

**BEFORE THE  
ILLINOIS POLLUTION CONTROL BOARD**

AMEREN ENERGY GENERATING	)	
COMPANY,	)	
	)	
	)	
Petitioner,	)	
	)	
v.	)	PCB 09-38
	)	(Thermal Demonstration)
ILLINOIS ENVIRONMENTAL	)	
PROTECTION AGENCY	)	
	)	
	)	
Respondent.	)	

**PRE-FILED TESTIMONY OF JAMES L. WILLIAMS, JR.**

1. My name is James L. Williams, Jr. and I am presenting this testimony on behalf of Ameren Electric Generating Company ("Ameren"). I am employed by Ameren as the Plant Manager at the Coffeen Station. I have served in this capacity since 2001. I am responsible for the safe operation of Coffeen Station.

2. Ameren has filed its Petition to Modify Specific Thermal Standard ("Petition") asking the Illinois Pollution Control Board ("Board") to modify the specific thermal standard applicable to Ameren's heated effluent discharge from the Coffeen Station to Lake Coffeen in the calendar months May and October. My sworn affidavit dated December 10, 2008 was attached to the Petition as Exhibit 5. I incorporate my December 10, 2008 affidavit as my pre-filed testimony in this matter except as otherwise updated herein. Additionally, the sworn affidavit of Michael L. Menne dated December 10, 2008 was attached to the Petition as Exhibit 10. I have personal knowledge and can testify competently as to the matters described in Mr.

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Menne's December 10, 2008 affidavit, and therefore, I adopt Mr. Menne's affidavit as my pre-filed testimony in this matter.

3. Coffeen Station made its thermal demonstration in 1982. The specific thermal standard established in the 1982 thermal demonstration remains in effect today and serves as the basis for Coffeen's present thermal limits. Attachment 1 depicts graphically the presently applicable thermal limits.

4. Ameren is seeking to modify the specific thermal standard to increase the thermal limits for the calendar months of May and October. Coffeen Station is not able to comply at all times with the monthly average thermal limit for the months of May and October without de-rating its units or otherwise affecting operational availability. This is true for unseasonably warm days toward the end of May and in the beginning of October. At these times, the "winter" thermal limits apply while ambient temperatures are transitioning to or from summer temperatures. The need for relief is greater now than it has been in the past due to more frequent high summer temperatures, especially in periods of low lake levels. Attachment 2 depicts graphically the thermal limits Ameren is requesting in this proceeding.

5. This issue is not new for Coffeen Station. In 1997, it sought and obtained relief from the thermal limits for May and October in the form of a temporary variance. The 1997 variance set the thermal discharge standard for Coffeen Station to not exceed "105 degrees Fahrenheit as a monthly average from May through October, and 112 degrees Fahrenheit as a maximum for more than 3% of the hours during that same period." As a condition of that variance, Central Illinois Public Service Company ("CIPS") was required to conduct studies and collect data regarding the effects of the Station's thermal discharge on the lake's fishery. The variance also contained a condition providing for termination of the variance if the Illinois

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Environmental Protection Agency (“Agency”) the Illinois Department of Natural Resources (“IDNR”) determined that the variance was causing an adverse impact to the lake. The Station operated under the variance for two years before a fish kill led to its termination in 1999.

6. As a result of the 1999 fish kill, and two smaller fish kills in 2001 and 2002, Ameren went forward with several significant capital projects designed to improve thermal performance of its cooling system. The company spent in excess of \$26 Million to construct a 70-acre cooling basin and a 48-cell cooling tower. These efforts substantially improved cooling system performance. There have been no significant fish kills since the completion of those capital projects.

7. Despite these improvements, however, compliance with the thermal limits in May and October has been maintained, in part, by scheduling planned outages or extending forced outages in those months. As noted above, declining lake levels coupled with higher than normal summer temperatures exacerbated the compliance issues in 2007. In 2007, Ameren resorted to de-rating its units in May and October, at substantial financial hardship, in order to maintain compliance with the monthly average thermal limits.

8. Ameren has analyzed other cooling alternatives to meet the current thermal standard for May and October. Ameren retained Sargent & Lundy to do the engineering analysis on behalf of Ameren. Its report is attached to the Petition as Exhibit 15 thereto. That analysis concluded that potential alternatives are either technically infeasible or otherwise unreasonably cost prohibitive. Incurring substantial additional costs for the enhanced cooling technologies investigated beyond those investments already made by the Company is not economically reasonable as none of these alternatives would provide a substantial additional environmental benefit.

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9. In August 2007, Ameren performed an economic analysis of the costs associated with the installation of various enhanced cooling technologies. Ameren originally estimated that the payback period for the installation of an \$18 million, 175,000 gallon-per-minute (“GPM”) helper cooling tower would take approximately 11.5 years. Since the original analyses in the Sargent & Lundy Report were performed in 2007, market prices for electric capacity and energy have fallen considerably. Accordingly, Ameren prepared an updated analysis utilizing May 2009 capacity and energy prices. While conducting this economic analysis, Ameren also refined and updated certain assumptions utilized in the August 2007 analysis regarding the capital expenditures and revenue impacts associated with the installation of enhanced cooling technologies. The result was a conclusion that the 2007 analysis overstated the economic viability of an \$18 million investment required to potentially increase the availability of the Coffeen plant during two months of the year. The updated economic analysis demonstrates that the additional capacity revenues and energy margins realized from this increased availability do not recover the high up-front cost. The installation of such technology is therefore economically unreasonable.

