

SOUTH DAKOTA PUBLIC UTILITIES COMMISSION

CASE NO. EL05-022

IN THE MATTER OF THE APPLICATION BY OTTER TAIL POWER COMPANY

ON BEHALF OF THE BIG STONE II CO-OWNERS

FOR AN ENERGY CONVERSION FACILITY SITING PERMIT FOR THE

CONSTRUCTION OF THE BIG STONE II PROJECT

PREFILED REBUTTAL TESTIMONY

OF

TERRY GRAUMANN

MANAGER OF ENVIRONMENTAL SERVICES

OTTER TAIL POWER COMPANY

JUNE 9, 2006



PREFILED REBUTTAL TESTIMONY OF TERRY GRAUMANN

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1 **BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION**

2 **PREFILED REBUTTAL TESTIMONY OF TERRY GRAUMANN**

3 **I. INTRODUCTION**

4 **Q: Please state your name and occupation.**

5 A: My name is Terry Graumann and I am the Manager of Environmental Services for Otter
6 Tail Power Company.

7 **Q: Did you provide direct testimony in this proceeding?**

8 A: Yes I did. My direct testimony has been marked as Applicants' Exhibit 16.

9 **Q: Whose direct testimony are you responding to?**

10 A: I am responding to the testimony of South Dakota Staff witness Olesya Denney and
11 Intervenor Mary Jo Stueve.

12 **Q: What issues do you address in your rebuttal testimony?**

13 A: I address the issues of mercury control, calculation of environmental impacts, the federal
14 Environmental Impact Statement, and the status of other permits and authorizations required for
15 Big Stone Unit II.

16 **II. MERCURY**

17 **Q: What commitments are the Applicants prepared to make to control emissions of**
18 **mercury from both Big Stone Unit I and Big Stone Unit II?**

19 A: The co-owners of Big Stone Unit II have committed to a voluntary site-wide cap of 189
20 pounds of mercury per year at the Big Stone site beginning three years after commercial
21 operation of Big Stone Unit II to afford the Applicants sufficient time to test and implement
22 commercially available, technically feasible mercury emissions control measures. The 189

1 pounds reflects the amount of mercury emissions from Big Stone Unit I in 2004. On May 31,
 2 2006, I wrote to the South Dakota Department of Environment and Natural Resources and put
 3 this commitment of the co-owners in writing. A copy of my May 31 letter is attached as
 4 Applicants' Exhibit 34-A.

5 As I explained in my letter, this commitment is significant because even though electrical
 6 output from the combined units will increase to 230% of the current capacity, mercury emissions
 7 from both units will not increase above the amount emitted during 2004. Using the New Source
 8 Performance Standard for new units (42×10^{-6} lb/MWh) as a benchmark, the addition of Big
 9 Stone Unit II alone would have represented an expected increase of approximately 210 lbs/year
 10 (i.e., we would be limited to the 42×10^{-6} lb/MWh following the 180 day shakedown period from
 11 the date that fuel is first burned in the boiler).

12 Under the commitment made by the co-owners, there will be no such increase from the
 13 site as a whole. The commitment has the added benefit of operation flexibility -- the owners can
 14 put resources to work where it will control mercury most effectively and efficiently. Because the
 15 owners must purchase allowances in excess of those allocated under the Clean Air Mercury Rule
 16 and the South Dakota rules, they will have ongoing incentives to reduce mercury emissions.

17 **Q: Who will enforce the annual site limitation?**

18 A: The South Dakota DENR will enforce and regulate the site cap as part of the Applicants'
 19 Prevention of Significant Deterioration Construction Permit and future Title V Permit to
 20 Operate.

