

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 PERMIT FOR THE

CONSTRUCTION OF THE BIG STONE II PROJECT

DIRECT TESTIMONY

OF

STEPHEN MICHAEL THOMPSON

CENTRAL MINNESOTA MUNICIPAL COMPANY

MARCH 15, 2006



TESTIMONY OF STEPHEN MICHAEL THOMPSON

TABLE OF CONTENTS

1

2

3 I. INTRODUCTION 1

4 II. PURPOSE 1

5 III. BACKGROUND INFORMATION ON CMPA 2

6 IV. RESOURCE PLANNING 5

7 V. FORECASTING 6

8 VI. GENERATING RESOURCES 9

9 VII. NEED FOR BIG STONE UNIT II 14

10

1 **BEFORE THE SOUTH DAKOTA PUBLIC UTILITIES COMMISSION**

2 **DIRECT TESTIMONY OF STEPHEN MICHAEL THOMPSON**

3 **I. INTRODUCTION**

4 **Q: State your name and business address.**

5 A: My name is Stephen Michael Thompson. My address is 459 South Grove Street, Blue
6 Earth, Minnesota 56013.

7 **Q: Whom are you employed by and in what capacity?**

8 A: I am the Chief Operating Officer of the utilities services company of Central Minnesota
9 Municipal Power Company ("CMMPA"), Utilities Plus. ("UP"). I am also serving as the acting
10 interim manager for both organizations.

11 **Q: What is your educational background?**

12 A: My education background is attached to this testimony as Applicants' Exhibit 6-A.

13 **Q: What is your employment history?**

14 A: My employment history is attached to this testimony as Applicants' Exhibit 6-A.

15 **Q: What work experience have you had that is relevant to your testimony?**

16 A: I have worked in the utility industry for 26 years. I have worked primarily in the planning
17 and operations areas.

18 **Q: What professional organizations do you belong to?**

19 A: I am a registered professional engineer in the State of Minnesota.

20 **II. PURPOSE**

21 **Q: What is the purpose of your testimony?**

1 A: The purpose of my testimony is to provide information about CMMPA and the CMMPA
 2 members' need for Big Stone Unit II. My testimony will explain the two major reasons why the
 3 CMMPA members are planning to participate in the Big Stone Unit II and another baseload coal
 4 unit (Nebraska City #2): The two reasons are: (i) currently the majority of the energy
 5 requirements of CMMPA members are provided from energy only contract purchases and spot
 6 market purchases, which are based on system incremental pricing and are subject to market
 7 volatility; and (ii) incremental system costs in this market region are expected to rise
 8 significantly in the coming decade.

9 **Q: The Mid-Continent Area Power Pool (MAPP) Load and Capability Report dated**
 10 **July 12, 2005 projects capacity shortages beginning in the summer of 2011. Do the**
 11 **CMMPA Big Stone Unit II Participants project capacity deficits in the same timeframe?**

12 A: CMMPA currently projects surplus capacity through 2012 for the CMMPA Big Stone
 13 Unit II Participants. The CMMPA Big Stone Unit II Participants are participating in Big Stone
 14 Unit II for baseload energy purposes and not primarily to meet their future capacity
 15 requirements. Big Stone Unit II and Nebraska City #2 are expected to provide the CMMPA
 16 members a greater opportunity for price stability and fuel diversity. This price stability and fuel
 17 diversity should provide long-term benefits to the CMMPA members' retail customers.

18 **III. BACKGROUND INFORMATION ON CMMPA**

19 **Q: Please describe CMMPA.**

20 A: CMMPA is a joint action agency that was created and incorporated in 1987 as a
 21 municipal corporation and a political subdivision of the State of Minnesota. CMMPA was
 22 established to serve the mutual needs of its members and has the power and authority to finance

1 and acquire facilities for the generation and transmission of electric energy. CMMPA is a
 2 “project agency.” That means each of CMMPA’s members individually decides which projects
 3 to participate in with CMMPA. CMMPA also allows non-member(s) to participate in CMMPA
 4 projects. Each participant in a project with CMMPA, including members and non-members, is
 5 required to enter into a power sales agreement (“PSA”) with CMMPA.

