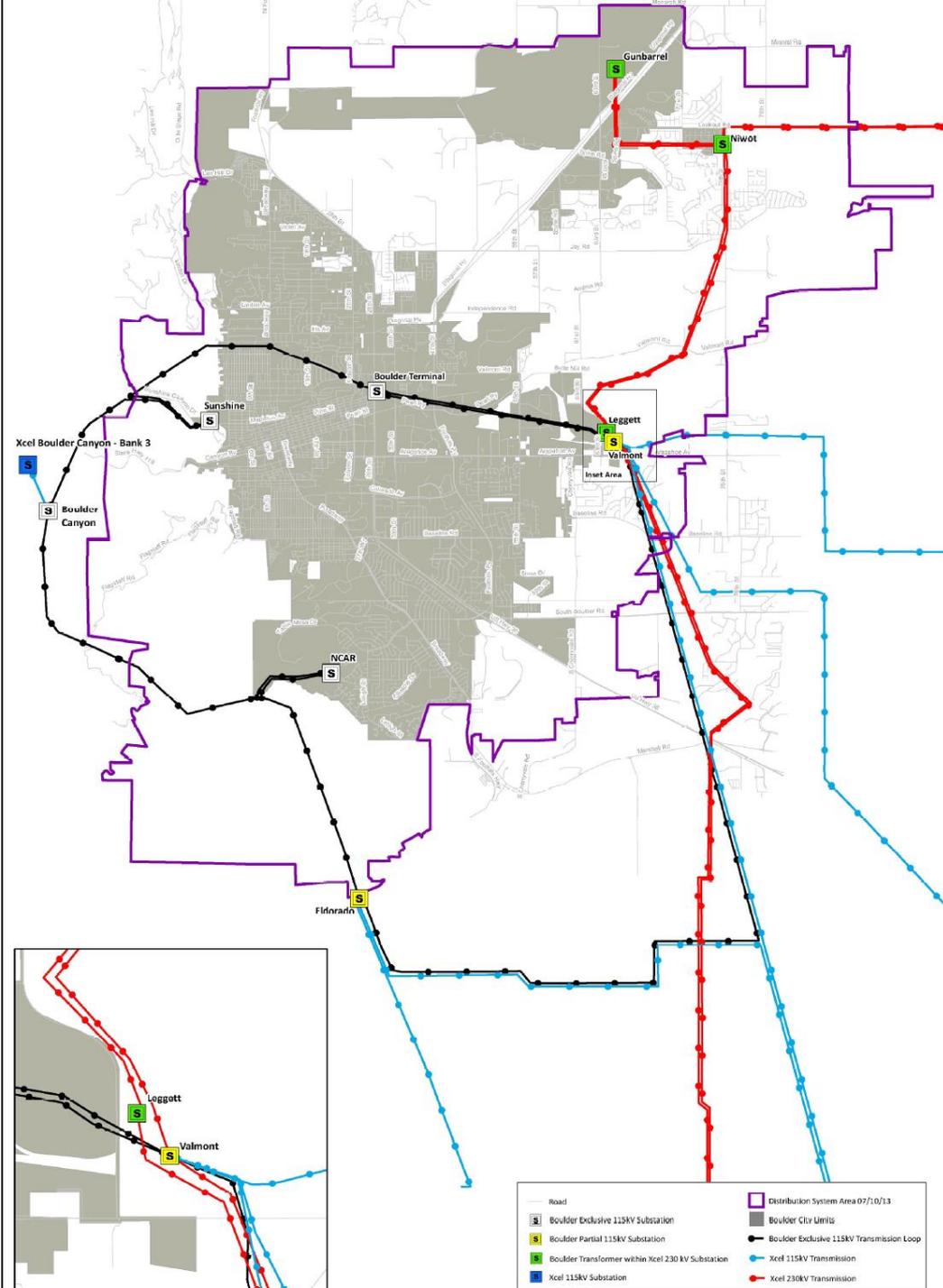


## Engineers' list of criteria:

- Maintain the ability to cross-feed between substations and utilize substation capacity
- Use existing parcel boundaries
- Minimize operational and maintenance conflicts
- Minimize the need for new facilities
- Eliminate the need for duplicate facilities