21 **Q: What potential adverse environmental impacts are expected from the emission of**
 22 **mercury from operation of Big Stone Unit II?**

1 A: None. Ms. Denney in her testimony and other Interveners in their testimony have
2 expressed a concern about the possibility of adverse impacts from an increase in the emissions of
3 mercury when Big Stone Unit II comes online. These concerns are based on the assumption that
4 mercury emissions from the Big Stone site as a whole will more than double when Big Stone
5 Unit II goes into operation. However, as I have explained, the co-owners have committed to
6 keep mercury emissions from both units at the level they are today from Unit I. Because the
7 total emissions of mercury from the Big Stone site will not increase, no additional impacts
8 should occur.

9 Ms. Stueve, in her direct testimony, cited a study from EPA prepared in 1997, for the
10 proposition that mercury emissions from power plants are likely to result in mercury “hot spots”
11 (i.e. localized areas of high ambient mercury deposition). The 1997 study predates EPA’s
12 determination that it was not necessary or appropriate to regulate coal-fired power plants under
13 hazardous air pollutant provisions because of mercury emissions. See 70 Fed. Reg. 15994
14 (March 29, 2005). EPA’s determination is based on the realized or projected effect of new air
15 emission control programs that have been implemented since this earlier study or that have been
16 adopted and will be implemented, and which have the intent or co-benefit of reducing mercury
17 emissions. These other control programs include Phase II of the Acid Rain Program, the NOx
18 SIP (State Implementation Plan) Call, the Clean Air Interstate Rule, and the Clean Air Mercury
19 Rule. Contrary to the earlier 1997 study cited by Interveners, EPA subsequently found, based on
20 computer modeling, that due to the reductions of mercury emissions resulting from these other
21 programs, mercury emissions will not result in “hot spots.” 70 Fed. Reg. 15994, 16027 -28
22 (March 29, 2005).

1 **Q: Given that the 189 lbs Hg/yr site-side cap is still in excess of the South Dakota**
2 **budget for mercury allowances, have the Applicants considered the monetary risk**
3 **associated with the requirement to either obtain additional mercury removal or purchase**
4 **mercury emission credits or allowances?**

5 A: Yes, we are aware that there will be costs incurred in installing mercury control
6 equipment or purchasing emission allowances. We do not know what the next generation of
7 emission control equipment will cost but it is certain it will be several millions of dollars in
8 capital costs and annual operating costs. The cost of mercury emission allowances has not been
9 determined either. Estimates range from a few thousand dollars per pound to tens of thousands
10 and hundreds of thousands of dollars per pound.

11 **III. ENVIRONMENTAL EFFECTS**

12 **Q: Did the Applicants qualitatively examine the environmental effects of the proposed**
13 **Big Stone Unit II?**

14 A: Yes, we did. The potential environmental effects are described in detail in the
15 Application and in testimony by various witnesses.

16 **Q: Will Big Stone Unit II pose a threat of serious injury to the environment or health of**
17 **nearby inhabitants because of its potential environmental impacts?**

18 A: No, as described in the Application, we have not identified any serious injuries to the
19 environment or health that would be caused by Big Stone Unit II.

20 **Q: Did the Applicants attempt to “calculate” the potential environmental effects of Big**
21 **Stone Unit II?**

1 A: No, we didn't attempt to put a dollar figure on the potential environmental effects
 2 associated with Big Stone Unit II.

3 **Q: Why didn't you attempt to "calculate" the potential environmental effects?**

4 A: In the usage and context of ARSD 20:10:22:13, the Applicants interpreted "calculate" to
 5 mean "to evaluate" or "to forecast consequences." That interpretation is consistent with the
 6 remaining portion of ARSD 20:10:22:13, which asks the applicant to provide a description of the
 7 existing environment, estimates of changes in the existing environment, and an identification of
 8 irreversible changes. In that context, the Applicants believed that a narrative description was not
 9 only consistent with the rule requirements, but also common regulatory practice.

