Dec. 14, 2012 (9 to 11 a.m.)
Atrium Building Conference Room
1300 Canyon Blvd.

Present: Pete Baston, JoAnn Silverstein, David Kline, Edie Zadona, Tom Leifer, Zane Selvans

Staff: Kelly Crandall, Sarah Huntley, David Gehr

Consultant: Greg Hamm

Objectives:

- Agreement on purpose and ground rules
- Agree on tasks and assignments
- Evaluate proposed decision analysis framework
- Identify follow-up questions for city staff or the decision analysis consultant

Introductions:
The group went around the table for quick introductions. Kelly explained that this is one of five working groups and explained where the project currently is. Pete pointed out that there could be risks associated with the status quo, as well as options. Pete said that it will be very important to translate what we are doing into language non-engineers can understand.

Project Overview, Purpose, Ground Rules/Protocols
Kelly referred the group to a handout that explains the purpose, expected work product and work plan overview/timeline. The group had no objections. Kelly then discussed the ground rules, specifically calling out the plan for building consensus and recording both majority and minority perspectives when necessary. She also went over the documentation expectations, specifically the protocol that draft documents will remain within the group until they are finalized. Edie asked about whether variables that might be confidential, such as acquisition and stranded costs, will be considered. Kelly and Sarah explained that they will be but that the actual values will not be released because of pending litigation. The group seemed comfortable with this approach. The group also agreed to use Basecamp.

Kelly reviewed the Energy Future goals and objectives. Tom had a question about how the metrics feed into these goals. Kelly explained that the metrics are based on Charter requirements. Greg explained that all of the metrics, except for the debt service coverage one, are measurements on the goals. Pete explained the metrics statements the city has created differ some from those of many utilities because theirs were developed years ago. Sarah pointed out that the goals need to be evaluated even for options that might not include the creation of a power and light utility; whereas, any municipalization plan has to meet the metrics.

Presentation on the Proposed Framework for Decision Analysis for discussion
Greg explained that he wants to bring the group up to date on the work that has been done so far and outline the next steps to get feedback about whether modifications are appropriate. The second part of his discussion will be focused on specific tasks this group can do, including comments and input as well as direct help at gathering uncertainty data and figuring out how to communicate with the public about the decision analysis process and work. David brought up a book called Value Based Decision-Making and said he wondered whether the process is open to looking at additional options. Edie said she was at Greg's presentation earlier this week and she had some questions about how additional options or combinations of options would be considered. Kelly sought to understand what the group means by options. Kelly explained that there are a variety of potential decision points, i.e. legal, resource mix, etc. She said there are two general options: some form of municipalization and some form of staying with Xcel. Within these is a range of possibilities. Greg explained that some factors play into evaluating options, such as deadlines related to making a decision about whether to allocate money for litigation and further study about this issue. JoAnn asked what is driving the timeline. Sarah explained that funding is limited to five years and we are one year in. Litigation is likely to take longer than that. David said he understands the stage gate of March but that beyond then, he hopes the group will be able to do an even richer analysis. It will be important to explain what we don't know and how we plan to get to the point of knowing them.

Greg explained that decision analysis has 4 steps: formulation, modeling, data gathering, and analysis. He noted that the steps for the decision analysis component of the project have changed somewhat—initially, the working groups began to create a values hierarchy that separates fundamental objectives from means objectives and started creating scales that could be used to measure the Energy Future goals. From working with staff and the working groups, and based on the expedited timeline, Greg is recommending a process to present multi-attribute information but not take stakeholders through the process of creating quantitative scales and then weighing fundamental objectives. David noted that this is decision support, if not decision analysis.

The working group discussed potential things that could be modeled. For example, Greg noted that some utilities (such as Alameda Light & Power) have a maximum annual rate increase that tracks close to inflation so that customers do not get hit with sudden increases all at once. Pete noted that utilities tend to put off rate increases and so they also put off operations & maintenance. JoAnn asked whether we might model dynamic regulatory change, as is done with water and wastewater decision analysis. Greg said that that could be considered on the list of uncertainties. Zane asked how we would define reserve capacity to consider it as an uncertainty. Greg and David explained that that would be defined by the coordinating councils.

Greg introduced the 5 scenarios that had been developed by the Resource Modeling Working Group (Xcel baseline and municipalization with Xcel power purchase, rate parity, GHG emissions parity, and maximized emissions reductions). Along with the separation geography, these are key decision alternatives to consider. Tom suggested that this could be visualized with

a matrix that has 5 rows for the scenarios and then columns that correspond to the Energy Future goals, to convey significant information.

