Water and Light Advisory Board Special Meeting
March 16, 2006

The Water and Light Advisory Board was held March 16, at 7 a.m. at the Administration office on Seventh Street. Those in attendance were:
John Conway, Chair
Tom Baumgardner, Vice-Chair
Ernie Gaeth, Member
Bob Roper, Member
Greg Macias, Member
Dan Dasho, Director
Jim Windsor, Manager Rates/Fiscal Planning
Mike Schmitz, Chief Engineer
Tad Johnsen, Power Plant Superintendent
Connie Kacprocwicz, Energy Management Specialist II
Ben Johnston, Electric Distribution Superintendent
Tina Worley, Utility Services Manager
Marilyn Thorpe, Administrative Support Supervisor

Win Colwell, League of Women Voters

POWER SUPPLY STUDY (FINAL BLACK & VEATCH): Dan Dasho began the discussion of the Power Supply Study. He said we were looking at reliability; the consequences of transmission; cost and environmental impact. He said these were the factors that Black & Veatch based their study on. Dan said reliability is an important consideration to our customers. He said we have a diverse portfolio, we buy off the wholesale market, and we own output of some generators. He said we already do a number of things that gives us flexibility and reliability. Dan said transmission is a big risk, because we don't know what is going to happen to the cost of transmission in the future. Cost will be based on additional constraints on the system as more and more people try to use the existing system and nothing is built. Dan said the base case assumptions 1-15 were revised. There were costs associated with them originally. Some changes were made to those costs, in particular with off system sales among the different options. They looked at all system sales between the self build options and buying off the market place and using Peabody. He said we also added in the demand or cost per megawatt associated with the Sikeston unit, Board of Public Utilities and with the Columbia Energy Center. Those factors added costs pushing the total over a billion dollars. Dan said we also wanted to do an analysis of rates, so we wanted the costs to reflect how we would incorporate our energy costs into our rates. Base case 12 was dropped even though it was the lowest cost option, because it put everything in Prairie States. That was a concern for reliability purposes. There was also a pre-payment which meant high upfront cost with no equity. Base case 5 was Prairie States by itself with just 50 megawatts. Dan said we would have to go back into the market place in 2011, so that didn't meet our long term needs. LS Power proposal was dropped because it was fairly consistent with Prairie State's option in terms of cost. He said he did not think transmission would be available. He said they don't have an operator for the plant and there are concerns with the economics of fuel supply. The six cases that were carried forward for further study included:

BC-1: Self Build of 108.5 MW
BC-2: Self Build of 250 MW
BC-3: Ameren Stair Step
BC-8: Ameren Bid + Peabody Equity 50
BC-9: Self build 108.5 + Peabody Equity 50 MW
BC-10: Ameren 100 + Peabody Equity 50 MW

Dan said the projects were then separated by those with Peabody and those without. Options with Peabody had lower cost options over the long term. He said they were asked to do that by City Council. Ernie Gaeth asked what they used for cost of capital when they did the Self Build option. Jim Windsor said it was between 7% and 8% range. He said the initial rate was 5% but then they added in some other factors.

Dan said they took the six options and asked how they performed with varying different factors. One question was how sensitive they would be to changes in the wholesale market place. He said 20% was added to the wholesale cost of Ameren to see how they would perform. He said they also varied the fuel costs both in the high and low range, and changed the loads so there was a high load forecast and a low load forecast. They also did some additional demand side measures to lower the loads. That gave each of them a different ranking in most cases. Across the board the Self Build and the Peabody 50 turned out to be the lowest cost. The second one is building a bigger unit in Columbia. The Ameren + Peabody Equity is also right in the mix. Dan said they wanted to show how conservation under each of the different plans would impact cost savings. Black and Veatch was asked to do an emission analysis comparing over the twenty year period what the emissions would look like. He said SO2 and Nox were used to get the comparison. The wholesale market place using Ameren was the most expensive in terms of emissions relative to each other. The Self Build + Peabody Equitiy was fairly low as well as Self Build by itself. Also tossed into the mix was off system sales. The amount of off system sales that you have is associated with the amount of emissions that you have as well. They were different for each plan. Some pros and cons for each case were discussed by staff:

Ameren – pros – reliable supply due to their plants in the area; simple timeline to implement
Ameren – cons – mercy of market price; no equity; emissions
Peabody – pros – low cost; equity; new plant would mean lower emissions
Peabody – cons – quick timelines (would need to be set by April); legal challenges (air permits)
Self Build – pros - no regional transmission; economic impact; equity; newer equipment ability to burn alternative fuels, lower emissions
Self build – cons – increased staffing; up front funding (ballot issue)