10 **Q: What was your understanding regarding the interpretation and approach followed**
 11 **by the South Dakota PUC in other matters involving a request for an Energy Conversion**
 12 **Facility Siting Permit?**

13 While I have not reviewed all of the previous submittals, I did review Basin Electric's
 14 application for their East Side Peaking Project dated December 2004 and the descriptive
 15 evaluation that is included in the Big Stone Unit II application appears to be consistent in
 16 approach to Basin's application. The Basin Electric Application did not attempt to calculate the
 17 environmental effects in monetary terms but rather provided a narrative description of the
 18 possible environmental effects.

19 **IV. FEDERAL ENVIRONMENTAL IMPACT STATEMENT**

20 **Q: What is the current schedule for development of the Federal Environmental Impact**
 21 **Statement (EIS)?**

1 A: EPA published the Notice of Availability of the Draft EIS in the May 19th Federal
2 Register. Western's Notice of Availability and Public Hearings was published in the May 23,
3 2006 Federal Register. Western will hold public hearings in the next week at the following
4 locations to take comments on the DEIS:

5 June 13 Big Stone City, SD

6 June 14 Morris, MN

7 June 15 Granite Falls, MN

8 June 16 Benson, MN

9 There is a 45-day public comment period that is slated to close on July 3, 2006.
10 Following close of the public comment period, Western will incorporate the public comments
11 into the final EIS. At that time, Western will issue a Record of Decision and announce the
12 availability of the Final EIS. The current schedule shows the release of the Record of Decision
13 near the end of December 2006.

14 **Q: Has a copy of the Draft EIS been distributed to the parties in this case?**

15 A: Yes it has.

16 **Q: When and how did the distribution occur?**

17 A: Copies were mailed for overnight delivery to all parties on the service list in this docket
18 on May 5, 2006. Copies were also sent to all parties and participants in the certificate of need
19 proceeding for transmission facilities before the Minnesota Public Utilities Commission.

20 **Q: Was notification on the availability of the Draft EIS provided by other media?**

1 A: Yes it was. As the lead Federal agency, Western published a Notice of Public Hearing in
2 twelve local newspapers on two different occasions. In addition, mailings were made to
3 approximately 6000 landowners in the transmission line corridors.

4 **V. STATUS OF OTHER PERMITS**

5 **Q: Do you have an updated list and status of potentially required permits and**
6 **approvals?**

7 A: Yes, I have included with my testimony a revised version of Table 1-1 from the Energy
8 Conversion Facility Siting Permit Application. It is attached as Applicants' Exhibit 34-B.

9 **Q: What is the status of the PSD Construction Permit?**

10 A: The South Dakota Department of Environment and Natural Resources published the
11 Notice of Prevention of Significant Deterioration Permit Application and Draft Permit on April
12 26th. Public comments will be accepted for a period of 30 days. The Sierra Club and Region
13 VIII EPA have requested a 30-day extension to the comment period and following their requests,
14 Otter Tail filed a similar request on behalf of the Big Stone II co-owners. The South Dakota
15 Department of Environment and Natural Resources granted the requests for the 30-day extension
16 and comments are now due on July 26, 2006.

17 **Q: What is the status of the Water Appropriations Permit?**

18 A: The Notice of Hearing on the application to appropriate water was publicly noticed on
19 April 5 and 12, 2006. Subsequent to the publication, the South Dakota Department of
20 Environment and Natural Resources received three requests for an automatic delay of hearing,
21 and the hearing was rescheduled to July 12 and 13, 2006.

22 **Q: What is the status of the Permit to Operate a Solid Waste Facility?**

1 A: The draft Permit to Operate a Solid Waste Facility was public noticed on May 10, 2006
2 for a 30-day public comment period.

3 **Q: Are you able to identify the dates for filing the applications for remaining permits**
4 **that are not as yet submitted?**

5 A: I am unable to provide specific dates, but those permits that are necessary to have prior to
6 construction, for construction, and for operation are noted on Table 1-1.

7 **Q: Does this conclude your rebuttal testimony?**

8 A: Yes it does.