Why Are Bowling Green's Electric Rates Increasing?

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Thursday April 24, 2014



AMP's April 14 Presentation Showed that Bowling Green's Power Costs Are Going Up



- 50.5% increase from 2012-2015, 32% from 2013-2015.
- Does not include \$1.2 million that AMP will have borrowed from a line of credit by April 30, 2014 to levelize (i.e., lower) Bowling Green's electric rates. These funds will have to be paid back with interest.



Quick Answer - Long-Term Contracts Bowling Green signed with AMP to buy expensive power from the Prairie State Coal Plant and AMP's New Hydro Projects.

For example, the consultant to AMP and the City of Bowling Green has recently projected that in 2016:

- Prairie State and the new AMP hydro projects will provide 73% of Bowling Green's power at very high costs.
- The cost of power from Prairie State will average \$73.19 per megawatt hour (MWh).
- The cost of power from AMP's new hydro projects will average \$129.77 per MWh.



Background on Prairie State Energy Campus (PSEC)

- 1600 megawatt (MW) coal-fired power plant and mine in Southern Illinois. Bowling Green's contract is for 35 MW.
- Peabody Energy Corporation was developer.
- 2001 Peabody began aggressive campaign to induce municipal power agencies (like AMP) to buy into the project.
- Peabody sold 95% of the project to 6 power agencies and 2 cooperatives. These sell power to 234 communities and co-ops in 9 states.
- Peabody has a very minimal risk.
 - Only has to keep its 5% share of Prairie State for 5 years unless other owners allow it to sell before then.
 - Guaranteed buyer for its coal.



- The cost of the power from Prairie State has increased dramatically from what the communities, including Bowling Green, were told in 2007.
- The power from Prairie State is much more expensive than buying capacity and energy from the competitive wholesale PJM energy and capacity markets.
- The plant has operated significantly worse than AMP told the communities it would back in 2007.



The Actual Cost of Power in 2012 & 2013 Was Much Higher than AMP Projected in 2007



• Cost of power from Prairie State remains high in 2014 - \$81.88 per MWh in January and \$83.75 per MWh in February. This is much higher than the \$48 per MWh price projected for 2014 by AMP in 2007.



The Cost of Power is Much Higher than the Cost of Buying Power from Competitive PJM Markets





What Is Levelization of Prairie State's Power Costs?



AMP expects to use approximately \$1.2 million from a line of credit to levelize or stabilize (i.e., lower) Bowling Green's Prairie State power rates through the end of April 2014. Bowling Green's ratepayers and businesses will have to pay these funds back with interest.



Forecast Cost of Power Rose Substantially After AMP Communities Committed to Prairie State in Late 2007





Why Have the Costs of Power from Prairie State Increased So Much Since 2007?

- Prairie State's construction cost increased by approximately \$1 billion.
- The plant's operating performance has been much poorer than AMP had told communities it would be.



The Cost of Building Prairie State Has Been Much Higher than AMP Said in 2007





Prairie State's Operating Performance Has Been Worse Than AMP Projected





- Technical problems experienced during initial "shakedown" period.
- Decision to purchase boilers that were originally designed to burn coal from the Powder River Basin.
- Many problems caused by the poor quality of the coal.



Costs of the Power from Prairie State Likely to Remain Very High in Coming Years

- Consultant for AMP and the City of Bowling Green recently forecast continued high costs for Prairie State power even if operating performance improves significantly.
- Cost per MWh will be even higher if plant's operating performance does not improve as much as AMP claims it will.
- Natural gas prices are expected to remain low, leading to continued low energy market prices.
- This means cost of power from Prairie State will continue to be much more expensive than buying from competitive PJM markets.



Even with Periodic Spikes, Natural Gas Prices Expected to Stay Low in Coming Years





Low Natural Gas Prices Can Be Expected to Lead to Low PJM Energy Market Prices





Prairie State Power Will Continue to Be Very Expensive – Even If Plant Operates as AMP Claims it Will



Prairie State power will be even more expensive if the plant continues to operate worse than AMP predicts.

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- Bowling Green's ratepayers and businesses could pay between \$48 million and \$54 million between 2014 and 2021 more for power from Prairie State than they would pay for power from the competitive PJM wholesale markets or through AMP's Northern Pool.
- This would be \$48 million to \$54 million that will not be available for other personal, business or city uses.