Dan said the next question was the rate impacts of each plan. He said the Self Build option; Ameren + Peabody: and Self Build + Peabody were considered. The Self Build + Peabody would start in 2011. Dan said the Self Build option would be the lowest cost option the further out you look. He said the next question was what the rate impact would be on this. Jim Windsor explained that the rate changes needed to maintain cash reserves of 16% with a range of plus or minus 4%. Jim said up front all the base cases would have a rate impact. The Ameren and Peabody combination showed decreases starting in FY11 and FY12. The Self Build and Peabody would have a decrease in FY17. Dan told the Board that staff was recommending the Self-Build and the Peabody Equity. He said the Peabody Equity continues to show a good option regardless of what is done in the long term. He said staff recommended that it go to Council and that we sign up for the 50MW, which would be bought through Missouri Public Utility Association (MPUA). It would be a purchase power agreement through MPUA for both the output of the unit plus the fuel. Dan said we would have both the fuel associated with the 50 MW since it's a mine mouth plant and the 50 MW's of output itself. A contract would go to City Council for their review. He said we have all the risks and responsibility of the 50MW's just like we're an owner, but MPUA is the actual owner.

Bob Roper asked if we would have an indirect equity interest. Dan told him we would for the life of the plant. Dan said the Self Build option was one that we would like to pursue both in terms of more detail costs, and working with DNR on permitting the unit. Dan said he was not asking the Board to choose this option but rather go forward and get more numbers on it. He said we needed to move forward with an air permit with DNR because it could be an 18 month process. Dan said even if in the end the Board decided to go with another option he didn't feel the money would be wasted because of the timeline involved.

Greg Macias asked what happened to the Self Build 250 MW option. Jim Windsor said that when Stanley Consultants looked at the site that they didn't look at this option. No analysis was done on whether a larger plant would even fit there. Greg said the option was for a 100 MW equity partner. He thought that would be pretty easy to come by in this environment. Greg wanted to know why it was eliminated. Dan said it was a low cost option but staff was concerned about building a 250 MW unit here when we needed 150 MW, we would sell 100 MW and he wasn't sure how that would go over in the community. So that option was dropped. Dan said it shows that the more you build Self Build the better off you are in the long term up to a 150. He said that's where the Peabody Equity plus the 108 comes in. You get up to that 150 level and that becomes a low cost option.

Tom Baumgardner asked what happens at 150 MW that would be bad. Dan said you start getting too much excess capacity. You buy too much, more than you need then the capital costs start to get to you. He said it's the 150 that carries you through for a long period of time. If you get more than that you get more than you need. The off system sales from having the access don't balance the additional cost to get into higher capacity amounts.

Bob Roper said he was in favor of the Peabody 50 option. But he said he had concerns about the Self Build 108 option. He felt that building a power plant was the most capital intensive things there was. He said it would have to be a very big size to get the best efficiency and that would be way above 108. He was concerned that by building a higher cost option we would be selling higher cost power to our rate payers. Dan said the question is, over the long term, does it work out to be a negative for us or a positive. He said that it works out to be a positive. It does come out to be a lower cost option in the long term even though you pay higher for those capacity costs up front.

Dan said the end result is that owning your own generation and having it here in town, selling it to the marketplace can lower these costs for you versus building off system. Dan said Self Building here in town is still the low cost option. Bob Roper said he was not convinced of that. He said the final report showed the risks associated with Self Build had a wider variability. Dan said that was right because we don't have the detail design work necessary to tell us what this is really going to cost. He said w e have some numbers that we have looked at in detail but not design numbers. He said staff was recommending that we carry forward the Self Build option for further investigation. He thought we should get some more numbers on it, and do the air permit analysis on Self Build and move forward as if we may do it. He said the end result may be not to go any further with Self Build because the costs are too high. At that point the Ameren + Peabody option might be the way to go. He said the Ameren option is always available and that we will need to discuss a bridge with them from 2008 to 2011 to get us at capacity, even if we do a Self Build or Peabody comes in. He said we are going to be with Ameren anyway for a period of time.

John Conway asked where Stanley Consultants were with their capital costs for the Self Build. He was told it was $230 million.

Greg Macias wanted to know with the 20% that Black and Veatch added in, if Stanley had a margin of error associated with the 20%. Dan thought it was more like 10% to 15%. Greg said he was guessing at 10% higher then the Self Build would no longer be the lowest cost. Dan said that was correct.

