Electric Integrated Resource Plan (EIRP)
Public Meeting, Oct. 3, 2007

Springs Utilities Issues Manager Gail Conners greeted all participants and reviewed the agenda, hand-outs, and purpose of the discussion groups later in the meeting. John Romero, general manager in Energy Acquisition Engineering and Planning then proceeded with the PowerPoint presentation on the status of the EIRP.

Questions that arose during the presentation:

1. In regards to the environmental high end, how clean is it with $30/mwh carbon tax? Do you have any idea how clean it would be if coal and gas plants could be improved?
   Answer: Given our current assumptions, we would expect that when a $30/ton carbon dioxide cost is assumed to apply, wind and natural gas-fired energy sources are more cost-effective than coal. Coal-fired plants with sequestration may also be cost competitive, however, the costs of this type of plant are not fully known, since none are operating today. Solar power is not cost effective at this price. There is a great deal of exciting research aimed at cleaning up coal and gas plants. See question 2, below.

2. Is there any such thing as making a coal plant clean?
   Answer: "Clean Coal" is the goal of a number of federal and utility research initiatives. There are existing technologies that have the potential to greatly reduce or eliminate emissions of carbon dioxide and other pollutants from coal fired power plants. The goal of the research is to develop the technologies so that they are effective, reliable and relatively low-cost.

3. Was there any modeling on environmental options? How much cost or benefit would there be from environmental options?
   Answer: We evaluated environmental options, which varied from carbon taxes to integrated gasification-combined cycle technology (IGCC) and nuclear. We modeled renewables such as wind, solar and hydro. Some of those are part of the seven final portfolios that were chosen for further modeling.

4. With load cycling, are you pulling something off the grid?
   Answer: The load cycling program provides a reduction in peak demand through the cycling of residential air conditioning.

5. Has the government looked at green energy?
   Answer: Many of our local military installations are looking into renewable energy options. The critical determining factors for them to further pursue these options are price and availability.

6. Have you worked with the architectural association and the cost of retrofitting? For example, 2x6 construction rather than 2x4?
   Answer: To date we have initiated a Builder Incentive Program to help stimulate the building of Energy Star homes. As far as work on building codes to require 2x6 construction we have not been part of any initiatives for this.

7. Are you communicating with other municipalities?
   Answer: Yes.

8. Have you taken a regional look at capacity, or being part of a regional network for strategic planning?
   Answer: Springs Utilities has communicated with the Western Area Power Administration (WAPA), which is looking to a regional process.

9. What are the economic gaps to attract more businesses? If you have a 300 mw need by 2013-2014 – what will that do to economics?
   Answer: Springs Utilities looks at capacity expansions in the short term if we need it. Currently, we don't show a load forecast of 300 mw need in 2013-2014.

10. With transporting coal over rail lines – is that considered a transmission risk?
    Answer: It's not considered a transmission risk, but we'd minimize risk by storing coal piles.

11. If you have a subscription for green energy, would a ratepayer be exempt from a carbon tax?
    Answer: Potentially yes, but currently there is not a carbon tax and green energy is an intermittent resource. We won't know until we integrate and carbon tax legislation is enacted. It's uncertain what the future impacts would be.

12. Are there any plans for adjusted subsides from the federal government?
    Answer: We are currently unaware of any, but we're monitoring it.

Participants then broke into four discussion groups to discuss the following:

1. DSM - what else should we look at and how can we spread the work? Is there an area we could use to pilot a DSM/conservation effort to see how it impacts our system?
   - How much should we invest in rebates?
   - How much should we invest in education and communication?
   - What are the price signals to encourage DSM among customers?

Comments:

Group One (yellow group)

- How are transmission lines scored – transmission lines versus coal delivery?
- Have a centralized utility model. Solar de-centralized. Retro-fit versus base load.
- People are willing to pay more for energy efficient homes
- Continue with rebate programs. If "sold out" we don't know when it's available. Should be able to advise when program is available again.
- Have e-connection for electric transfer for customers.
- DSM = dry. In the United Kingdom, funding supports progressive communication to get the message of a "greener world" out
- Lumping DSM degrades potential, such as solar. As the community grows so does the "mandate" for environmental success.
- The truce cost of pricing – subsidize.

