

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

STEPHEN M. THOMPSON

CHIEF OPERATING OFFICER

CENTRAL MINNESOTA MUNICIPAL POWER AGENCY

JUNE 16, 2006



PREFILED REBUTTAL TESTIMONY OF STEPHEN M. THOMPSON

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BEFORE THE SOUTH DAKOTA PUBLIC UTILITIES COMMISSION
PREFILED REBUTTAL TESTIMONY OF STEPHEN M. THOMPSON

I. INTRODUCTION

Q: Please state your name and business address.

A: My name is Stephen M. Thompson. My business address is 459 South Grove Street, Blue Earth, Minnesota 56013.

Q: Did you previously submit testimony in this proceeding?

A: Yes. I submitted direct testimony as Applicants' Exhibit 6.

II. PURPOSE AND SUMMARY OF TESTIMONY

Q: What is the purpose of your testimony?

A: I have prepared this testimony in order to respond, along with R.W. Beck's Robert Davis, on behalf of CMMPA to the May 26, 2006 testimony of the Minnesota Center for Environmental Advocacy (MCEA) witnesses Schlissel and Sommers on pages 5, 6, 24, and 34 with regard to the need for baseload capacity, and various resource planning issues relating to the need for baseload capacity.

Q: Please summarize your testimony.

A: CMMPA has a need for the additional baseload capacity and energy that Big Stone Unit II is designed to provide. The results of the new resource expansion analysis reinforce this need.

III. NEED FOR AND TIMING OF BASELOAD CAPACITY

Q: At pages 5 and 6 of their May 26 testimony, MCEA witnesses Schlissel and Sommers state that CMMPA will have sufficient capacity through 2012. Does CMMPA have enough resources to meet their capacity requirements?

1 A: No. As I testified in my direct testimony and as Mr. Davis discusses in his testimony,
 2 CMMPA Members are projected to need additional capacity beginning in 2008, with demand
 3 steadily increasing through 2011, when we will experience an even greater capacity shortfall
 4 unless new generation sources are obtained.

5 **Q: Has CMMPA continued to evaluate its projected generation needs?**

6 A: Yes. Several months ago we engaged R.W. Beck – our consultant over many years – to
 7 prepare updated forecasts of the capacity and energy requirements for our participating CMMPA
 8 Members and to expand our resource expansion analysis. Mr. Robert Davis led that work on
 9 behalf of R.W. Beck.

10 **Q: Why have you continued to look at your forecasts and planning?**

11 A: Our proposed participation in the project is significant for a small municipal power
 12 agency such as CMMPA - a municipal utility whose rates and service are regulated by its citizen
 13 members and not by the Minnesota Public Utilities Commission (all of our load is in Minnesota).
 14 CMMPA must rely on the best data available to make long-term decisions. In addition, the
 15 Minnesota Center for Environmental Advocacy, et al. (MCEA) has questioned CMMPA's
 16 determination that it has a need for additional generation capacity and Mr. Schlissel and Ms.
 17 Sommers in their testimony have challenged the credibility of our forecast methodology and
 18 results. CMMPA asked R. W. Beck to respond to the concerns expressed by MCEA earlier and
 19 in their prefiled testimony.

20 **Q: Does the R.W. Beck analysis support CMMPA's decision to participate in Big Stone**
 21 **Unit II as a least-cost facility?**

1 A: Yes it does. In fact, the rigorous analysis demonstrates that CMMPA could justify taking
 2 an even greater share of the proposed power plant than it is currently contractually
 3 obligated/limited to.

4 **IV. DEMAND-SIDE MANAGEMENT (DSM)**

5 **Q: At page 34 of their May 26 testimony, MCEA witnesses Schlissel and Sommers state**
 6 **that CMMPA has not evaluated the potential for DSM on its system. Do you agree?**

7 A: No. As Mr. Davis discusses, the CMMPA Members adequately considered demand-side
 8 programs along with traditional resources as it evaluated its expansion alternatives.

9 **Q: At page 34 of their May 26 testimony, MCEA witnesses Schlissel and Sommers state**
 10 **that CMMPA does not offer DSM programs. Please explain how CMMPA considers**
 11 **demand-side management and conservation measures as part of its resource planning.**

12 A: In the past, CMMPA has had no direct control over the development and implementation
 13 of the DSM and the energy conservation programs of its members as the members are
 14 individually responsible for demand-side management and conservation programs. However,
 15 CMMPA has served as a catalyst for its members to encourage them to establish the reporting of
 16 the effects of the various DSM and conservation programs. CMMPA is currently developing an
 17 integrated load management system for its members.

18 In accordance with Minnesota law, the members of CMMPA report that they participate
 19 in energy conservation and efficiency programs that are approved and funded by individual
 20 members. The members are required to spend a portion of annual gross revenue dollars on
 21 conservation and DSM programs. To the extent that these programs have reduced actual energy
 22 use, such impacts are implicitly reflected in the members' forecast of future demand and energy

1 requirements. The rebuttal testimony of Mr. Davis discusses the estimated economic impacts of
 2 DSM and energy conservation programs.

