

**Decision Analysis Working Group**  
**Meeting Summary (Final)**

Jan. 23, 2013, 9 to 11 a.m.  
13<sup>th</sup> Street Conference Room  
1701 13<sup>th</sup> St.

**Present:** David Kline, Edie Zagona, Zane Selvans, Tom Feiler (on phone)

**Staff:** Kelly Crandall, Heather Bailey, Sarah Huntley, David Gehr, Ruth McHeyser

**Objectives:**

- Receive feedback from group on modeling progress and key uncertainties
- Receive feedback from group on draft influence diagram
- Share mock DPL outputs and receive suggestions on appropriate presentation of information

**Agenda items:**

- Introductions
  
- Update on progress and process  
Kelly reviewed the new outreach process dates and indicated she would like group feedback about how to present information to the public during this time. Edie asked for clarification about whether there would be a quantitative comparison of the five strategies. She also wanted to know whether council would actually be making a decision about which strategy to pursue or really just offering direction about which of the strategies are worthy of a more detailed analysis. Kelly explained that part of the reporting out has to do with which, if any, of strategies are feasible. Council will also be determining if we have sufficient information to go forward with the expenditure of legal resources. Heather Bailey said the 26<sup>th</sup> is an opportunity to daylight how the scenarios compare to Xcel and provide a quantitative and qualitative idea about what could work and what wouldn't. Going into April, city staff hopes to get council feedback about which of the scenarios they would most like to focus efforts on achieving. Edie said the presentation about the results of the analysis is critical to understanding the nature of the decisions that need to be made at each point. Heather said one of the bigger challenges will be explaining this process and what the data tells us. Edie agreed and said that distilling the information and making it relevant to the decision points at hand can be very valuable. Zane asked about whether the scenarios are end games as opposed to paths. Heather said they do reflect paths because they reflect the community's goals and weight them differently. Impacts of different choices will become apparent, although some of them will be subtle. The concept, for example, of slowly tapering off from Xcel's supply is a risk minimization strategy. Sarah offered another explanation about the questions council is being asked to answer. Edie provided feedback that it will be important to be very clear about what is being decided and what isn't at this time. Edie said she wants to have a better understanding about what the analysis will look like and what level of detail will be provided to the community so that members can determine for themselves whether the analysis is sufficient. Even legally sensitive information – or the existence of this information – needs to be reflected in any influence diagram so the public understands generally that they are being accounted for and how. Heather said we can't divulge how acquisition and stranded costs are calculated or associate a probability with them, but we will be able to model a range of numbers. Heather explained that for stranded costs, for

example, the range will be \$0 to Xcel's figure and that the model will take into account dollar amounts at 1/3 intervals. David Kline said a tornado diagram might be helpful because it wouldn't show probabilities but would show you what could happen at that level of stranded costs. The group seemed comfortable with that approach.

#### Key uncertainties and data collection

Kelly reviewed the model integration map with the team and explained the type of information that is going into each model. She then moved onto the conceptual framework diagram. David Kline said this modeling approach provides a resource plan for every five years but that it is important to understand that HOMER is only indicative. The data will be illustrative as opposed to the be-all-end-all approach/path. Heather agreed with this assessment. Kelly shared the list of uncertainties and explained some changes that have been made since the last meeting in terms of some inputs being treated as direct inputs instead of high/medium/low inputs. She spoke specifically about how the load profile is being treated as an input. Zane said people he has talked to are concerned that the city could end up with a utility that is tied to the same incentives as an IOU. Heather said she understands the concern but that is exactly where the city does not want to go. David Gehr pointed out that the city's water utility has been actively selling less and less water and is a good example of being able to create a business model that achieves a conservation goal. Heather said utilities typically model maximum and consistent load growth. The risk that needs to be assessed by the city is if we have flat or declining growth. A recent article showed that nationwide, there has been a reversal in the typical growth model. Heather said it is important to understand the financial implications of this trend. Kelly said the financial model is set up to look at variations between the strategies. David Kline asked what we mean by carbon tax. It is a national or statewide tax that would be imposed on everyone, including the city. Zane said he is wondering how we are avoiding a straw man comparison and actually taking Xcel's likely decision-making into account. Heather said she is poring over records to try to determine how they structure rates and make decisions so this can be taken into account. She said the city is closer to achieving this so we can model risks associated with the baseline. Kelly said a question came up last time about whether we are using averages. She said the information coming from the working groups is generally based on most likely figures with two levels of standard deviation. She sought the group's feedback about whether this makes sense. David Kline asked some clarifying questions and noted that "most likely" is not the same as a 50% or median level, which could skew the distribution. The group seemed to be comfortable with this approach. Heather pointed out that value of this level of analysis is that you have to look at possible outcomes over a range of time and prompts the discussion about what you will do if certain risks occur. Edie agreed that people who are used to making decisions in a risk environment intuitively understand the issues, but that is not necessarily true of everyone. There was a discussion about the story that 10-50-90 tells and doesn't tell. The group agreed that the story it tells best is how wide the range is. Zane said he would like the team to be receptive to positive surprises, such as aggressive demand reduction, as well as risks. There was a brief discussion about the financial vulnerabilities such an outcome could create. Heather explained that the vulnerabilities are less and that decreased demand could be a good thing as long as rates are not based on Xcel's current structure. The group discussed the pros and cons of such a paradigm shift for our community.