John Conway said if the Stanley report was showing plus or minus $230 million that we could pretty well be assured that it was not going to be less than 230 million. It could be more like $230 million to $300 million. Dan said they added 17% contingency to come up to $220 million and then Black and Veatch said to add 20% to that contingency so you would have a 37% contingency.

Greg Macias asked how close we could get when we do our next study of the Self Build option. Dan said 15% would be good. Jim Windsor said there would be risks regardless even with Ameren. The analysis that was used projected some capital costs that meet environmental regulations of the future. However, new numbers were released in the last month regarding how much they are projecting to invest in the Illinois plants. Jim said he asked Black and Veatch to go back and get those numbers to add in, because they are substantially higher than they were previously. He said that will ultimately impact the projections on the Ameren costs. Jim said unfortunately the dollars are always going to be a question mark until we spend the money, whichever way we go.

Bob Roper said he was on board for the 50 + Peabody option. He wasn't sure he wanted to go ahead with the 108 Self Build option by checking it out and getting the permitting. He felt that might be perceived that the decision had been made and that the Board was no longer looking at the other options. He asked if it might be a good idea to get a second opinion from a different consultant.

Dan asked if they wanted to drop the 108 Self Build and go forward with Ameren. Mr. Roper asked if the timeframe would allow for another consultant or another opinion. Dan said we had all the time we wanted to take. We could sign up with Ameren for 4 or 5 years to do that. He said a decision on 108 did not have to be made today. He said if the Board felt there were too many risks we could just go with Ameren. Dan said we could retire the units here in town and be done with generating, other than our gas units. He said we could do that or look further at the 108.

Dan said rather than bringing another consulting firm in to do this again, we could bring somebody in who could give us the costs in more detail of the 108. We could get all the systems laid out, and see what's really there in terms of costs. Dan said it won't be cheap to do it. Dan said Black & Veatch, RW Beck, Stanley Consultants, CH2Mhill, Burns & Mcdonnell, etc. could all provide the analysis. Tom Baumgardner wanted to know what the timeframe would be. Dan said it would probably take nine months to get a final report. Dan said another problem is that we are not the only ones thinking about building. There will be a lot of demand on labor for building power plants.

Bob Roper said there were a lot of people in the community that feel a real personal sense about the power plant and want to keep it, want to expand it, without thinking too hard about the numbers. He said there will be other people who will feel just the opposite when rates go up if the Board makes a bad decision. Dan said regardless of what is done, rates will increase. He said if we don't want to build here

in town because it will be too costly, the public will not know the difference if we give a 5% increase for building here in town or 5% increase for buying Ameren.

Greg Macias asked if this was on the base case projections. He said there are risks associated with all the options. Greg wanted to know if the circulating fluidized bed's technology was what would allow us to build the 108 megawatt plant economically. Dan said if you are going to build a small unit then a fluidized bed makes a lot of sense, rather than try to build a big coal plant using fluidized bed. In terms of burning coal it has those advantages for size. Greg asked what would happen when the steel prices go up, what happens to Peabody and our equity in that? Dan said the contractor states in the contract what the price is going to be for a particular start date. He said, however, if you get into it and labor costs go way up, and steel costs go up, you won't get away from that exposure.

Ernie Gaeth asked about Ameren's 80% load factor. He said the study pointed out that if that could be increased the Ameren proposal becomes more attractive. He wanted to know if that was a realistic negotiable point. He said if it was that would make a lot of sense, it covers your bridge, the cost during that time, and would probably mitigate our risks to some extent. Dan said he was sure it was negotiable with Ameren. He said there would just be a price that you pay, because you are taking energy away from them that they could go out and sell on the market place and that's why they set the level at 70%. They want to sell power out in the marketplace. You take that from them. Ernie said on the other half of the coin in negotiations it would seem to him that they are getting a stable long term customer that has a good history with them.

Dan, said with Ameren we needed to sit down with them and say here is the report we know this information what's your flexibility on the 70% versus the 80% how will that impact our costs and start talking with them on that line as well. He said staff would report back to the Board about changing or getting additional flexibility on the capacity that we could buy from them. John wanted to know if Ameren continued to contact us. Dan said yes, and that Ameren was willing to sit down with us anytime and talk about these things. He said they have laid out the options but we haven't sat down and talked with them about all the issues. Dan said staff wanted Ameren to make a proposal to us. He said we wanted to get the numbers, and get some idea of where we are going and then go back to Ameran and say this is what we have to have from you all to make this work.

Ernie Gaeth asked if the Peabody option had to be acted on right away. Dan said it did. Ernie said he would rather negotiate with Ameren first knowing that we could go back to the Self Build option if we couldn't make a deal with Ameren.