Other Prairie State-Related Economic Risks

- How much coal is in the mine?
- Adoption of a federal plan to place a cost on CO₂ emissions and/or regs. increasing coal ash costs.
- Prairie State could emit as much as 12 million tons of CO₂ per year. Even with modest \$10 dollar per ton CO₂ cost, these emissions would increase the cost of power from Prairie State by \$120 million per year.
- Bowling Green's share of these CO₂ costs would be approximately \$2.6 million per year.
- Over 40 years, Prairie State could emit approx. 500 million tons of CO₂.
- It is unreasonable to expect that no price on CO₂ emissions will be adopted at any time within the next 40 years.



- Bowling Green should prepare an Integrated Resource Plan (IRP) to determine the appropriate portfolio of supply-side and demand-side resources.
- Goal -- do as much energy efficiency and renewables as are technically and economically feasible and as little natural gas as is necessary.
- Issue a Request for Proposals (RFP) for power from a natural gas combined cycle plant – evaluate prices offered by suppliers.
- Do more aggressive energy efficiency. EE is cheap – approx. \$30 per MWh.
- Solar and wind prices are declining.
- Short-term -- buy from PJM markets or from AMP Northern Pool.



- AMP communities like Bowling Green were only given a short time in 2007 to decide on whether to enter long-term contracts for power from Prairie State, a second coal plant (AMPGS in Meigs County) and AMP's proposed hydro projects.
- The consultant for the town also has been a consultant for AMP – Sawvel Associates.
 Possibly R.W. Beck as well.
- Peabody said in early 2007 that a "hot" labor and equipment market had led to increases in the prices of building new coal plants.



- To minimize this effect, Peabody said PSGC (Prairie State Generating Company) was negotiating with Bechtel for a "Turnkey EPC Contract" with a capped price.
- But PSGC was unable to get such a capped price contract – instead it signed a target price contract which gave Bechtel incentives but there was no fixed price for Prairie State.



- AMP nevertheless reassured the communities considering Prairie State that the target price contract would minimize the potential for schedule delays and budget overruns. AMP also said that the total estimated construction cost for Prairie State would increase by only as much as 6 percent.
- This was based on the "experience related to the construction and construction costs for coal plants similar to Prairie State."
- By the time that a fixed price contract was finally signed in 2010, the estimated cost of building Prairie State had increased by approximately 25 percent to \$4.9 billion.



- Peabody and AMP knew or should have known in 2007 that there was a significant risk, if not a certainty, that the cost of building Prairie State would increase by more than 6 percent.
- The industry was using terms like "soaring," "skyrocketing" and "staggering" to describe the cost increases being experienced by coal plant construction projects.
- The estimated costs of coal plant construction projects were routinely being increased by well over 6 percent over a period of months, not years.







Duke Cliffside Coal Plant Construction Cost Increases



By Spring 2007 building 1 new coal plant at Cliffside was estimated to cost almost as much as the estimated cost of building both new units has been just a year earlier.

AMP'S NEW HYDRO PROJECTS



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Projected Construction Cost





Projected Cost of Power





What are Bowling Green's Options – Prairie State

- 1. Acknowledge that AMP and perhaps Peabody provided bad and possibly misleading advice concerning the Prairie State coal plant.
- 2. Investigate whether AMP or Peabody misled Bowling Green into entering into long-term contracts for power from Prairie State.
- 3. Acknowledge that the City's consultant(s) on Prairie State had a potential conflict of interest and also provided bad and perhaps misleading advice.
- 4. Retain other, more independent, consultants to assist the City in resource planning.
- 5. Investigate options for withdrawing from the contract to buy power from Prairie State.
- 6. Talk to other AMP communities that also entered into long-term contracts to buy power from Prairie State.



What are Bowling Green's Options – AMP Hydro Projects

- 1. Retain truly independent consultants to assist the City in evaluating its options and in future resource planning.
- 2. Investigate whether AMP misled Bowling Green into entering into long-term contracts for power from the AMP hydro projects.
- 3. Investigate options for withdrawing from the long-term contract to purchase power from AMP's new hydro projects.
- 4. Investigate options for recovering from AMP for imprudence related to the design and construction of the new AMP hydro projects
- 5. Talk to other AMP communities.



Bowling Green's Alternative Options for both Prairie State and AMP's Hydro Projects

- 1. The City could do nothing beyond entering into levelization and stablization plans that will merely defer some of the expensive power costs from these projects to future years where some of these deferrals will have to be repaid with interest.
- 2. This would make the City's residential ratepayers and businesses suffer the burden of paying tens of millions, if not over a hundred million dollars, in unnecessarily high power costs during the coming decades.



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