KEC Electricity Committee Meeting Notes
May 21 2008

KEC Electricity Committee Members Attending: Stuart Lowry, Committee Chair, Steve Dillard, Carl Holmes, Janis Lee, Mark Schreiber, Dave Springe, Michael Volker [KEC Co-Chair Ken Frahm]

KEC Staff: Liz Brosius, Ray Hammarlund, Corey Mohn, Jennifer Knorr

Opening remarks
Stuart Lowry called the meeting to order, noting that the format of this meeting was similar to the previous two, during which the committee had heard presentations from different electric utilities on the planning to meet future demand. After the presentations, Lowry said the group would need to schedule another meeting; he noted the committee objectives and work plan (printed on the back of the agenda) as a basis for the proceedings. He asked Ken Frahm for opening remarks and noted that the Lt. Governor was attending a funeral in Wichita. Frahm thanked everyone for being in attendance.

Presentation from Kansas City Power and Light
Lowry asked Paul Snider, KCP&L, to introduce John Grimwade, KCP&L Senior Director of Strategy, Planning and Development. Grimwade gave a PowerPoint presentation on their strategic planning process (available on the KEC web site, under the May 21, 2008, meeting heading: http://www.kec.kansas.gov/electricity/index.htm).

Grimwade presented background information on the KCP&L service area, noting the acquisition of Aquila assets by parent company Great Plains Energy. Regarding load growth, Grimwade estimated it would be between 1.3% and 2.0% annually, depending on effect of energy efficiency and demand response programs. Janis Lee asked him to explain what he meant by low-hanging fruit with respect to energy efficiency and Grimwade listed better education and technology, better insulation, home audits, etc.

Regarding the overview of generating facilities in 2007, Lee asked whether they intended to install another 400 MW of wind; Grimwade say yes, by 2012. Liz Brosius asked for clarification of accredited net capacity with reference to the 100 MW for the Spearville wind farm. Grimwade said accredited capacity for wind was treated differently than for other generation; wind net capacity is actually lower than shown on the chart: should be roughly 15 MW instead of 100 MW for Spearville.

Lee asked if the utility was required by KCC to have a certain amount of baseload generation per population? Grimwade said no, that it is a cooperative process to determine what is best for customers. Lee asked whether the regulatory bodies would have a problem with 80% wind and 20% coal? Grimwade replied that any generation plans would need to make sense as a whole in terms of cost, reliability, fuel certainty, etc. Carl Holmes noted that the wind was only blowing 6 mph in Dodge City on recent a 94 degree day. Michael Volker noted that the flatter the loadshape, the more it can be served by baseload capacity, the least expensive option in a utility’s portfolio.

Grimwade noted that KCP&L's customer base was becoming increasingly residential, less industrial. Mentioned bulk power market, noting that electricity sold on the wholesale market produced savings for customers. He noted that for nearly 20 years, customer rates have been going down, until last year and the investment in wind generation.

Holmes asked how the rates compared between Kansas and Missouri? Grimwade said they're virtually the same. Dave Springe noted that the rates for residential customers in Kansas were higher than noted on slide 14, which shows average of all customers.

Grimwade outlined KCP&L's strategic planning process, initiated in 2004, noting high level of community outreach. He said they produced various forecasts (in 2004 dollars) based on different scenarios, different fuel price inputs. Holmes asked if the price jump in one scenario around 2011 was due to cap-and-trade policies? Grimwade said that it was due to the switch from coal to natural gas. Regarding the scenario labeled "Gas Market Chaos," Lowry said he assumed that this was the current scenario, based on the increase in natural gas prices, and Grimwade agreed.

Regarding progress with their comprehensive plan, Grimwade said Spearville wind farm, after lower than expected capacity factors initially, appeared to performing very well in 2008, with capacity factors higher than anticipated. He outlined environmental upgrades at LaCygne and Iatan 1, and said that cost/schedule reforecast for Iatan 2 had been completed. Springe noted that the projected cost for Iatan 2 had increased dramatically since it was approved.

Grimwade outlined the 2008 Sustainable Resource Strategy, noting that they would evaluate multiple scenarios due to uncertainty regarding carbon regulation. – more focused on sustainable and renewable energy. In response to a question from Holmes regarding underlying assumptions, Grimwade noted that the optimistic assumptions of natural gas availability and price are too low. Lee asked if analysis had been done to assess impact on home heating costs? Grimwade said that needed to be done.
Volker said we could be looking at $20 natural gas—the power generation sector is not the only one increasing its use of natural gas. Lee suggested that there be could be adverse health effects when home heating costs increase (because people might not be able to keep homes warm enough).