6 **Q: Please identify CMMPA’s current member cities.**

7 A: There are currently 14 members of CMMPA (“Members”) as listed below.

- | | |
|---|---|
| City of Blue Earth, MN (“Blue Earth”) | City of Kenyon, MN (“Kenyon”) |
| City of Delano, MN (“Delano”) | City of Lake Crystal, MN (“Lake Crystal”) |
| City of Fairfax, MN (“Fairfax”) | City of Mountain Lake, MN (“Mountain Lake”) |
| City of Glencoe, MN (“Glencoe”) | City of New Ulm, MN (“New Ulm”) |
| City of Granite Falls, MN (“Granite Falls”) | City of Sleepy Eye, MN (“Sleepy Eye”) |
| City of Janesville, MN (“Janesville”) | City of Springfield, MN (“Springfield”) |
| City of Kasson, MN (“Kasson”) | City of Windom, MN (“Windom”) |

8 **Q: Please provide background information on the relationship CMMPA has with these**
 9 **member cities.**

10 A: CMMPA provides a flexible arrangement for Members to participate in the agency and,
 11 as a result, the membership has fluctuated between 14 and 16 members during the last few years.
 12 While Members may leave, their financial and contractual obligations to CMMPA continue
 13 through the PSA. Members must fulfill this contractual obligation regardless of membership
 14 status. Each Member is individually responsible for providing an adequate, economical, and
 15 reliable supply of electric energy to meet the needs of its customers, and must, accordingly, plan
 16 for and maintain electric generation, transmission, and distribution facilities, including
 17 generation capacity reserves and other ancillary services.

18 **Q: What services does CMMPA provide to its members through UP?**

1 A: CMMPA through UP, a utilities services company, assists the Members with the
 2 purchase, sale, and scheduling of capacity and energy on a short term basis or other basis, as
 3 requested and arranges for transmission services for such purchases and sales. The Members
 4 rely on CMMPA to schedule the various Member resources together with purchases from the
 5 market to secure a reliable supply of power and energy and to minimize each Member's total
 6 power costs.

7 **Q: Describe the governance structure of CMMPA.**

8 A: CMMPA is governed by a nine-member Board of Directors elected by the Members.
 9 The current nine directors were elected during the February 1, 2006 Quarterly Board Meeting.
 10 Staggered terms for the Board of Directors were adopted at the annual meeting on
 11 February 2, 2005.

12 **Q: Please describe the various groups of municipal utilities that you will be discussing**
 13 **in your testimony.**

14 A: My testimony will address three separate groups of utilities. The first group will be the
 15 members of CMMPA as defined above and will be identified as Members. The second group
 16 defined later in my testimony, CMMPA Big Stone Unit II Participants, is the group of utilities
 17 that will be participating in Big Stone Unit II through CMMPA. This group includes one non-
 18 member, the City of Willmar, Minnesota ("Willmar"). The third group defined later in my
 19 testimony, CMMPA NC2 Participants, is the group of CMMPA Members that will be
 20 participating in a purchase from the planned Nebraska City #2 coal unit.

1 **IV. RESOURCE PLANNING**

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

3 A: Yes. CMMPA and its Members share planning duties. Both CMMPA and its Members
4 periodically prepare planning studies to address resource additions. For example, the Members
5 are responsible for conducting their own planning and financing studies for adding diesel-
6 generating resources to their respective systems. CMMPA was not involved in these efforts. As
7 explained below, CMMPA was responsible for recent planning studies for the consideration of
8 base load coal resources for the Members. CMMPA provides load forecast and resource
9 information to MAPP annually. As explained below, the Members are individually responsible
10 for demand-side management and conservation programs.

11 **Q: What studies has CMMPA relied on for resource planning?**

12 A: CMMPA relied on two planning studies prepared by R. W. Beck, Inc. The *Generating*
13 *Resources Planning Study*, prepared in April 2002, primarily evaluated total projected costs of
14 power for certain alternative resources available to CMMPA and its members. The alternative
15 resources considered included base load coal, base load gas-fired combined cycle, gas-fired
16 combustion turbines and purchases from the market.

17 The *Power Supply Analysis*, prepared in December 2004, provided an update of certain
18 information in the 2002 study. The 2004 study considered the load curve for each Member and
19 provided a range of base load coal resources for each Member. The projected base load
20 resources were projected to be more economical in comparison to a combined-cycle gas fueled
21 alternative based on a range of natural gas forecasts. The December 2004 analysis incorporated
22 preliminary Big Stone Unit II (operating on coal) busbar costs and generic combined cycle

1 (operating on natural gas) costs. The 2004 study reflected updated load data, fuel prices, capital
 2 costs, and market conditions.

