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

DIRECT TESTIMONY

OF

JOHN KNOFCZYNSKI

MANAGER OF ENGINEERING

HEARTLAND CONSUMERS POWER DISTRICT

MARCH 15, 2006

TESTIMONY OF JOHN KNOFCZYNSKI

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BEFORE THE SOUTH DAKOTA PUBLIC UTILITIES COMMISSION

DIRECT TESTIMONY OF JOHN KNOFCZYNSKI

I. INTRODUCTION

Q: Please state your name and business address.

A: John Knofczynski, 205 West Center Street, Madison, South Dakota 57042.

Q: By whom are you employed and in what capacity?

A: Heartland Consumers Power District (Heartland), as the Manager of Engineering. I am responsible for forecasting the power and energy needs of Heartland's customers (whom are municipalities, several state institutions and an electric cooperative), and securing the power supply resources to meet those needs.

Q: What is your educational background?

A: I received my Bachelor's Degree in Electrical Engineering from South Dakota State University in 1987.

Q: What is your employment history?

A: After graduation I began working for Burns & McDonnell Engineering Company in Kansas City, Missouri. At Burns & McDonnell I was involved in planning and designing electric generation and transmission facilities. In April 2000 I began working for Ulteig Engineers in Minneapolis, Minnesota, where I designed electric power transmission facilities. In January of 2002, I left Ulteig to take the position of Manager of Engineering at Heartland.

II. PURPOSE AND SUMMARY OF TESTIMONY

Q: What is the purpose of your testimony?

A: The purpose of my testimony is to generally describe Heartland's method of forecasting the power and energy requirements of its customers and to describe Heartland's plan to meet those requirements through Big Stone Unit II, among other resources.

Q: Please summarize your testimony.

A: In developing its long-range forecast, Heartland utilizes econometric models based on demographic and economic factors and weather conditions developed for each of its customers to determine annual energy projections. Heartland's energy and demand allocations for each customer are then aggregated to provide Heartland's monthly forecast. Heartland's energy requirements are forecast to increase by approximately 3.9% per year from 2005-2015. See Exhibit 3-9 in the Application. Heartland's capacity needs show summer season capacity deficits beginning in 2007 (8 MW), and increasing to 111 MW by 2014. See Exhibit 3-8 in the Application. Big Stone Unit II will help accommodate Heartland's forecast load growth through 2016.

Q: What regulations relating to the Big Stone Unit II project are covered in your testimony?

A: My testimony provides the information for Heartland required by ARSD 20:10:22:10. I helped prepare Section 3.1.4.3 and Exhibits 3-8 and 3-9 of the Application, which address Heartland's forecasted capacity needs and annual energy requirements, and which are incorporated herein by reference.

III. RESOURCE PLANNING

Q: Does Heartland engage in resource planning, and if so, explain how the resource planning process works?

A: Yes. Heartland's resource planning process involves the preparation of its members' forecasts and analyzes the generation resources necessary to meet members' capacity and energy requirements. Once the total customer demand and energy resource requirements are determined, Heartland's existing resources and other selected resources are evaluated using production cost modeling to determine which types and capacity of resources can economically and reliably supply the customers' resource requirements. Resources to cover planning reserves and contingencies are also included to cover Heartland's total resource requirements.

IV. FORECASTING

Q: Please describe the manner in which Heartland forecasts the future power and energy demands of its customers.

A: Heartland periodically performs a long-term demand and energy forecast for each of its customers, whom are 18 municipalities located across eastern South Dakota, southwestern Minnesota and northwestern Iowa, as well as several state institutions and one electric power cooperative. The forecasts provide the annual and monthly demand and energy requirements for each customer, which are then separated into the portions supplied by the primary (typically Western Area Power Administration (WAPA)), supplemental (typically Heartland) and, if applicable, other suppliers. The Heartland portion of each forecast is then adjusted for system losses and the loss-adjusted forecasts are aggregated to determine the customers' total power and energy requirements for each period.

Q: What are the sources of information for your forecasts?

A: The current customer forecasts were derived from two sources. The primary source was an econometric load forecast that was performed in 2002 for Heartland by Power Systems Engineers. That forecast included the customers that Heartland had contracts with at that time.

The second source was data received for new customers from third parties, typically consultants retained by the new customers. The forecast from the econometric model and the forecasts from the new customers were added together to provide the total customer power and energy requirements.

Q: What are the future capacity and energy requirements for Heartland according to the forecasts?

A: The forecast shows Heartland's demand and energy growing from 94 MW and approximately 620,000 MWhs in 2005 to about 145 MW and 897,000 MWhs in 2015. The forecast shows steady growth from 2005 until 2016 when a power purchase agreement with Heartland's largest customer expires. In 2016 the forecast shows that demand and energy drops to 91 MW and 487,000 MWhs respectively, and then increases from 2017 through 2019.

The total forecast of Heartland's power and energy needs includes the customer forecasts as well as an additional growth component added to reflect the goals of Heartland's Board of Directors.