Grimwade summarized their existing demand management and energy efficiency programs, saying that some of these helped shave peak last summer. He noted that they were working towards LEED certification for their facilities.

Grimwade said they assumed a federal RPS would be enacted and outlined several future scenarios of how KCP&L might meet those requirements. Referring to a graph showing the coincidence of wind generation and hourly load obligation, Volker noted that it showed the wind wasn't blowing in the summer months when the power was needed. Grimwade noted that the cost of building wind facilities had increased over 50% between 2003 and 2007, driven in part by RPS mandates, costs of copper and steel, and also by the weak dollar. He said he was cautiously optimistic about nuclear; the industry is standardizing now. Lee asked what kind of consumer load would be necessary to justify the cost of building nuclear? Grimwade said the biggest concern is carbon mitigation, though construction cost is a limiting factor; it will take partnering effort (1400 – 1600 MW units minimum). Lee suggested that some components could be built in the U.S. if industry takes off; Grimwade agreed and said the estimated cost for a new nuclear facility is $4,000 to $6,000/kWh, compared to $2,500/kWh for new coal-based generation.

Presentation from Kansas Electric Power Cooperative (KEPCo)
Lowry introduced Les Evans, Vice President of Power Supply for KEPCo. Evans gave a PowerPoint presentation entitled "KEPCo Power Supply Overview" (available on the KEC web site, under the May 21, 2008, meeting heading: http://www.kec.kansas.gov/electricity/index.htm).

Evans provided an overview of KEPCo's 19-member service area, which covers two-thirds of the state in area. KEPCo has a 430 MW peak load and estimates demand to grow 1.5% to 2% annually. He noted that rates jumped in 1986 (one year after Wolf Creek came online). He explained that policy was established by 38 trustees (2 from each of 19 members), and that they were under the jurisdiction of the KCC.

Evans outlined KEPCo power supply strategic goals: (1) avoid exposure to the market, (2) reduce volatility, (3) own generation when prudent, (4) enter into long-term PPA's, (5) incorporate renewable energy where cost effective, and (6) have diversified and balanced portfolio. With respect to diversification, Evans noted through their partial ownership of Wolf Creek (6%) and their participation in federal SWPA and WAPA, they had 34% nuclear and 20% hydro currently, a pretty high percentage of non-carbon-emitting generation. Lee noted that the SWPA contract expires in 2016 and asked if they were concerned about that? Evans said they're always concerned when Federal appropriation is involved, that currently KEPCo receives 100 MW out of 2,000 MW total.

Evans described their 2007 power supply in terms of capacity, energy, and energy resource fuel mix. He noted that they have load in five control areas – Westar, Sunflower, KCPL, Empire, and MKEC. He also pointed out the vast difference and significance between capacity and energy numbers.

In discussing what drove past investment decisions, Evans said their part ownership of Wolf Creek was driven in part by the fact that SWPA's hydro offer required them to have baseload generation to balance peaking (i.e., limited energy) nature of resource. Similarly, they invested in the Sharpe diesel facility in order to cover their rising peak demand needs and placed them adjacent to Wolf Creek to have back-up for Wolf Creek emergency diesel generators.

Evans said their generation planning process was similar to other utilities who have made presentations to the committee. They use a two-phase approach: (1) develop long-range power supply plan and (2) develop work plan for generation construction. He said KEPCo faced some power supply challenges, including (1) their dependence on other utilities for transmission delivery and ancillary services, (2) SPP's transition to RTO, and (3) lack of robust wholesale market from which to acquire spot, short-term and long-term purchases.

Evans said KEPCo used a 10-year planning horizon in developing their Long Range Resource Plan. Their optimum plan includes partnering in construction of new generation along with extension of contracts. He noted that energy efficiency and conservation were part of the plan and, though he has no way to measure, estimated that they reduced peak demand by 8% to 9% through various programs (e.g., time of use rates, automated metering).

Ken Frahm asked about the cost of PPA for hydro, and Evans said the federal program provided that energy at cost. He explained that SWPA included power from 24 dams in OK, MO, AR, and KS, that 1,200 hours of 100 MW (120,000 MWh's) were guaranteed, and that price varied based on how much was generated in a given year (2 cents/kWh compared with over 4 cents/kWh last year).