3 **Q: Please explain how CMMPA considers demand-side management and conservation**
 4 **plans in its resource planning process.**

5 A: In accordance with Minnesota state law, CMMPA Members participate in energy
 6 conservation and efficiency programs that are approved and funded by individual Members who
 7 are required to spend a portion of annual revenue dollars on conservation programs. CMMPA
 8 has served as a conduit and catalyst for its members to encourage benchmarking of programs.
 9 Implementation of programs by the members over the last several years has most likely had an
 10 impact on actual energy usage. To the extent that these programs have reduced actual energy
 11 use, such impacts are reflected in the Members' forecast of future energy requirements.

12 **V. FORECASTING**

13 **Q: Please describe the process your company undertakes to forecast the future power**
 14 **and energy resources to meet its customers' obligations.**

15 A: CMMPA prepares long-range load forecasts annually for MAPP reporting purposes.
 16 Periodically, CMMPA prepares a more comprehensive forecast when the Members or CMMPA
 17 are considering the need for additional capacity and/or energy resources. The most recent
 18 comprehensive forecast was completed as part of a power supply study in December 2004 to
 19 help the Members in determining their levels of participation in base load coal resources,
 20 including Big Stone Unit II.

21 **Q: Please describe the CMMPA Big Stone Unit II Participants' projected peak demand**
 22 **and energy requirements.**

1 A: The table below provides a summary of the CMMPA Big Stone Unit II Participants
2 annual historical and projected net energy requirements and peak demand for the historical years
3 1995 to 2004 and the projected years 2005 through 2020. This load forecast was developed in
4 December 2004. The historical net peak demand increased from 142 MW in 1995 to 167 MW in
5 2004, which represents a 1.8% compound annual average growth rate. The historical net energy
6 requirements increased from approximately 610 GWh in 1995 to 732 GWh in 2004, which
7 represents a 2.0% compound annual average growth rate. The net peak demand is projected to
8 increase from approximately 167 MW in 2004 to 261 MW in 2020, which represents a 2.8%
9 compound annual average growth rate. Net energy requirements are projected to increase from
10 approximately 732 GWh in 2004 to 1181 GWh in 2020. which represents a 3.0% compound
11 annual average growth rate.

12

1

Historical and Projected Net Demand and Energy Requirements For the CMMPA BSP II Participants					
Year	MW	GWh	Year	MW	GWh
1995	141.6	610	2005	167.6	753
1996	139.3	618	2006	172.3	775
1997	142.1	633	2007	177.2	797
1998	146.3	646	2008	182.3	820
1999	152.3	661	2009	187.6	844
2000	150.7	679	2010	193.0	869
2001	151.6	686	2011	198.7	895
2002	159.8	705	2012	204.6	922
2003	161.7	727	2013	210.7	950
2004	166.9	732	2014	217.1	980
			2015	223.7	1010
			2016	230.6	1041
			2017	237.8	1074
			2018	245.2	1108
			2019	253.0	1144
			2020	261.1	1181

2

3 **Q: Please describe the manner in which the load forecast was prepared.**

4 A: The information used in the most recent load forecast was supplied from the Members
 5 and Willmar and based on available information reported in the Directory of Electric Power
 6 Producers and Distributors. The historical summer and winter net peak demands from 1995 to
 7 2004 were based on available information reported in the Directory of Electric Power Producers
 8 and Distributors for each of the CMMPA Big Stone Unit II Participants and estimates in years
 9 where such information was not available.

10 Net energy requirements were projected for each CMMPA Big Stone Unit II Participant
 11 based on reviewing the average annual compound growth rate for each of the CMMPA Big
 12 Stone Unit II Participants' total net energy requirements over several of the historical periods
 13 between 1994 and 2003. The periods reviewed included 1994 to 1999, 1999 to 2003 and 1994 to

1 2003. Based on this review, the average annual compound growth rate for the period 1994
 2 through 2003 was selected and applied to 2003 net energy requirements for each CMMPA Big
 3 Stone Unit II Participant to project net energy requirements over the period 2004 to 2020.
 4 Actual net energy requirements reported for 2004 for all of the CMMPA Big Stone Unit II
 5 Participants were subsequently used in place of the projected amounts without changing the
 6 forecasted amounts for the 2005 through 2020 period.

