

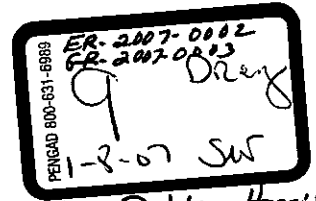
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Comments for the Missouri Public Service Commission --  
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Missouri Public  
Service Commission

My name is Kay Drey. I live at 515 West Point in University City. 63130



As with many St. Louisans, my husband and I were also forced to leave our house in December because of no heat, electricity or running water, and, as with many St. Louisans, the gorgeous Johnson's Shut-Ins had always been one of our family's most favorite state parks. *Public Hearing Univ of Mo- ST. Louis*

I am here today, however, to talk about a different financial challenge facing Ameren, and the rest of us as electric ratepayers. And that is the Callaway nuclear power plant. St. Louis is only 60 air miles downwind from Callaway, and 80 river miles downstream, on the Missouri River.

For years I have been writing to the Missouri Public Service Commission and the Missouri Public Counsel to ask about the costs and liabilities associated with Callaway's steam generators, and specifically to ask if AmerenUE's ratepayers were going to have to pay for the elaborate repairs and then, ultimately, for the premature replacement (in 2005 ) of the gigantic, expensive, and defectively-designed Westinghouse steam generators.

I have always been told I would have to wait until the next rate case to raise such questions. It is my understanding that this set of public hearings is finally the appropriate time.

Union Electric placed an order in July 1973 with Westinghouse for an incredibly expensive and complex nuclear power plant reactor and steam electric system for its Callaway County location. It was understood by the public that the basic equipment --- the reactor, the steam generators, and the other major components and systems --- would operate for the full forty-year duration of the plant's operating license. Instead, not long after December 1984, when the plant began operating, leaks began to occur in all four of the gigantic steam generators.

The steam generator problems should have come as no surprise to Union Electric. In 1978 a report was published that featured the Westinghouse steam generator tube degradation as one of the most serious unresolved safety issues of nuclear power plants. *\*by the U.S. Nuclear Regulatory Commission*

In a nuclear power plant, the water that flows within the steam generator tubes is the identical, radioactively contaminated cooling water that is present in the reactor vessel where the uranium fuel fissions to generate the heat that generates the electricity.

Many pipes, valves, and other components have also had to be replaced during Callaway's first 22 years of operation --- that is, the kind of repairs that are required in all power plants. At Callaway, however, and at other nuclear power plants, the replacements and repairs involve radioactive equipment, and therefore far more workers are needed than for repairs in a coal- or gas-fired plant.

Starting in 1978, more than a dozen electric utilities faced with the same degradation and premature aging of their nuclear plant steam generators, filed lawsuits against Westinghouse, demanding payment for a portion of the cost of purchasing and exchanging replacement steam generators -- including the removal and storage costs of the old ones, and the cost of having to pay for alternate power sources for their customers during the long shutdown.

Although Union Electric did not file a lawsuit, it reached a settlement for an undisclosed amount with Westinghouse for a portion of the costs. Was the Public Service Commission informed of the amount

*know of the settlement*

provided by Westinghouse? How will the Commission <sup>know of the settlement</sup> was appropriate --- and how much should be charged to the ratepayers, if any, and how much to the shareholders? Westinghouse knew its steam generators were defective when Union Electric purchased them. What guarantees has Ameren obtained, if any, from Framatome, the manufacturer of the replacement generators, covering the design and materials (Inconel-690) of the new generators?

Each of Callaway's four steam generators has five-thousand tubes inside, made of metal only four-hundredths of an inch thick. The tubes are shaped like an upside down "U" and are threaded through holes in a series of so-called "tube support plates." The radioactively and thermally hot cooling water travels in pipes from the reactor vessel into the 22,500 steam generator tubes, and then back into the reactor vessel.

The cooling water travels under tremendous pressure. The resulting vibration of the steam generator tubes and the buildup of highly radioactive corrosion products on the tubes and on the tube support plates cause some of the tubes to dent, crack and then to leak. This leakage results in the release of radioactive water, steam and gases to the environment.

Because the water inside the tubes is so radioactive and the rust or corrosion products are also highly radioactive, high radiation fields are created near the steam generators where workers have to make repairs. I first began learning about how radioactive the steam generators are when the Callaway plant was first under construction. A Nuclear Regulatory Commission engineer sent me an article from Nuclear News. It said that it took eight months and 700 men for a repair of a steam generator at the Indian Point plant in New York --- a repair that would have taken "about two weeks [not 8 months] using 25 men" [not 700 men] if it had been a coal-fired plant.

I hope the Public Service Commission will specifically seek information on how much it cost Ameren to pay for the experimental Framatome electrosleeving repairs in 1999 that were made to leaking tubes in two of the four Callaway generators. The Nuclear Regulatory Commission cited Ameren for unexpectedly high exposures of workers to radiation during those repairs. No other electric utility in the United States tried out the Framatome process, either before or after the Callaway experiment. In fact, even Ameren failed to electro-sleeve the other two generators as it had planned to do during its next refueling outage.

I believe one important question is why Ameren chose to expend a great deal of money, and expose its workers to the high levels of radiation to electrosleeve the steam generators when the company knew long before the electrosleeving experiment that it intended to replace all four of the generators, which it did do in 2005.

I would also like to know if the Public Service Commission has been examining to what extent Ameren may be making decisions about replacing major, expensive equipment at Callaway in order to be in a better position to be granted (by the NRC) an extension of its operating license for an additional 20 years, beyond the current 40-year duration.

I would like to offer the staffs of the Commission and of the Public Counsel's office the opportunity to borrow or copy documents about steam generators that I have accumulated over these several decades. I literally have a filing drawer full of reports about steam generators which happen to be my favorite of many defective components that clearly demonstrate that nuclear power is dangerous, dirty and expensive. Thank you.