10. Ameren then retained an outside consulting firm, ASA Analysis & Communications, to study the effect of modifying the thermal limits for May and October on the lake and its aquatic communities. ASA’s study concluded that modifying the limits in May and October as proposed by Ameren is expected to be environmentally acceptable.

11. If adopted, these limits would more realistically reflect a natural thermal environment, where temperatures fluctuate daily or weekly while increasing in the spring or decreasing in the fall, rather than track the abrupt (16 to 18 degree) change inherent in the existing thermal limits. In recent years, the natural transition in ambient temperatures has

threatened exceedances of the non-summer thermal limits during unusually warm weather in May and October. The proposed revisions to the May and October limits will avoid circumstances that would cause reductions or suspension of electricity generation simply to adhere to artificially lower limits for the transition months. The lake therefore has been, and would continue to be, environmentally acceptable.

12. De-rating the units, especially in warmer weather, impacts electric consumers. Coffeen is a lower-cost generator of electricity. The unavailability or reduced availability of a lower-cost generator like Coffeen will increase the daily and hourly market prices for power. Further, on unseasonably warm days, demand for electricity will be higher, thereby exacerbating the impact on prices and costs to consumers of the reduced availability of a baseload generator like Coffeen. In the longer term, higher wholesale prices for electricity in Illinois and the Midwest will compel wholesale suppliers to bid higher prices to supply the needs of electric utilities such as CIPS, Illinois Power and ComEd under contract, and thereby ultimately increase the prices paid by retail consumers for electricity.

13. Ameren has and continues to invest significant capital and resources in the control of air emissions at Coffeen Station, including the installation of equipment to control mercury emissions. The installation and operation of flue gas desulfurization ("FGD") and selective catalytic reduction ("SCR") systems at Coffeen Station have the co-benefit of reducing mercury emissions in addition to sulfur dioxide and nitrogen oxide emissions, respectively. Ameren expects to expend nearly \$600 million on two wet FGD projects at Coffeen Station, both scheduled to go online at Coffeen Station by 2010. In addition, Ameren has expended approximately \$100 million on a retrofit of SCR systems at Coffeen Station.

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14. Ameren takes its responsibility to the environmental very seriously. We have instituted and maintain good management practices at the Coffeen Station. With regard to thermal discharges, good management through scheduled maintenance, de-rating, and the implementation of various cooling system enhancements has allowed Ameren to maintain compliance with the thermal limits and ensure that Coffeen Lake is more than capable of supporting shellfish, fish and wildlife and a wide range of recreational uses.

15. I would like to conclude my testimony by taking a few minutes to talk about Coffeen Lake State Fish and Wildlife Area, our long-standing partnership with the IDNR and the company's commitment to the community. The cooling pond known as Coffeen Lake was open to the public in 1986 under a long term lease with the IDNR. The lake offers over 50 miles of shoreline with a lake depth averaging 19 feet and a maximum depth of close to 60 feet. The State Park offers the public great fishing, boating, hunting, camping and wildlife viewing opportunities thanks, in large part, to the good work of IDNR.

16. The lake is a well-known championship fishery. Thus far this year, for example, Coffeen Lake has hosted over 30 scheduled fishing tournaments through May.

17. I am taking the time to mention this to you because I am very proud of our power plant and especially proud of our lake. We believe Coffeen Station and the lake are a very important part of the community and the State. Most importantly, though, we feel strongly about our partnership and work with the IDNR to continue to make Coffeen Lake one of the best recreational fishing lakes in the State of Illinois.

18. Ameren has invested tens of millions of dollars worth of operational and hardware improvements to address temperatures associated with our discharge. As a side note, but just as important, in later this year we will begin work to install new state-of-the-art scrubbers on our

units to control air emissions, including mercury. These new scrubbers are two of the few in the State that will be capable of burning Illinois Coal—something we hope to be doing by mid-year, next year.

19. Again, my point in highlighting all of this is to emphasize our continuing work at Coffeen Station and to emphasize that offering Coffeen Lake to the public for its enjoyment is just as important to the company as the operational need for which the Lake was originally built.

20. As one fisherman noted, Coffeen Lake is a “Hidden Jewel”—his words not mine but I certainly agree. Ameren and Coffeen Station will continue in partnership with IDNR so that sportsmen and all the public who have visited our lake and have boasted about our “Hidden Jewel”, will continue to boast about our lake in the future.

I thank you for the opportunity to present this testimony to the Board.

Attachment 1





# Coffeen Thermal Standard

## Current Standard

105° Monthly Avg  
112° Max - 3% Hrs

Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
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89° Monthly Avg  
94° Max - 2% Hrs

Attachment 2



# Coffeen Thermal Standard

## Proposed Standard