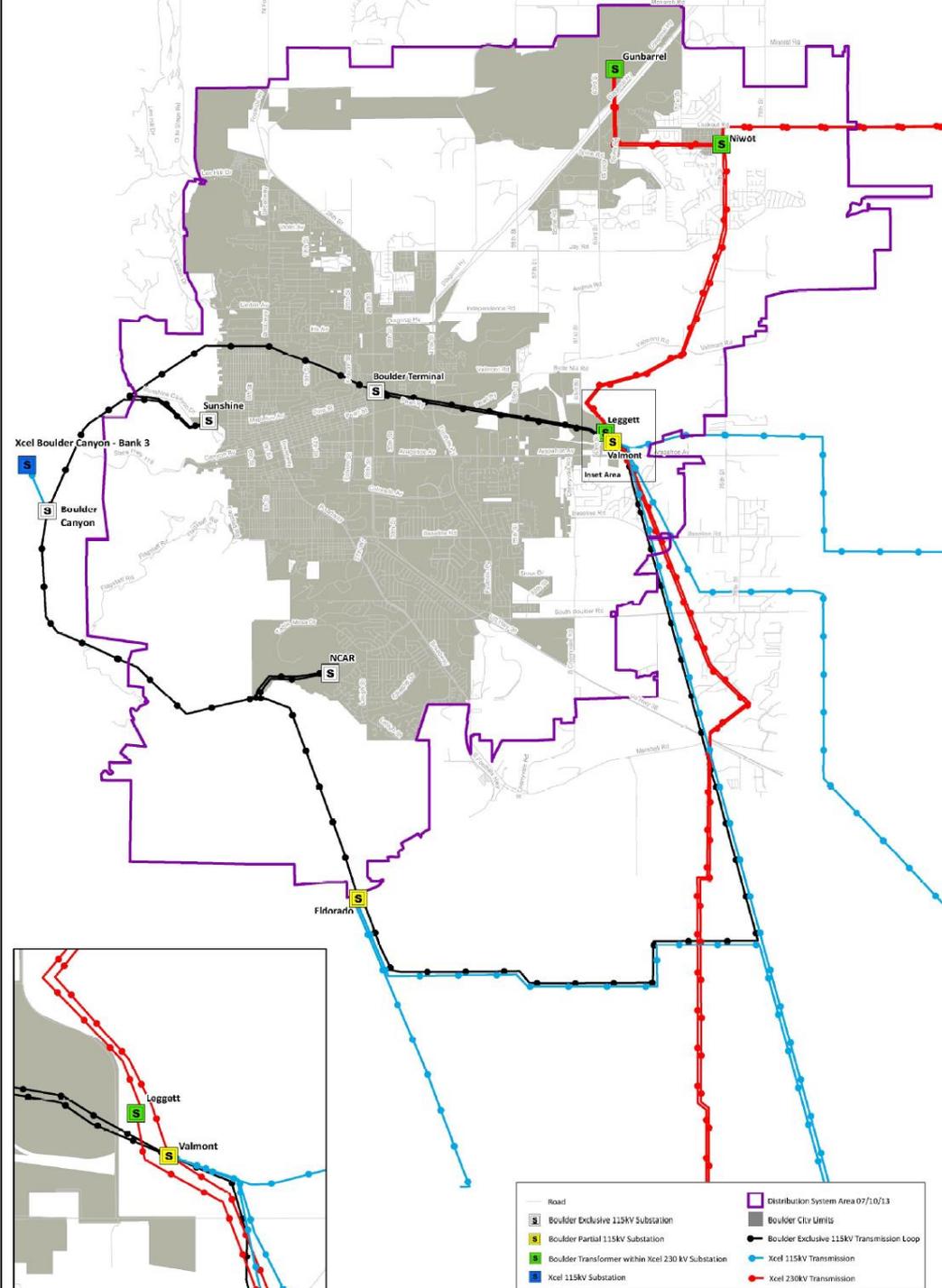
# Transmission Systems Map

- Part of economic and operational unit for service territory
- Allows new utility to manage flow throughout service area
- Reduces electric line losses
- Allows multiple points of delivery to distribution system
- Provides redundancy
- Provides access to city generation at Boulder Canyon Hydro