7 Projections of net peak demand were prepared for each CMMPA Big Stone Unit II
 8 Participant using the projections of net energy requirements and a load factor for each CMMPA
 9 Big Stone Unit II Participant based on a review of historical load factors over the historical
 10 period 1994 to 2003. For purposes of maintaining a consistent growth rate in net peak demand
 11 between 2003 and 2004 and beyond, the load factor for 2003 was selected for each CMMPA Big
 12 Stone Unit II Participant to project the net peak demands.

13 **VI. GENERATING RESOURCES**

14 **Q: Do CMMPA, its Members, and Willmar individually own generating resources and**
 15 **enter into power purchase agreements?**

16 A: Yes. CMMPA, its Members and Willmar separately own generating resources and enter
 17 into power purchase contracts. Currently, the Members individually own local peaking capacity
 18 resources and have power supply contracts established by the Members prior to joining
 19 CMMPA, including WAPA allocations.

20 **Q: What are CMMPA's existing and planned generating resources?**

21 A: CMMPA's resources are summarized in the table below.

22

1

CMPMA Resources

Resource	Capacity (MW)	Fuel Type	In-Service Year
(a)	(b)	(c)	(d)
NSP Interruptible Energy Purchase	[1]		-
Cedar Falls	6.0	Wind	2005
Wolf	7.5	Wind	2006
NC2	13.0	Coal	2009
BSP II	30.0	Coal	2011

2 [1] No capacity amount is associated with the NSP energy purchases.

3 CMPMA purchases market-based energy from Northern States Power (“NSP”) for two of
 4 its Members. This energy resource is associated with a 13 MW block of power at a 100%
 5 capacity factor that is subject to up to approximately 200 hours per year of interruption. The
 6 price is based on average system costs plus a monthly fuel cost adjustment. CMPMA also serves
 7 a portion of eight of its Members’ requirements with energy only (without capacity) contract
 8 purchases from NSP that require those members to purchase at least 55% of their total annual
 9 energy requirements, net of WAPA firm purchases. The price of this interruptible energy
 10 purchase is based on the NSP incremental system cost plus an adder. The annual average cost of
 11 this energy is projected to be similar to the cost of spot market energy purchases.

12 Twelve Members plus Willmar signed a PSA with CMPMA, collectively referred to as
 13 the “CMPMA Big Stone Unit II Participants.” CMPMA acquired a 5%, or approximately 30
 14 MW, ownership interest in Big Stone Unit II, which is planned for commercial operation in
 15 2011.

16

1 The CMMPA Big Stone Unit II Participants are listed below.

- | | |
|---|--|
| City of Blue Earth, MN ("Blue Earth") | City of Kenyon, MN ("Kenyon") |
| City of Delano, MN ("Delano") | City of Mountain Lake, NM (Mountain Lake") |
| City of Fairfax, MN (Fairfax") | City of Sleepy Eye, MN ("Sleepy Eye") |
| City of Glencoe, MN ("Glencoe") | City of Springfield, MN ("Springfield") |
| City of Granite Falls, MN ("Granite Falls") | City of Windom, MN ("Windom") |
| City of Janesville, MN ("Janesville") | City of Willmar, MN ("Willmar") |
| City of Kasson, MN ("Kasson") | |

2 In addition to the proposed Big Stone Unit II Project, eleven Members signed a PSA with
 3 CMMPA, collectively referred to as the CMMPA NC2 Participants, for the purchase 13 MW of
 4 Nebraska City #2, a 600 MW coal-fired base load plant to be located adjacent to the Nebraska
 5 City Unit No. 1 facility nearing construction commencement by the Omaha Public Power
 6 District. Nebraska City #2 is planned for commercial operation in 2009. The CMMPA NC2
 7 Participants are listed below.