Dan said he thought we should do an RFP for design costs. He said we would probably talk to Stanley again about their costs and see how confident they are with their numbers. The next step would be to do an RFP and ask engineering firms to come up with the cost on a design based on the size of the unit that we request. The time line would probably be nine months. He said we will be left with numbers with a wide range depending on what the future looks like. Dan said one of the things that we are doing right now is putting together an RFP to get an air permit for a plant here in town. He said if the Board prefers that we not do that process until after we get better feel for the cost we can hold off on that too.

John Conway asked how much it would cost. Dan said hundreds of thousands of dollars for the air permit. It will be expensive because of the engineering, DNR, analysis and modeling. Tad Johnsen said we would probably need to pursue some of the air permits initially because it will affect some of the design characteristics of the plant.

Mike Schmitz suggested phasing the RFP. He said we might get much better bids if they know they are the firm selected for the various phases. He said if we go out for the air permitting and the firms have to do a lot of upfront design costs they could use those later on in the detail designs. Mike he would propose that we phase it and let the people that are bidding know if they get the preliminary design they will get the follow up design.

Ernie Gaeth said that made sense to him, but wanted to know if we should pursue the Ameren load factor and come to some agreement on it. He said if we did that would there be any reason to do any air permitting at our power plant today. Jim Windsor emphasized again that we are talking about over 2 billion dollars, so $100,000 isn't that much money when you look at the decision that is being made. He said if we decided to go with Ameren, how much is it worth to invest to say we made this decision because this is the cost that it's going to be if we went this route and so we lost that money when we went in the other direction. There are risks regardless of which direction we go.

Ernie asked if we were really falling back on the premise that these numbers on the Self Build in fact could not be used to compare against other options because they are not accurate enough. Jim said they were all projections and that even Ameren is based on system costs that are projected out 20 years. He said there will be a range anyway. He said ultimately you get back to the fact that you are off $100 million or so over the life of the time and then what do you get at the end of it? That's the other question. Those people that really want a plant here could come back and ask why we did go with Ameren when a plant could have been built here. The answer then is that in this report it's the number one option but there are risks.

John Conway asked what the time frame would be for entering into negotiations with Ameren. Dan said he thought we would go to them and ask them to look at the Black and Veatch report and tell them we need more flexibility on the capacity factor.

Dan said by the May Board meeting he should have some idea of what Ameren is willing to do. He said an RFP is ready to go out for the air permitting design type of work. He said we could get people in here and interview them and decide whether we want to go forward because that's a process in itself that is going to take a while.

John Conway said he didn't want to lose track of the transmission and distribution issue and wanted to know if we were still at the $47 million level.

Dan said he planned on discussing this issue at the next Board meeting. One of the big factors is redoing Broadway from Garth to W. Boulevard. There are citizens interested in getting new sidewalks, curb and gutter and undergrounding distribution lines.

John Conway said we are still going down the track of the transmission/distribution plus or minus $50 million. A bond election for that will be in August.

John said the Board needed to consider two things:

- Take up immediate negotiations with Ameren UE
- Send an RFP out for permitting and consider doing an RFP for the cost estimating for the Self Build

John said the only expense for the RFP would be in-house. He said the Board would have it in front of them and would be able to make a decision on whether or not to spend the money on it. He said depending on how things go with Ameren the Board would be ready to act.

Dan said we might want to revise the RFP to do a phased approach. He said that doesn't commit us to anything other than looking at the cost. We could redo the cost again based on what we find out from Ameren. Dan said we're taking a look at some additional numbers regarding emission costs associated with Ameren. He said we're trying to get the right numbers in for that, so we're not finished with the Black and Veatch study yet. He said we still have a few modifications we would like to do. At the April meeting in two weeks the focus will be on the ballot issue numbers. He said we have to get that to council in a timely fashion. Council has to do it in two meetings in May.

Bob Roper made the motion that the Board recommend Council proceed with the 50 megawatt Peabody proposal. Ernie Gaeth made a second to the motion. Vote was unanimous in favor of the motion

Dan said an RFP will go out to the engineering firms that will look at both the cost of permitting and the cost of estimating design work in phases, review those consultants and bring the cost back to the board probably within six months.

John Conway asked if there was any value to having someone from the board attend the negotiations meeting with Ameren.

Dan said he would notify the Board when the negotiations with Ameren are set.

Next meeting date will be April 6, 2006.

Dan said he appreciated all the comments and questions that the board had posed regarding the power supply study.

John reminded the Board that the Joe Paul Crane dedication would be on the 22nd and the Renewable Energy Conference would be on the 29th.

Respectfully submitted,