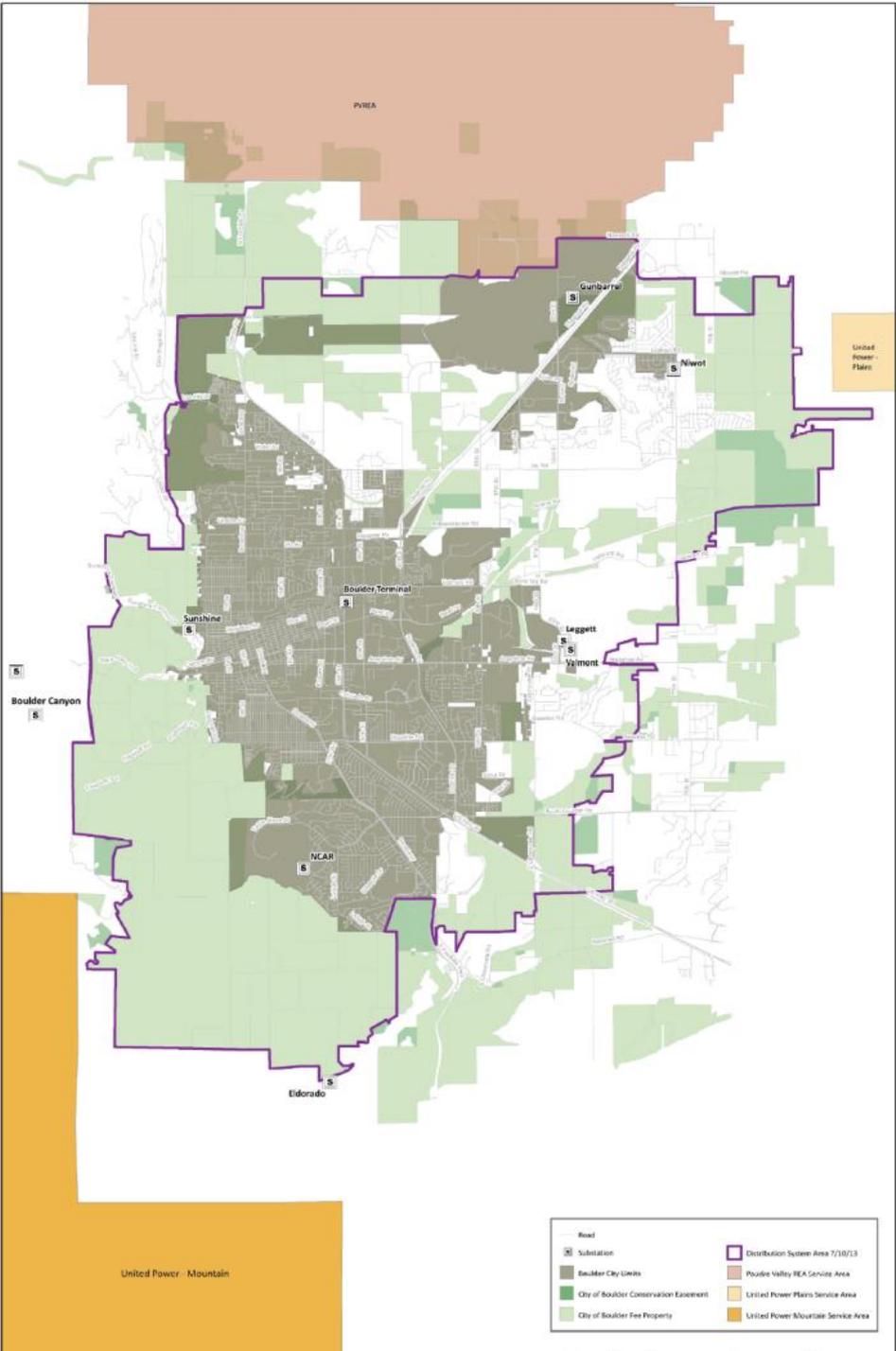


# Transmission Systems Map

- Provides redundancy to Xcel for service outside of service territory
- Necessary to manage local generation, storage, and demand response programs
- No negative impact to Xcel
- Benefits to Xcel:
  - Reduce Xcel costs for aged equipment
  - Xcel does not have to balance resources within city service area