3 **Q: Please describe in more detail the current load management system in development**
 4 **by CMMPA.**

5 A: CMMPA has taken the lead in developing, planning and implementing a centralized load
 6 management system that will be offered as a service to all of its members. The purpose of the
 7 system is to enable each member utility to unilaterally reduce its load at peak times when it
 8 deems it to be necessary. This type of system has a high up front investment cost associated with
 9 it; therefore, it was only feasible to proceed by having a number of smaller utilities aggregate to
 10 invest in the underlying backbone facilities of the system. The investment funds came from the
 11 non-conservation monies of the Conservation Improvement Program from five separate
 12 municipalities and were accumulated for two years in order to be able to afford the components
 13 necessary to build a viable base network. The parts are currently being ordered and the backbone
 14 should be installed and tested by the end of 2006. During 2007, the new monies invested are
 15 planned to be used to purchase and install the controllers that actually turn off the subject loads
 16 for rotating periods of 7.5 minutes every half hour during the load-shed period. At this early
 17 point in the system's development, we don't know the exact magnitude of the managed load.

18 **V. RENEWABLES**

19 **Q: Is CMMPA implementing renewable generation as part of its portfolio of resources?**

20 A: Yes. The agency is subject to the Minnesota's Renewable Energy Obligation (REO) but
 21 not its members. As a result, CMMPA must demonstrate "good faith efforts" to supply at least

1 10% of its retail sales in Minnesota by 2015 using qualifying renewable energy sources. Progress
 2 is reviewed in detail by the Minnesota Department of Commerce.

3 **Q: Please describe the status of CMMPA's efforts in complying with the REO.**

4 A: To meet its REO requirements, CMMPA in 2005 entered into three wind energy purchase
 5 agreements. The three existing agreements provide for the purchase of 6 MW beginning in 2005
 6 and 16.25 MW beginning in 2006, for a total of 22.25 MW. The 6 MW contract expires at the
 7 end of 2006 and CMMPA has an option to extend the contract on an annual basis. In addition,
 8 the City of Blue Earth, a CMMPA member, has recently entered into the purchase of 2.5 MW of
 9 wind energy from a project developed by a local farmer. Other CMMPA members are also
 10 investigating wind turbine projects.

11 **Q: Please describe any other initiatives that CMMPA is participating in with regard to**
 12 **renewable energy.**

13 A: CMMPA has been active in the research of potential use of landfill methane gas in the
 14 generation of electrical energy. It has been investigating a possible project at an operating
 15 landfill site. The project involves harnessing the potential energy benefits from the methane gas
 16 at the site, which is currently just being flared off. The proposed use would be to route the gas to
 17 3 or 4 methane burning turbines that would be located on site. The total output of these engines
 18 would be between 2500 and 3000 kW.

19 **Q: Is CMMPA meeting its REO requirements?**

20 A: Yes.

21 **Q: At Pages 23 and 32 of their May 26 testimony, MCEA witnesses Schlissel and**
 22 **Sommers state that CMMPA considered only fossil-fueled alternatives and did not consider**

1 **renewable or demand-side alternatives as potential alternatives to the Big Stone Unit II**
 2 **project. Do you agree?**

3 A: No. As Mr. Davis explains, our recent resource expansion analysis clearly considered
 4 wind resources along with fossil-fueled resources as expansion alternatives.

5 **VI. RESOURCE PLANNING**

6 **Q: At Page 34 of their May 26 testimony, MCEA witnesses Schlissel and Sommers state**
 7 **that CMMPA does not perform integrated resource planning. Is CMMPA or its members**
 8 **required to file a Resource Plan in the State of Minnesota?**

9 A: No. CMMPA is not subject to the integrated resource planning rules of the Minnesota
 10 Public Utilities Commission.

11 **Q: Does CMMPA engage in resource planning?**

12 A: Yes. I explained our resource planning process in my direct testimony, Applicants'
 13 Exhibit 6. And Mr. Davis explains in his rebuttal testimony, our recently completed Resource
 14 Expansion Analysis is state-of-the art resource planning analysis.

15 **Q: Could CMMPA use more baseload capacity than its proposed share of the Big Stone**
 16 **Unit II project?**

17 A: Yes. CMMPA's current participation in the Big Stone Unit II project is 30 MW. The
 18 capacity expansion modeling described in Mr. Davis' testimony determined that CMMPA can
 19 economically justify at least 60 MW of baseload generation, which is 30 MW more than the
 20 current 30 MW share in the Big Stone Unit II. Acquiring 60 MW of baseload coal generation
 21 rather than the subscribed 30 MW of generation is projected by Mr. Davis to result in lower total

1 system costs to the CMMPA Members, even considering incremental fixed capacity cost of the
2 Big Stone Unit II.

3 **Q: What is the impact of the Big Stone Unit II on CMMPA's power costs?**

4 A: The projected busbar cost of the Big Stone Unit II is anticipated to be lower than the
5 projected future market purchase costs of CMMPA. As a result, CMMPA Members'
6 participation in the Big Stone Unit II will lower CMMPA's wholesale costs.

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

8 A: Yes.