V. GENERATION RESOURCES

Q: What are Heartland's existing generation resources?

A: Heartland has a 50 MW undivided ownership interest in Laramie River Station- a 1,650-MW baseload coal-fired power plant near Wheatland, Wyoming. In addition to Laramie River Station, Heartland contracts for 57 MW of baseload capacity through several participation power agreements with Basin Electric Power Cooperative (BEPC) and the Nebraska Public Power District (NPPD). Heartland's baseload contracts begin expiring in 2006 and all expire by the end of 2013. The remainder of Heartland's resource mix consists of several contracts with its customers and other utilities for peaking resources. Heartland currently has a total of 52 MW of diesel generation under contract in the winter season and 56 MW of diesel generation in the

summer season. Of the peaking capacity described, 28 MW of capacity has been contracted since the Application was submitted.

Q: Are Heartland's costs of generating resources accurately represented as part of Exhibit 3-3 to the Application?

A: Yes; the exhibit accurately reflects the relative costs that Heartland anticipates for the various resource types represented. Heartland has historically had more baseload resource in its portfolio than a typical utility might have due to the high load factor of our customers and the arrangements Heartland has to market its surplus baseload capacity.

Q: Are Heartland's existing generating resources sufficient to meet its forecasted demand and energy requirements?

A: No. Heartland currently contracts for most of the capacity and energy resources required to meet its customers' power and energy requirements. In anticipation of these contract expirations, Heartland is seeking resources to replace those contracts.

More than half of Heartland's baseload resources in its resource portfolio are participation power agreements with BEPC and NPPD. These agreements begin expiring in 2006 and all terminate by the end of 2013. Heartland is pursuing baseload resources to replace these agreements and accommodate future growth, and Big Stone Unit II is one such resource. Heartland also has contracts for about 50 percent of its peaking resources, which expire at the end of 2009. Heartland will need to procure resources to meet this capacity deficiency.

Heartland's capacity resource needs are presented in Section 3.1.4.3 and Exhibit 3-8 of the Application. As illustrated in Exhibit 3-8, Heartland experiences capacity deficits beginning in 2007 (8 MW) and continuing through 2014 (111 MW). The deficit is primarily due to increased load growth and a power purchase agreement that expires in 2009.

VI. DSM AND CONSERVATION PLANNING

Q: Does Heartland consider the effects of demand-side management and conservation measures as part of its resource planning process?

A: Yes.

Q: Please explain Heartland's ongoing DSM efforts.

A: Heartland, as a supplemental wholesale power supplier, works with its wholesale customers to promote demand-side management programs and conservation. It assists its municipal customers in the evaluation and development of many conservation and load management programs. Each of Heartland's municipal customers is responsible for monitoring the effectiveness and accomplishments of its individual energy conservation efficiency programs and reporting those efforts to Heartland. Heartland's customers report a reduction in peak demand of approximately four MW through their load management efforts. The demand-side activities of Heartland's customers are reflected in the forecasts that are developed for each customer.

VII. SELECTION OF BIG STONE II

Q: What are the results of Heartland's resource planning activities?

A: Big Stone Unit II is the least-cost option to replace the expiring baseload purchase power agreements.

Q: Will Big Stone Unit II meet all of Heartland's projected demand?

A: No.

Q: Why is Heartland relying on Big Stone Unit II to provide only a portion of its baseload requirements?

A: Heartland has elected to participate in more than one baseload project to provide greater resource diversity for its customers. For many years, Heartland relied on a single generating unit to supply all of its baseload resource requirements. When that unit was unavailable or curtailed, Heartland was required to purchase replacement energy from the market, potentially exposing its customers to the market price for a significant portion of its power supply. As its load has grown, Heartland has entered into contracts with other utilities to purchase the output of other baseload resources, diversifying its resource portfolio. Heartland has a goal to maintain that diversity and not rely on any one resource for more than half of its baseload needs. Having three baseload resources provides better availability for a large portion of Heartland's primary power supply, increasing reliability and ensuring more stable power costs for its customers.

Q: Did Heartland have the option to continue purchasing its baseload requirements through participation power agreements?

A: No. Heartland considered the option to continue purchasing a portion of its baseload resources, however, at the time the utilities contacted did not have excess baseload resources or their excess baseload resources were not available for contract on a long-term basis. To fulfill its future baseload resource needs and provide long-term price stability, Heartland elected to participate in new coal-fired projects available in the region.

Q: What resources will be available to meet Heartland's future power and energy requirements if Big Stone Unit II is not approved?

A: If Big Stone Unit II is not built, Heartland would attempt to rely on purchases of energy from the market to replace its proposed ownership share of Big Stone Unit II. It would continue to participate in the market until it was able to participate in another, lower cost resource option, most likely another pulverized coal baseload generation project.

VIII. ADDITIONAL INFORMATION

Q: Does this conclude your testimony?

A: Yes.