- | | |
|---|--|
| ▪ City of Blue Earth, MN ("Blue Earth") | ▪ City of Lake Crystal, MN ("Lake Crystal") |
| ▪ City of Delano, MN ("Delano") | ▪ City of Mountain Lake, NM (Mountain Lake") |
| ▪ City of Fairfax, MN (Fairfax") | ▪ City of Sleepy Eye, MN ("Sleepy Eye") |
| ▪ City of Glencoe, MN ("Glencoe") | ▪ City of Springfield, MN ("Springfield") |
| ▪ City of Granite Falls, MN ("Granite Falls") | ▪ City of Windom, MN ("Windom") |
| ▪ City of Kenyon, MN ("Kenyon") | |

8 To meet its state-mandated requirements, CMMPA in 2005 entered into two purchase
 9 power agreements for the purchase of energy produced by wind and is currently negotiating with
 10 a developer for a third purchase power agreement. The two existing agreements provide for the
 11 purchase of 6 MW beginning in 2005 and 7.5 MW beginning in 2006. The third agreement
 12 would be for 10 MW. These resources are expected to operate at an annual capacity factor of
 13 around 35 percent and the output will be sold to the current members of CMMPA.

14 **Q: Please describe the resources of the CMMPA Big Stone Unit II Participants?**

1 A: The CMMPA Big Stone Unit II Participants current capacity resources summarized by
 2 resource and fuel type in the table below include a portfolio of self-generation assets and various
 3 amounts of purchases from the Western Area Power Administration ("WAPA"), Alliant Energy
 4 ("Alliant"), Great River Energy, and NSP.

5 **2006 CMMPA Big Stone Unit II Participants Capacity Resources**

Resource Type	Capacity (MW)	Fuel Type
(a)	(b)	(c)
NSP Purchase	1 [1]	
Alliant	5 [2]	
Great River	30 [2]	
Diesel	116	No. 2 Oil & Gas
Gas Turbine	45	No. 2 Oil & Gas
Hydro	2	Hydro
WAPA (Firm)	22 [2]	Hydro
Total	221	--

6 [1] 0.7 MW purchase by Granite Falls.

7 [2] Includes capacity reserves.

8 The WAPA purchase, Alliant purchase and NSP full requirements purchase for Kasson
 9 and Fairfax include generating capacity reserves and are considered firm resources for planning
 10 purposes. The WAPA firm purchase is generally available at the annual load factor of the
 11 respective Members that receive the WAPA resource. The Alliant firm purchase is available at a
 12 100% capacity factor. The parties recently extended the NSP full requirements purchase through
 13 December 2008, which was planned to expire in December 2005.

14 The CMMPA Members existing self-generation resources are predominantly peaking
 15 resources comprised primarily of diesel units but also include three gas-fired steam units, two
 16 combustion turbines and a run of river hydroelectric plant. The hydro resource is projected to
 17 operate at an annual capacity factor of approximately 20-30% and the combustion turbines and

1 diesel resources are projected to operate at an annual capacity factor of approximately 2% (200
2 hours of operation per year).

3 Willmar, in addition to its WAPA allocation, has a 30 MW capacity and energy purchase
4 from Great River Energy through 2015 and owns approximately 41 MW of diesel, gas, and coal
5 units.

6 **Q: What is the projected source of supply for the energy requirements for the CMMPA
7 Big Stone Unit II Participants?**

8 A: As shown in the table below, the CMMPA Big Stone Unit II Participants are projected to
9 obtain the majority of their energy needs through energy-only contract purchases and spot
10 market purchases that are based on system incremental pricing. These two sources of energy are
11 projected to supply approximate 70% of their energy needs through 2008, the year before
12 Nebraska City #2 is expected to come online.

13 **Projection of CMMPA BSP II Members Energy Requirements & Energy Dispatch**

Energy Resources	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>
WAPA Resources	13%	13%	13%	13%	13%	13%	12%	12%
Wind Resources	1%	2%	3%	4%	5%	6%	7%	8%
NC2	0%	0%	0%	0%	6%	11%	10%	10%
BSP II	0%	0%	0%	0%	0%	0%	12%	21%
Alliant Purchase	6%	6%	5%	5%	5%	5%	5%	5%
Contract Energy Purchases	48%	44%	43%	41%	42%	42%	33%	25%
Self Generation	7%	7%	7%	6%	6%	6%	6%	6%
Spot Purchases	26%	29%	29%	30%	23%	18%	14%	14%

14 Since the projections of energy dispatch were prepared as described above, CMMPA
15 entered into two wind energy purchase agreements. CMMPA is also negotiating with a
16 developer for a third wind purchase agreement. The output from these wind projects could
17 potentially supply approximately nine percent of the energy requirements for CMMPA
18 Members.