- Draft influence diagram

Kelly shared the diagram. David Kline asked about the key, which Kelly explained. He also wanted to know how the city is evaluating which decision is better than others. Kelly said the

outputs will be consistent across the scenarios (examples: rates, net present value revenue requirement, carbon emissions) and that these comparisons are what we will use to weigh one option against another. The group had a discussion that some data that we had hoped would be binary, for example, with rates, will have a range of probabilities – and the challenges related to this from decision-making and public communication perspectives. David Gehr explained that what the Charter requires is a point-in-time test that answers the “can we do this” question. The more detailed level of analysis that is being conducted now really gets to the broader “should we do this” question. Edie had a question about the load being treated as a decision instead of an uncertainty because that is unusual. Zane said he thinks it is “great” that it is being treated as a decision. Kelly said the city believes load could be treated as either but we ended up treating it as a decision because some strategies involve significant investments in efficiency, which will impact the load. Kelly said it is possible that future modeling could treat load differently. David Kline indicated that might be helpful. Zane specifically suggested that a future model run could treat efficiency as a resource. Edie said that is something that is often done and might seem less ambiguous. David Kline asked what PILOT means. Kelly explained that it is payment in lieu of taxes. David Kline wanted to know how coal prices are accounted for as an influence on the cost coal resource box. Kelly said the city is currently looking at Xcel’s coal price baseline and not treating it as something that needs to be varied. She acknowledged that there are questions about whether this baseline is accurate and the best to use. Heather said staff has an understanding of the problems with Xcel’s coal prices and feel pretty comfortable that this is being taken into account.

- Suggestions related to the presentation of information

David asked a process question: How does the work of all of the working groups get presented to council? Heather explained that staff will take the output from each of the groups and incorporate them into a detailed memo. Heather also said the plan is to have a joint meeting of all of the working groups in advance of the 26<sup>th</sup> to share the output and receive feedback from working group members. Kelly said staff is also in the process of collating significant notes about what decisions were made in the background in terms of model runs and assumptions that were used. Heather said the staff memo will have attachments and links to all supporting documentation. Edie made a point that 101-level information presented needs to be a “smart distillation” of relevant information, as opposed to being “dumbed down.” David Kline talked about the value of focusing on the handful of items that are most likely to make a difference and being able to explain to the community the thought processes that went into these. Edie said it will be important to develop specific ways of expressing the results in terms of probabilities. Kelly asked the group for advice about how to convey some of the risks associated with the more qualitative energy future goals, such as economic vitality and local control. These are not necessarily outputs from the modeling process. Zane said an efficiency commitment would like create local jobs because retrofitting is a very labor-intensive process. Zane said analogies from other places, such as Germany, would be very helpful. David Kline said it is important to understand that the employment profile for wind is very different from that of solar. For wind, where it is manufactured is critical. NREL has some published reports about the impact of putting X megawatts of wind in other states. He said these might be helpful. David suggested considering whether there is a story to tell about the paradigm shift encompassed in each of the strategies. Edie raised the challenges associated specifically with explaining what having more local control would mean to the average person.

- Assign tasks/next steps/collect questions  
Kelly plans to send out the assumptions with probabilistic ranges for the group to vet. She also volunteered to draft a paragraph about the 10-50-90 for the group to review. Kelly asked the group members to post any additional questions they think of on Basecamp so we can take these into account. Heather also suggested putting a list together of the non- or less-quantifiable values and sending it to the group in case anyone can identify case studies or analogies that would help. Zane began posting some to the group at the end of the meeting. Kelly said she has also started list of modeling that could occur between February and March. David Kline asked when outputs from DPL would be available. Heather said she would love to see them at the end of next week, but that it likely won't be until the first or second week of February. Edie asked what the outputs will look like. Kelly said the tornado graph, a pyramid diagram and a comparative line graph are all possibilities.

**Next meeting:**

Joint working group meeting: Likely Feb. 13 from 9 a.m. to noon

Next steps:

- Kelly will circulate a paragraph describing 10-50-90 ranges
- Kelly will upload to Basecamp the ranges for uncertainties as they are available
- Kelly will upload to Basecamp a blank matrix on risks and opportunities as an example for conveying information
- The working group will provide examples for how to convey decision analysis results, or relevant materials to supplement the identification of risks and opportunities