Group Two (red group)

- Green Power is too small
- Expand Kilowatcher
- Include solar thermal
- Increase PV participation (training/coaching)
- Can commercial accounts purchase wind and partner (net meter)
- Springs Utilities provides "A-to-Z" for all renewable/DSM services
- What can we do to increase switching to "off-peak" use?
- Reward both off-peak and flat load customers
- Restructure time-of-use-rates with greater incentives – also include residential
- Kilowatcher sign-up is inconvenient (April only)
- Call and ask customers what utilities can do

General Comments:

- There's some concern about focusing on DSM, and not new resources
- It's better to invest in new resources at current prices
- Can we consider nuclear?
- Did we overestimate wind CF? Will wind offset coal or gas?
- Can WAPA help with wind power, pump storage, and transmission?
- Can Springs Utilities participate in on-site generation/renewable/other research and development with UCCS?

Group Three (blue group)

- The water department did a great job with education and conservation, such as encouraging people to xeriscape. Use a similar approach.
- What are other communities doing? The outreach is not comparable to water conservation – look at best practices.
- Conservation measures work! Water has more education and it's seen as an issue.

- Give the customer a target and reward them. Send out an annual piece of information on how much they saved and pay/reward them for conserving.
- Is the budget adequate – what is the budget for water conservation?
- Net metering allows meters to turn backwards when not in use – what are the plans now for new housing and net meters?
- Automatic Meter Readers (AMR) – will there be more access to usage?
- Advertise!
- Promote good usage by placing a Springs Utilities sign on a lawn that says "I'm now paying back into the grid."
- Could you use the savings from DSM to budget to communicate and promote?
- When promoting DSM – could you use the image of a meter rolling back – people would visually get that
- Love the idea of a demonstration house and/or a sign that says "I saved XXXX this month…" and you'd see a drive-by sign
- Can you provide home energy audits again for $15? This used to be offered but is not longer available.

2. Renewable Energy (background material at each station on current programs and services to date) Discuss potential products and services (renewable energy credits vs. energy products)
   - How much renewable is in each portfolio?
   - RECs versus supply – how much for how long?
   - Partnerships to engage renewables?
   - What's the vision and potential legislation?

   Group One (yellow group)
   - How much carbon footprint is solar? Over what period do you begin "saving" from solar installation? (wind versus solar as a resource benefit.)
   - Why is the Green Power product sold out? We need more voluntary participation.
   - Why not more wind – why is it sold out for so long?
   - Why isn't there wind generation locally or in the Pikes Peak region?
   - How do you store wind energy?
   - Wind energy as part of Green Power program status not know by Springs Utilities employees at the call center

   Group Two (red group)
   - Add fuel supply security to KT analysis

   Group Three (blue group)
   - Promote solar panels
   - PV – at Old Town Bikes we will have a PV system up with CSU and a vendor and 35 percent of the electric was wind power. Most people don't know about the wind power option.
   - Renewable Energy Credits (RECs) are a start, but we need to get there
   - Have a holistic approach to installation – a whole house approach
   - Have a pilot house at the Mesa – much like the original Mesa Development Project

- People won't understand unless there's a sense of urgency – where is there a tiered structure? People don't know how to take advantage – there's no urgency like with water conservation.
- State what the average kwh usage is and then put in a block structure.
- In regards to RECs, I'm a little leery – would it be one or two plants – what is it up to recently? Why reward another state for being green while we burn coal?
- We should buy now – after all the original motto for Colorado Springs was the "City of Sunshine," and we should keep it that way
    - (***side note):*** In a 2002 *Gazette* article by Deb Acord, local residents (including former CONO President Jan Doran) did research on the original motto for Colorado Springs, and they found it in the Sixth Annual Report of the Department of Public Health, published in 1907, that Colorado Springs (claimed) the title of the City of Sunshine.

Group Four (green group)

- Does Springs Utilities think there is such a thing as global warming?
- Why are we discussing coal?
- These are positive steps considering more options
- Would Springs Utilities build or buy?
- Springs Utilities should look at integrating wind, NOT 100 percent all at once

3. Discuss customer survey
    - Pre-survey potential questions

Group One (yellow group)

- In the survey, give context to the facts
- Have no "door slammer" questions for survey questions. Escalate the reason for price.