1 **Q: Do the CMMPA Big Stone Unit II Participants have enough resources to meet their**
 2 **capacity requirements?**

3 A: As shown in Exhibit 3-5 of the Application, the CMMPA Big Stone Unit II Participants
 4 are projected to have a capacity deficit beginning in 2013 without Big Stone Unit II.

5 **VII. NEED FOR BIG STONE UNIT II**

6 **Q: What two factors does CMMPA understand to be the most important for its**
 7 **Members in terms of load and supply forecasting and planning on behalf of their**
 8 **customers?**

9 A: The first is reliability. That is, ensuring that each Member has enough reliable supply-
 10 side resources to meet the power and energy needs of its customers. The second is affordability.
 11 The customers and consumers of CMMPA's Member cities are, generally, small business
 12 operators and residents of rural towns and cities.

13 **Q. What factors contribute to CMMPA's Members' concerns about the reliability of**
 14 **their future power supply resources?**

15 A. A key one is the fact that for many years, MAPP's member utilities have consistently
 16 forecasted generation shortages for the year 2011 and beyond. Another is the one discussed
 17 above. Beginning in the year 2013, CMMPA projects that CMMPA Big Stone Unit II
 18 Participants will have capacity shortages.

19 **Q. The second factor you mentioned was affordability of electricity. Please explain**
 20 **why this is such an important concern to CMMPA's Members in connection with their**
 21 **power supply planning activities.**

1 A. CMMPA's Members supply power and energy to towns and cities in predominately rural
 2 and relatively sparsely populated areas of Minnesota. CMMPA's Members' customers, for the
 3 most part, have lower household incomes, less lower property values and less ability to absorb
 4 unnecessary increases in energy costs than the customers of utilities that serve larger urban
 5 service territories.

6 **Q. Please elaborate.**

7 A. The residents of CMMPA's Member cities generally have lower median household
 8 incomes compared with residents of Minneapolis/St. Paul. Also, the median home values for
 9 homeowners in CMMPA Member cities are substantially lower than Twin Cities home values.
 10 Also, the median age of the populations in these areas is markedly different. The residents of
 11 CMMPA member cities are older than residents of the Twin Cities. That means a greater
 12 percentage of the residents of CMMPA Member cities are retired people or are approaching
 13 retirement age than residents of the Twin Cities.

14 **Q. Why are these statistics important to CMMPA?**

15 A. They reinforce what we know by our experience and our observation: The customers who
 16 depend on the power and energy we supply cannot afford to pay significantly more than they do
 17 now for electricity.

18 **Q: Please explain why participation in generating resources fueled by coal is important**
 19 **to the CMMPA Members.**

20 A: Incremental system costs have risen significantly in the last two years, due primarily to
 21 the following reasons. Almost all new generation installed in recent years has relied on natural
 22 gas as a fuel source. Several older coal units have been converted from coal-fueled operation to

1 gas fueled operation. Thus, the addition of new coal units is being outpaced by the continued
 2 load growth and the predominance of natural gas fueled units that have been installed in recent
 3 years. This has resulted in significantly greater dispatching of natural gas units, measured in
 4 megawatt hours per year. Thus, these gas units are being used to establish the incremental price
 5 of energy during many hours of the year. Since gas-fueled resources are projected to be “on the
 6 margin,” and since the differentials between gas and coal prices are projected to increase,
 7 CMMPA believes that the economics of adding coal versus gas-fired combined cycle as base
 8 load resources strongly favors coal.

9 CMMPA also took in to account fuel diversity as an important factor in considering coal
 10 fuel base load resources. Historically, the price of coal has been significantly less volatile than
 11 gas and oil. CMMPA’s strategy is to diversify its base load requirements between two or three
 12 different base load coal resources. This provides diversity in fuel and rail contracts, provides
 13 shaft diversity, and minimizes the potential for problems related to transmission delivery
 14 constraints. Even after the completion of Big Stone Unit II, CMMPA is short of having an
 15 optimum amount of coal resources.