The group discussed major uncertainties out of the list of 50 that had been identified by the working groups. He noted that many were redundant or subsets of others, and so work with staff during his visit narrowed the list to 15-25 depending on what they encompass. David asked about modeling in fundamental legislative or regulatory changes, such as creation of an regional ISO market. Greg noted that at this point we are primarily considering the costs that get internalized by the market; CO_2 would be modeled as a shadow price or adder. JoAnn noted that energy and water interact, and that water availability is another risk to consider. Fugitive methane and other pollutants are relevant too.

Greg explained that there are 3 models necessary for the whole analysis: HOMER for resource optimization, an Excel spreadsheet for financial analysis, and DPL or a similar tool for the decision analysis. DPL would be used to set up scenarios with a tree structure to properly match resource and financial model components. Pete noted that this creates QC concerns, and Kelly explained that the team is developing several ways to cross check results manually. Zane asked how the Xcel baseline would be modeled, and Greg said that it would be like the other models but probably based on past history. There is a concern that Xcel's forecasts are not especially accurate so it might be necessary to look at forecasts vs. the predicted trajectory from actual performance.

Greg explained that data could be collected in 2 phases. First, 10%-90% (the 80% confidence range) data would be collected for uncertainties identified as having a particularly large impact. We would examine the most sensitive with attention to dependencies between them. We would need to cut them to 10 or fewer by mid-January to then obtain more detailed probability data and dependencies. JoAnn expressed concerns about the tasks assigned to this working group as not all members have background in the energy industry to assist with data-gathering. Greg and Kelly suggested that decision analysis working group members could liaise with members from other working groups to confirm that data is being gathered consistently. JoAnn noted that this can be an extensive process. David volunteered to assist with reviewing the data that is collected.

Other tasks for this group could include sitting in on other working group meetings to address probabilistic data questions, and suggesting topics for or helping draft or review short "white papers" or memoranda that can be released prior to City Council deadlines to get information out in bite-sized pieces. Greg said the goal would be to get decision-makers used to understanding ranges and risks. David asked if this is how it would be done with corporate boards. Greg said that a phenomenal final presentation is outweighed by getting bite-sized information out early.

JoAnn asked some questions about attaching probabilities to uncertainties: for example, would we look at extreme values or ranges? This feeds into communication, because people view averages and probabilities of extreme events in different ways. Edie agreed that this is a huge

problem in getting decision-makers to understand probabilities, and requires a constant process of education. Greg asked whether this was two issues: the collection of probability data, and the communication of it. He noted that presenting this information to City Council will lead them to reveal what they're concerned about, and added that this group may be able to provide advice on how to present the relevant pieces to them.

Greg asked the group to notify Kelly if there are any uncertainties on the list that look particularly difficult to assess, and suggested that if we can cut the list to 10 or fewer maybe we can have a more in-depth discussion on concerns about data gathering. Edie added that we need to represent those uncertainties that we do not think are particularly meaningful and JoAnn noted that there are some that might be sensitive but would not have a big impact on the model. Greg said he anticipated that we would have to convey these dependencies, and Edie said that was how she visualized the main product. Greg said the goal would be to construct a story on when a strategy shines under what conditions.

JoAnn stated that the list of uncertainties appeared heavily weighted toward those associated with municipalization, and asked whether we could consider Xcel's behavior in response to the city's actions as an uncertainty. Kelly provided the group some background on the policy paper on alternatives to municipalization that city staff had released in early December. Greg said that the model or framework used in this process has to be flexible enough to consider alternatives like this. Tom asked whether we could anticipate a couple of likely strategies that Xcel might be amenable to and model those. Pete stated that this might not be feasible because Xcel is being shut down from generating creative options by its own legal department in the event that they could be used against it. Zane asked about modeling the possibility that Xcel could use its leverage at the state level, for example, to push for community choice aggregation legislation. Greg said that utilities in California can band together for lobbying, although they are not as big as some of the large investor-owned utilities like Pacific Gas & Electric. Kelly said that there are local lobbying groups that Boulder municipal is involved with, such as the Colorado Association of Municipal Utilities and the Colorado Municipal League.

Greg said that next steps included developing an influence diagram to vet with the group, and to review the probabilities screening at the next meeting.

Next Steps and Tasks
- Come back to group with components of influence diagram that are not legally sensitive
- Develop ideas on how information can be presented for group feedback
- Share refined strategies, uncertainties, and probabilities with group for feedback

Upcoming Dates:
Meeting 2 – Jan. 18, 2013
City Council Study Session – Feb. 26, 2013