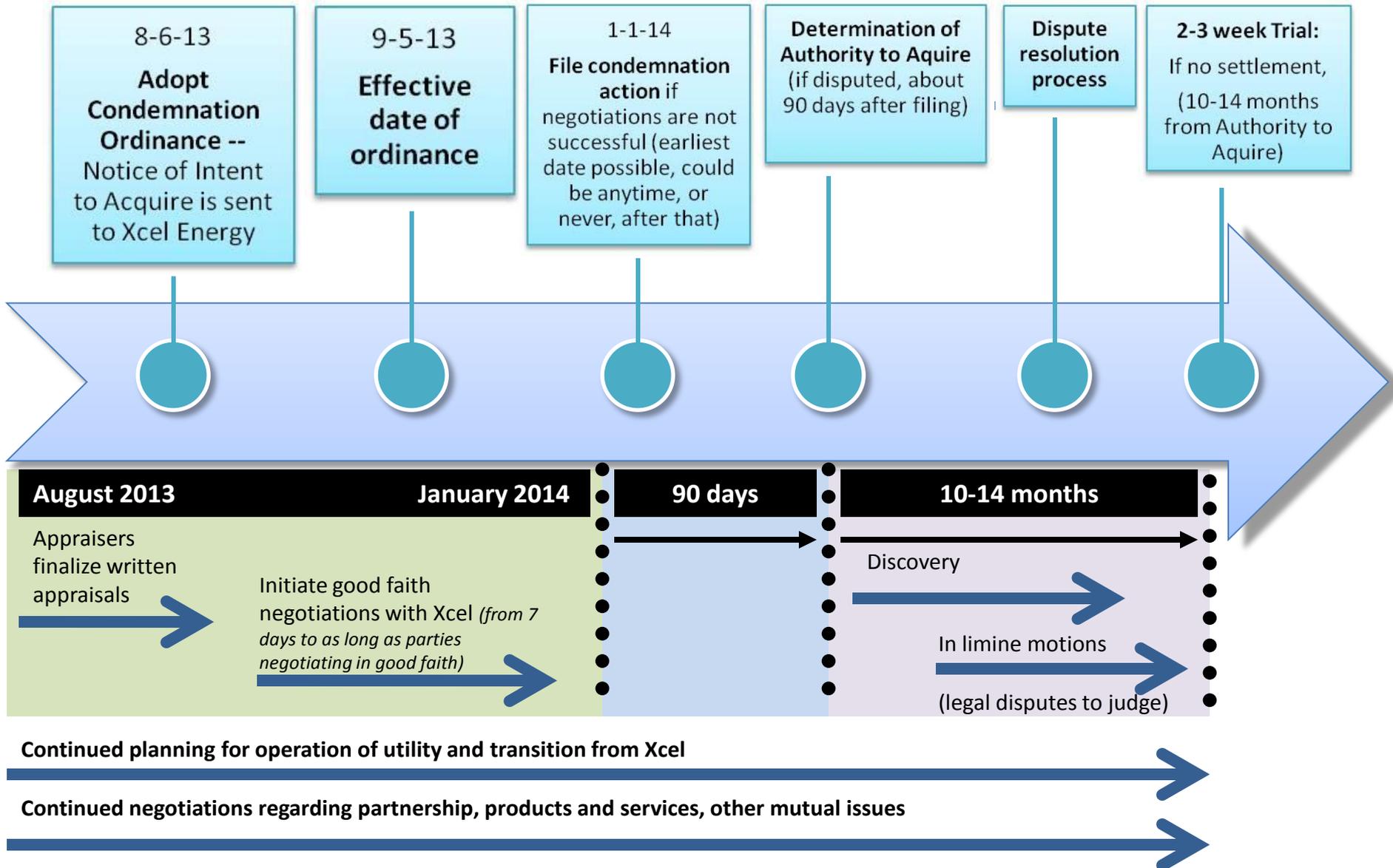


# Distribution Systems Map



Road	
	Substation
	Boulder City Limits
	Boulder Valley REA Service Area
	City of Boulder Conservation Easement
	City of Boulder Tree Properties
	Distribution System Area 7/10/13
	United Power Plains Service Area
	United Power Mountain Service Area

# Acquisition Process



# Public Hearing on Third-Party and Condemnation Ordinances

# Ballot Ordinances

# Meeting Objectives



Second reading on two ordinances related to the Energy Future project:

- Ballot initiative
  - Review short title
- Alternate competing ballot measure
  - Review Charter amendments, ballot title, and short title

# Municipalization Ballot Questions Overview



- Initiative
  - Election requirement for debt
  - Out-of-city customers required to vote on debt
  - Debt elections can only occur every other year
  - Limitations on brokerage fees
- Alternative ballot measure
  - Intended to address concerns
  - Implements recommendations of the Governance Working Group

# Proposed Initiative



Initiated Ballot Measure	TABOR
Applies to electric utility enterprise	Does not apply to utility enterprises
Votes only allowed every other year	Votes permitted at all November elections
Requires out-of-city debt elections	Only applies to districts
No safe harbor for emergencies	Permits exceptions to restrictions in emergencies

# Initiative - Short Title

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Initiated Charter Amendment  
Restricting Debt and Requiring  
and Restricting Elections of  
the Electric Utility

# Alternative Ballot Measure Alternatives and Conflicts



- Ballot Titles Changed bring the ballot measure under statute statutory provisions for alternative ballot measures