16 **Q: Do the CMMPA Big Stone Unit II Participants own or participate in unit purchases**
 17 **from existing base load coal resources?**

18 A: No.

19 **Q: Have the CMMPA Big Stone Unit II Participants had the opportunity to own or**
 20 **participate in unit purchases from planned base load coal resources?**

21 A: Because of the relatively small scale of the CMMPA Big Stone Unit II Participants
 22 systems, constructing a base load coal resource by the CMMPA Big Stone Unit II Participants

1 alone was not considered to be economically feasible. Participation with larger utilities by the
2 CMMPA Big Stone Unit II Participants was considered to provide the CMMPA Big Stone Unit
3 II Participants with the most prudent feasible option for acquiring a base load coal resource. To
4 date, only two base load coal resources alternatives have been identified in our market region:
5 Nebraska City #2 and Big Stone Unit II.

6 **Q: Describe the rationale for CMMPA's level of participation in Big Stone Unit II?**

7 A: CMMPA relied primarily on a *Power Supply Analysis* prepared in December 2004 and
8 the *Generating Resources Planning Study* prepared April 2002. The results of the 2002 study
9 indicated that CMMPA's current strategy of purchasing in the market was less advantageous for
10 CMMPA's Members than the strategy of participating in a base load resource. The 2002 study
11 showed that a gas-fired combined cycle unit was slightly less expensive than a coal resource
12 based on assumptions used in the study, including the base gas cost assumption of \$3.28/MMBtu
13 (in 2002 dollars). The 2002 study contains sensitivities that show that if natural gas prices
14 increase by 13.6% above the base gas cost assumption, the cost of the base load coal resource
15 was more favorable than the gas-fired combined cycle option. The study also concluded that the
16 case with a coal resource option relied significantly less on gas and oil and recognized that
17 historically, the price of coal has been significantly less volatile than gas and oil. Natural gas
18 prices in 2005 reached three times the base gas cost assumption in the 2002 study. CMMPA
19 decided on a strategy of committing to coal as a base load resource in part because the relatively
20 small differences in combined cycle prices versus coal were outweighed by the potential
21 volatility of natural gas prices.

1 The 2004 study was prepared to update the projected amount of base load power
 2 requirements for each Member and was expanded to include Willmar. The Members used the
 3 analysis to help confirm the amount of their participation in Big Stone Unit II.

4 **Q: How is CMMPA planning to pay for its share of the construction and operating**
 5 **costs of the proposed Big Stone Unit II?**

6 A: CMMPA Big Stone Unit II Participants through CMMPA can elect to directly fund their
 7 portion with capital contributions or funds available from the operation of their respective utility
 8 systems. CMMPA plans to issue electric system revenue bonds to fund its capital portion of Big
 9 Stone Unit II that is not funded with capital contributions. Annual operating costs will be paid
 10 with revenues collected from the CMMPA Big Stone Unit II Participants.

11 **Q: What benefits do you see Big Stone Unit II affording CMMPA's Members'**
 12 **customers?**

13 A: Big Stone Unit II provides base load coal energy that is needed in the current resource
 14 portfolio of CMMPA members. In turn, CMMPA expects to be able to provide its Members
 15 with a continually reliable supply of affordable power and energy, thereby allowing its Members
 16 to avoid passing through significant rate increases to their customers.

17 **Q: What alternatives exist to BSII for your customers in the timeframe beginning in**
 18 **2011 and beyond?**

19 A: Only two base load coal resources alternatives were identified, Big Stone Unit II and
 20 Nebraska City #2, when the CMMPA Big Stone Unit II Participants elected to participate in Big
 21 Stone Unit II. Certain CMMPA members have elected to participate in Nebraska City Unit 2 as
 22 well.

1 **Q: Is there any other information that you would like to provide?**

2 A: Presently, the majority of energy to serve CMMPA members comes from procuring
3 power from both the market and other utilities. In recent years, transmission constraints have
4 increased and therefore reduced the ability of CMMPA members to reliably import purchased
5 power on a short-term basis. Big Stone Unit II, as a long-term firm resource, affords CMMPA
6 the potential opportunity to utilize reliable firm transmission to deliver this resource. CMMPA
7 believes that this was also a consideration for the members in selecting Big Stone Unit II as a
8 firm, long-term resource.

9 **Q: Does this conclude your testimony?**

10 A: Yes.

STEPHEN M. THOMPSON, P.E.

