

Schnieders, Carla

From: Rice, Arthur
Sent: Thursday, August 13, 2009 10:42 AM
To: Gilbert, Guy; Williams, Nathan
Subject: Ameren ER-2010-0036

I have completed my initial review of the Direct testimony of Wiedmayer and Loos for ER-2010-0036. (A review of the depreciation study will take me a while longer!)

I have three comments/questions to voice at this time.

1. Wiedmayer page 11 bottom -- The adjustment to historical net salvage percent by 20 percent --- using 2% net salvage vs. 10% net salvage ---- for account 311.
a) I did not find any support in the testimony for the 20% estimate,
b) and why only account 311

2. Wiedmayer page 19 center -- and Loos pages 3-3 and 3-4 -- the scrubbers added to the coal plant have been used as a major factor in the estimate of the life of these plants. The estimates are derived from economic considerations, not mortality considerations. But, I would like to see mortality estimates (data) with respect to this type scrubber equipment.

As a stand alone piece of equipment, what would an expected mortality curve for the added scrubber system look like?

3. On a broader basis --- My conclusions from reviewing Wiedmayer and Loos is as an answer to the following question:

The life of an electric generating plant is exhausted when?

Continued maintenance, (upkeep & repair parts) of boilers and turbines results in a system that, as a whole, does not wear out. It is economic forces which determine the necessity to retire a plant.

An electric generating plant becomes exhausted and should be retired when;

The expected cost of continued operation of a plant (capital and expenses) exceeds the expected cost of operation (capital and expenses) of a replacement plant.

This includes the expected cost of capital and expenses to pay for:

- a) future expected environmental compliance,
- b) downtime and capital to repair/replace worn components,
- c) differences in fuel cost (efficiency) of old versus new
- d) differences in operation and maintenance labor of old versus new.

Plus liability issues, safety issues, and reliability requirements.

LIFE SPAN

Planning for the retirement of an electric generating plant becomes an exercise in cost analysis, --- future cost analysis ---.

Projections of mortality, (depreciation analysis), of component parts becomes an essential ingredient of the "future cost analysis". This applies to depreciation expense for both the existing plant as well as the expected depreciation expense of the projected replacement plant.

For the Public Service Commission, the question is, --- When will the "EMS run" for a new plant result in lower rates than continued operation of the existing plant?

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4. How do Wiedmayer and Loos present an answer to the question (When to retire?).

They do not present any economic analysis, (to say nothing of one with credible evidence) showing when a new plant will cost less to operate than continued operation of the existing plant.

What they do show is a long list of retirement history, and from this they project that the age at retirement for the AmerenUE plants will similar to these other plants.

This is fine until I take a close look at the historical data, Loos Appendix A-2.. The data base includes a very large number small generator plants (less than 50 KW). I'm sure many of these small plants are not representative of the AmerenUE plants in review. Also, this data base goes back into the early days of electric power generation. Many of these plants would now be considered pilot or demonstration plants which provided utility both as power generation and as prototype plants for equipment development. Only 5 of the 586 plants listed as retired are rated 200 MW or greater.

Also, Loos Appendix A-3 is a list of current plants in service. Of the 1,439 plants listed, only 85 (5.9%) are 60 + years old, and of these only 4 (0.28%) are rated at 100 MW or greater. Believe it or not, with respect to the life of generating plants of the type and size of the AmerenUE plants, this technology is still to young to have a representative retirement data base to analyze.

Summary; I do give credit to the way Wiedmayer and Loos extended the life expectancy of these plants about 20 years past the ASL that would be found from typical mortality curves on current boiler plant equipment, and then further extended them to accommodate an orderly replacement construction schedule. I also understand the implications of increasing environmental constraints, and see advances in technology resulting in significant increases in the thermal efficiency of new plants over the AmerenUE plants in question.

Overall, I believe the estimated retirement dates presented by Wiedmayer and Loos to be reasonable. Short of a reversal of the environmental movement, and/or a decade long economic depression, I believe these plant will be slowly going away over the next 12 to 36 years.

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Missouri Public Service Commission