- Intended to supersede the ballot initiative
- Additional language is court tested
- First reading was only based on charter provisions related to conflicting measures.

# Alternative Ballot Measure— Options



Council Alternative	Initiated Ballot Measure
Bond test or specific initial debt limit.	Voter Approval of Debt Limit before Future Debt
Allows elections at any city election	Restricts Elections to Every Other Year
Allows out of city service if it assists with a safe and reliable system	Prohibits out of city service unless customers can vote on debt
Limits Brokerage fees to commercially reasonable amounts	Limits Brokerage Fees to 1%
All customers eligible to serve on the Utility Board	
Utility Board to advise on rates	
No discrimination based on location or customer class	

# Alternative Ballot Measure



## 1. Bond Test

- Better for negotiation and litigation

## 2. Higher Debt Limit

- High number allows one to disaggregate sections
- Less voter appeal

## 3. Lower Debt Limit

- Voter appeal
- Sets the price

# Alternative Ballot Measure

## Customer Choice

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- Drafted as a City Council ordinance
- Objectives:
  - Understand out-of-city neighborhood preference by vote, poll, or other means
  - Facilitate allowing out-of-city customers to choose utility provider by neighborhood

# Alternative Measure - Short Title

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## Charter Amendments To Article XIII, “Light and Power Utility”

# Staff Recommendation

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- Adopt as amended:
  - The ballot initiative (Ord. No. 7919)
  - Alternative measure with the bond test option (Ord. No. 7920)

# Public Hearing on Ballot Initiatives