46153 100th St
Blue Earth MN 56013
(507) 526-5622 Home
(507) 526-2193 Work

MAJOR QUALIFICATIONS:

- Twenty six years of electric utility work experience in:
 - Planning
 - Operations
 - Business Development
 - Financial Analysis
 - Project Management
 - Leadership

- Masters of Business Administration, St Thomas University

- A Bachelor of Science in Electrical Engineering , University of Minnesota

- Registered Minnesota Professional Engineering (PE)

FUNCTIONAL WORK EXPERIENCE

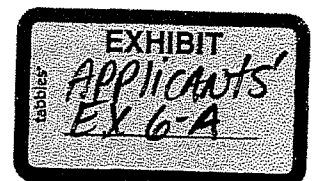
Planning Experience:

- Problem Identification and Evaluation of Alternative Solutions on both technical and economic merits
- Capital Asset Planning
- Operational Plans
- Optimization Studies
- Economic Financial Feasibility Studies

Operations Experience:

- Process Redesign
- Development of Procedures and Policies
- Budget Development Monitoring and Control
- Development of Financial / Managerial Reports
- Business System / IT Development
- Implementation Plans
- Risk Management
- Process Efficiency Improvements

1219



Business Development Experience:

- Business Plans / Product Plans
- Strategic Planning
- Marketing Plans
- Competitive Analysis/Marketing Analysis
- Promotional Marketing Materials

Finance Experience:

- Financial Analysis
- Feasibility Studies
- Development of Long-Term Financial Proformas
- Cost Accounting and Cost Allocation Studies
- Profit Margin Analysis and Pricing

Project Management Experience:

- Project Management
- Competitive Bid Proposals
- Contract Negotiation
- Contract Development
- Contract Administration

Leadership Experience:

- Identification of Goals and Objectives, Vision
- Development of Organizational Structure and Functional Job Descriptions
- Development of Staffing Plans
- Development of Performance Metrics
- Fostering Teams and Developing Staff Resources through Mentoring / Coaching
- Mentor and Train Subordinates
- Plan and Lead Meetings

Computer Skills:

- After-tax Present Value Cash Flow Models
- Constructing Pro Forma Business Models
- Word
- Excel
- Power Point
- Access
- PSS/E Load Flow Models
- PROMOD Economic Dispatch Models

EDUCATION:

Master of Business Administration 1994
University of St. Thomas, St. Paul, Minnesota
GPA: 3.9

Bachelor of Science Electrical Engineering 1982
University of Minnesota, Minneapolis, Minnesota

PROFESSIONAL LICENSES:

Registered Professional Engineer (PE), State of Minnesota
Licensed Master Electrician, State of Minnesota

CHRONOLOGICAL WORK HISTORY:

Central Minnesota Municipal Power Agency, Blue Earth, MN 2000 to Present

6 years Vice President of Director Power Supply Planning and Trade Room
Operations

Northern States Power Company (Xcel Energy), Minneapolis, MN 1979 to 2000

3 years

Department Type: Unregulated Utility Services
Job Function: Principal Sales and Marketing Consultant

Three Years experience as Lead/ Principal Technical Sales Consultant at Northern States Power in non-regulated Energy Plus Services Department. Target market was the large commercial and industrial sectors. Product focus was on selling Turnkey Engineered Solutions for improving customer reliability and power quality via application of distributed generation, high voltage auto-transfer switchgear and Un-interrupted Power Supplies (UPS's)

Job Responsibilities included:

Consultative sales of equipment and services to key accounts
Supervision and technical support of other sales representatives
Business Planning, Product Development and Business Development
Contract development, negotiation, writing and administration
Cost and Price Analysis of Products and Services
Conceptual Design of Solutions
Preparation of Competitive Bid Proposals
Presentation and Selling of Solution(s) to Key Account Customer

Procurement of Equipment
Construction Management
Departmental Budgeting and Financial Monitoring

3 years

Department Type: System Control Center
Job Function: Control Center Operator

3 years

Department Type: Operations Support
Job Function: Operating Engineer

3 years

Department Type: Regional Field Construction, Minneapolis Region
Job Function: Supervising Project Manager of Planning, Design, Construction

9 years

Department Type: Generation, Transmission, Distribution, Infrastructure Planning
Job Function: Planning Engineer & Financial Analyst