Group Two(red group)

- Change "wind power" to renewables
- Don't put $20/month option as number one
- A 10-point scale is overkill
- Address the fact that it isn't wind or no wind, it's wind or coal

Group Three (blue group)

- How questions are framed are critical
- See all options
- What are the cost options of various proposals
- Do a pilot of the survey – have full disclosure and don't rush – try it with some community members

Group Four (green group)

- Don't need a coal if plant building is designed correctly (shouldn't look in isolation)
- Look at range of prices for wind across Colorado
- How is survey done – is it random as well as volunteer?
- It's biased against wind
- All should pay for renewables

- You need a differential between wind and coal
- Need cost differential between high and low portfolios (a percentage?)

Public –Private Partnerships:

Group One (yellow group)

- Code enforcement would be a benefit to builders
- Have mandatory building codes
- EIRP should have short range versus long-term goals, such as Fort Carson having 100 percent renewables by 2025.
- Have tax credits for developers who install energy efficient homes – when would it end?
- Earth Day opportunities for communicating and participating in local meetings – Erin at Catamount Institute is on the steering committee for Earth Day.

Group Three (blue group)

- Integrate with school systems/colleges and use resources there to educate students
- Building codes are connected to human behavior
- Sustainable groups are out there – connect with them
- Work with developers to make every model home an E-Star home and have everything labeled – advertise with the developed in "Greater Homes"
- Take a grassroots approach and connect with visuals
- Can you use the same approach as Fort Carson and apply it to developments like Banning Lewis Ranch – it's the same concept.

Once all the discussion groups had completed their respective sessions, all participants returned to the main meeting, and Gail Conners and John Romero facilitated a final discussion on, "Areas of Agreement," and "Gaps." In closing, next steps were also outlined.

Areas of Agreement:

- Renewables
- Incentives are important
- More education and outreach should be allocated in the budget
- Look for creative ways to communicate
- Have more varied alternatives with options
- Have more partnerships with developers/builders = building standards for energy efficiency homes
- Why are you not using available money for photovoltaic – there are too many barriers to understanding
- Photovoltaic – have a contractor by leasing
- Does Springs Utilities know the global warning agreement?
    - ***(side note:)*** If question is in reference to Kyoto (Japan) Protocol agreement of 1997 to reduce globally reduce greenhouse gases, which the

United States did not sign, project team is aware of the Kyoto agreement and our environmental staff has done much research on the subject.

- There's too much focus on coal.

Gaps

- Survey questions could be leading or negative
- With wind and green power, there should be voluntary availability
- Long term vision versus short term EIRP goals
- Do a survey specific to wind power; wind is the only solution
- Not moving toward renewables fast enough; including options beside wind

Additional Comments (in the meeting and via e-mail):

- At the EIRP meeting in May, only 5-10 citizens showed. I commend you for straying out the box and the KT process is good. This has been a much better job of engaging the public.
- Springs Utilities has taken a more holistic approach – can you integrate with the City for a long-term vision?
- Might it be useful (in the survey) to add an item to the first question "Investment in energy efficiency programs for CSU's customers." EE is a resource too, and it would be interesting to know how customers feel about it.
- I read through it (the presentation) and was very pleased with the environmental focus which was included. SU should be a leader and certainly can be. I look forward to more opportunities to be involved
- A very comprehensive assessment with tremendous community involvement. This is a great step in the right direction toward providing our community with more DSM options and more sustainable energy.
- For me a really good meeting and an exciting time for CSU and us.
- Great that Utilities is participating and setting the group off from their site. A MORE SYSTEMATIC education program letting folks know about developments in alternative energy that make it more reliable and more affordable would be helpful. We should be able to look to Utilities for cutting-edge technology info.
- One area where Utilities could do more is in outdoor lighting which in many parts of the city wastes energy and blinds drivers and pedestrians. A program in helping folks understand how they can provide lighting where needed without having the light 'trespass' elsewhere would be an asset to our community. You could start with Traffic Engineering.
- Another topic I would have brought up are the many Green Congregation committees that many of our local churches have started. Ours at First Congregational will be distributing light bulbs as our next event. A frequent question is where and how to recycle the spent bulbs which do contain some mercury. Also folks often talk about how they don't like the quality of the light for reading. Bulbs Plus has lots of exhibits to show folks the variety of lights and the effects. IF you had a model home, this would be a great opportunity to showcase the broad range of bulbs--both size and color--available.