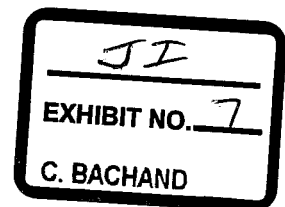


**BEFORE THE SOUTH DAKOTA PUBLIC UTILITIES COMMISSION**

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 ) Case No EL05-22  
Permit for the Construction of the Big Stone II )  
Project )

**Surrebuttal Testimony of  
Ezra D. Hausman, Ph.D.  
Synapse Energy Economics, Inc.**

**On Behalf of  
Minnesotans for An Energy-Efficient Economy  
Izaak Walton League of America – Midwest Office  
Union of Concerned Scientists  
Minnesota Center for Environmental Advocacy**



**June 20, 2006**

1 **I. PROFESSIONAL QUALIFICATIONS AND SUMMARY**

2

3 **Q. Please state your name, position and business address for the record.**

4 A. My name is Ezra D. Hausman, Ph.D. I am a Senior Associate with  
5 Synapse Energy Economics, Inc., 22 Pearl Street, Cambridge, MA 02139.

6 **Q. On whose behalf are you testifying?**

7 A. My testimony is jointly sponsored by Minnesotans for An Energy-Efficient  
8 Economy, Izaak Walton League of America-Midwest Office, the Union of  
9 Concerned Scientists and the Minnesota Center for Environmental  
10 Advocacy (“Joint Intervenor”).

11 **Q. Have you previously submitted testimony in this proceeding?**

12 A. Yes. I submitted Direct Testimony in this proceeding on May 19, 2006.

13 **Q. What is the purpose of this surrebuttal testimony?**

14 A. The purpose of this surrebuttal testimony is to respond to the rebuttal  
15 testimony of co-owner witness Ward Uggerud, Senior Vice President of  
16 Otter Tail Power Company.

17 **Q. What particular aspects of your direct testimony were addressed by  
18 Mr. Uggerud?**

19 A. Mr. Uggerud challenged my conclusion that “Big Stone Unit II will have a  
20 significant, long-term, and costly adverse impact on the environment both  
21 in South Dakota and throughout the region, the continent and the planet.”

22 **Q. What was the basis of Mr. Uggerud’s disagreement with this  
23 statement?**

24 A. Mr. Uggerud noted that the emissions from the proposed Big Stone II plant  
25 will total less than “two one-hundredths of one percent” of anthropogenic  
26 CO<sub>2</sub> emissions in 2010, and that, by implication, this would not represent a  
27 significant contribution to atmospheric CO<sub>2</sub> and to global climate change.

1 **Q. Do you take issue with Mr. Uggerud's quantitative calculation of Big**  
2 **Stone II's relative contribution to anthropogenic CO<sub>2</sub> emissions?**

3 A. No. I believe it is a reasonable calculation subject to uncertainty in both  
4 Big Stone's future emissions and global emissions in 2010.

5 **Q. Does this alleviate your concern that Big Stone II would represent a**  
6 **significant, long-term and costly contribution to anthropogenic CO<sub>2</sub>**  
7 **and to global climate change?**

8 A. It does not. As with most other environmental issues, the problem of  
9 anthropogenic CO<sub>2</sub> is the result of the combined action of numerous  
10 sources, both "point" sources and "non-point" sources. Point sources are  
11 single, large sources of a given pollutant, often including large industrial  
12 sources such as electric power generating facilities. Non-point sources are  
13 more diffuse sources, such as individual automobiles. It is often the case  
14 that regulation or elimination of point sources is a much more cost-  
15 effective approach to reducing emissions than regulation of non-point  
16 sources.

17 In the case of CO<sub>2</sub>, the sources of pollution are spread around every  
18 country on the globe, involving tens or hundreds of thousands of point  
19 sources, and probably hundreds of millions of non-point sources. In this  
20 context, a single source which would represent almost two one-hundredths  
21 of one percent of global anthropogenic emissions represents an enormous  
22 contribution to anthropogenic emissions and global climate change.

23  
24 **Q. Do you agree with Mr. Uggerud's contention that your statement, cited**  
25 **earlier, "lacks perspective, to say the least"?**

26 A. I agree that I had not specifically put Big Stone II's emissions into a  
27 quantitative perspective in my direct testimony. However, providing such a  
28 perspective on Big Stone II's CO<sub>2</sub> annual emissions, as Mr. Uggerud has  
29 done, serves only to support my statement that the proposed unit would

1           produce “significant, long-term, and costly adverse impact on the  
2           environment both in South Dakota and throughout the region, the continent  
3           and the planet.”

4   **Q.   Does this conclude your surrebuttal testimony?**

5   **A.   Yes.**