Holmes asked whether CMS, one of the member coops, had used up quota to move irrigation pumps to electric (from natural gas)? Evans said it was not a contract issue, though there might be a transmission issue, a thermal limitation? Volker said they might need to upgrade the line. Evans said it was probably a local issue. Frahm asked if Evans had seen a big movement towards switching irrigation pumps to electric; Evans said it had increased in the last six months. Holmes said Pioneer had an 18-month waiting period to switch.

Steve Dillard had a question about the KCP&L projections, whether they included costs of more transmission? Grimwade said no, that without dedicated transmission on site, utilities have to go to SPP and ask to move power. The process can take six months to a year to get cost estimate. Then, additional time may be needed to actually make the project happen. This becomes a major issue – hard to do if you don't have dedicated transmission. Evans said there was no dedicated transmission available today and this is a problem: requests all have to go through a study, then result is high cost and time delay.

Lee said she understood that SPP is looking to socialize transmission costs. Evans said now the issue is how to accommodate up to 20,000 MW of new wind in SPP region, how to move energy out of region to other load centers. Costs are distributed throughout SPP, but not over potential purchasers of power outside region. Grimwade said there was a need for broader, nationwide planning effort to solve this issue. Need a longer-term perspective to figure out investments.

Evans said there will always be balancing act between state authority and SPP/FERC. Lee asked if should we limit wind development? Should state put an assessment on state power and where it goes? Springe said you couldn't legally discriminate. Grimwade said balancing area will need to come within SPP. Lee asked if we build lots of wind in western Kansas, will we also have to build balance in Kansas? Grimwade said we will have to do something. Lee asked if we assume 7,000 MW of wind built in western

Kansas, with 40% capacity factor, then we do not need to build the other 60% in Kansas? Grimwade said that was correct. Volker said ancillary services will be paid by wind developers, but the major issue is who pays for transmission. Evans noted that ultimately the customer pays. Springe asked if current system would crash with new wind on existing transmission system? Grimwade said we would see more loading in non-peak because of different movement of power (not in the direction as planned by existing transmission).

Brosius asked whether committee thought it would be useful to present some of the issues discussed today with the full KEC—perhaps a kind of Electricity 101 presentation? Grimwade suggested that short presentations with panel format might work well. The committee seemed in general agreement that this should be considered for future meeting.

Committee objectives, additional meetings, direction to staff

Lowry asked Brosius about date for meeting in June; she noted that the Lt. Governor was available only on June 17. After a brief discussion, it was agreed that the afternoon of June 17th would be next meeting, pending availability of speakers. Volker noted that it would conflict with Midwest Energy's hearing before the KCC. Lowry said he would follow up with potential presenters and he and Brosius would get back to committee.

Lowry asked if the committee wanted to revise or add to the current objectives? Brosius noted that she wasn't sure whether item #4 under the work plan was doable, given proprietary nature of peak load forecast data. Grimwade noted that this is difficult to forecast, in part because of downturn in economy and also due to customer's conservation due to higher prices.

Lowry asked the committee to consider whether, in addition to understanding current status of the state's electric generation capacity and the way utilities plan to meet future demand, there were policies the committee wanted to recommend? Brosius observed that there were many areas of overlap between this committee and the GHG Policy Committee and asked if committees might want to work jointly in second half of year? Lowry said this committee's recommendations should be based on baseload electric generation (that was the original intent).

Holmes said that the word in D.C. is that there will be a big consumer outcry when they see the price increases from carbon regulation. Lowry said that transparency will be an important component.

Brosius reminded utility representatives that she would need the additional information (gross generation data) for the power plant summary by May 30th so they could present revised version at the full KEC meeting on June 10th.

Lee asked whether a change was needed in the May 13th minutes in the section discussing pollution equipment at Holcomb. Corey Linville, Sunflower, clarified that SCR was not the same thing as scrubber. Brosius said she would revise minutes to clarify and replace version currently on web site.

Brosius noted that a 2007 report on federal subsidies to electricity production (requested by Sen. Lamar Alexander) was included in the meeting packets as background resource.

Lowry asked whether the KCC wind study should be presented to the full council? Brosius said a brief presentation should be made to KEC (though there may not be time on June agenda), since it was essentially unfinished business from the 2006 planning cycle and a report to the Council had been promised. Paul Snider said it would be beneficial to have counter-response to the study so that it is not seen as Kansas policy. Brosius replied that it would not be presented as Kansas policy, but since the study was requested by the Governor, the KEC should receive a presentation on the final report. Mark Schreiber said the KEC deserves to have it presented. If there are other discussions, they can be had at that time.

Lowry adjourned the meeting at 4:45 pm.