BEFORE THE PUBLIC UTILTIES COMMISSION
OF THE STATE OF SOUTH DAKOTA

In the Matter of the Complaint by Oak Tree Energy LLC against NorthWestern Energy for refusing to enter into a Purchase Power Agreement

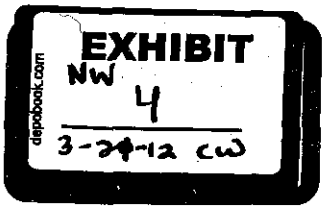
EL11-006

Prefiled Direct and Rebuttal Testimony of

Dennis L. Wagner

On behalf of NorthWestern Energy

January 13, 2012



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Exhibits

None

Testimony

Introduction and Qualifications

Q: Please state your name and business address.

A: My name is Dennis L. Wagner. I am employed by NorthWestern Energy. My business address is 600 Market Street West, Huron, South Dakota 57350.

Q: Please describe your professional qualifications and experience.

A: I obtained a Bachelor of Science in electrical engineering from South Dakota State University in 1972. After graduation, I worked for Wagner Electric in Sibley, Iowa, until March 1, 1973. In March 1973, I started working for Northwestern Public Service Company (NWPS) as an engineer. I was transferred to several different positions in different areas. In 1990, I was promoted to manager - Electric Distribution. In 1995, I was promoted to manager of electric operations for NWPS. I was moved to the production/dispatch area as manager in 2001. My current title is director - South Dakota Production. I am approaching 39 years' experience with NorthWestern Energy.

Purpose of Testimony

Q: Please describe the purpose of your testimony.

A: In the Complaint, Exhibit 2, page 3 of 3, Oak Tree asserted that NorthWestern needed capacity each year equal to its projected peak load plus 15%. In response to NorthWestern's data request 1-8, Oak Tree explained, "The peak plus 15% number is a proxy value that NWE in South Dakota will have to achieve in order to meet the one-in-10 year Loss of Load Expectation ("LOLE") value established as resource adequacy by MAPP/MISO." The purpose of my testimony is to demonstrate that Oak Tree's assertion and the basis for it are wrong.

- First, I will explain what capacity is and contrast it with energy.
- Second, I will explain how NorthWestern's capacity requirement is calculated today and contrast that with the history of our Planning Reserve Groups that NorthWestern belonged to.
- Third, I will discuss how NorthWestern currently meets its capacity requirements with its owned generating plants and capacity agreements. I will explain the contracts in detail plus the reason why the amounts differ and why the time periods are fairly short.

- Fourth, I will explain how NorthWestern plans to meet future capacity needs with the new Aberdeen Generating Station, why the decision was made to build the peaker, and how approval for the Aberdeen Generating Station was received.

- Fifth, I will explain the requirements that capacity be accredited for it to count toward a utility's capacity requirement, how NorthWestern accredits Titan Wind Farm, and how Oak Tree would be accredited, including the necessity of revising the accredited capacity of Oak Tree on an annual basis, and what we do today.

- Finally, I will discuss the risks with using wind as a resource today.

"Capacity" and "Energy"

Q: What is the difference between "capacity" and "energy," and why is each an important concept in the capacity reserve planning?

A: "Capacity" is the maximum electric power output of a generating unit, measured in megawatts (MW).

"Energy" is the amount of power actually consumed by the customers. Energy is measured in kilowatt hours or megawatt hours (MWh).

If a utility cannot find energy in the market at a peak condition, it can turn to a capacity agreement to make a purchase according to the terms of the agreement.

Q: What is NorthWestern's capacity requirement?

A: For each season, the capacity requirement is the peak load plus the planning reserve margin.

Planning Reserves

Q: What are planning reserves, and why does NorthWestern need them?

A: "Planning reserves" is a requirement in which a utility needs to meet its highest demand plus have enough reserves to help out in an emergency outage of a power plant. NERC requires planning reserves.

Q: What planning reserve group does NorthWestern belong to today?

A: NorthWestern was a member of Mid-Continent Area Power Pool (MAPP) Generation Reserve Sharing Group until the group sunset and disbanded. Subsequently, NorthWestern joined the Midwest Independent System Operator (MISO) Planning Reserve Sharing Group for approximately one year. MISO determined that membership in MISO was required to belong to

the MISO Planning Reserve Sharing Group. NorthWestern is not a member of MISO so could not continue in the MISO Planning Reserve Sharing Group. NorthWestern does not belong to a specific reserve group today, but does follow the Midwest Reliability Organization (MRO) and North American Electric Reliability Corporation (NERC) requirements.

Q: What capacity reserve requirement does NorthWestern follow today?

A: When NorthWestern was a member of MAPP, the capacity reserve requirement was 15%. While NorthWestern was a member of MISO (West Region), NorthWestern's reserve requirement was about 12.1%. Today, as a member of the WAPA Balancing Authority (BA) and following the MRO and NERC qualifications, NorthWestern is required to maintain 7.1% capacity reserves. This is reviewed on an annual basis. NorthWestern may eventually join an RTO, which could change the capacity reserve requirement.

Q: How is the planning reserve percentage number calculated?

A: As a balancing authority, WAPA contracts with MISO to do a "Loss of Load Expectation" (LOLE) Study to look at the region to determine the needed amount of planning reserves to maintain stability of the region. MISO has set the WAPA BA as a separate region. The calculated amount of planning reserves for the WAPA BA was set at 7.1%. Since WAPA has a significant amount of hydro generation within the region, a lower reserve planning capacity margin of 7.1% can be sustained. This is because hydro generation is more reliable than other forms of generation. Due to this increase in reliability, a lower amount of capacity reserves is needed for planning purposes. This means a company needs to have a planning reserve of the previous year peak electricity load plus 7.1%.

Capacity Agreements and Requirements

Q: Please explain what capacity agreements are and why they are important to NorthWestern Energy's customers?

Capacity agreements are agreements that allow NorthWestern to meet its planning reserve requirements for generation to stay compliant with the MRO and NERC requirements.

Q: Please state what capacity agreements NorthWestern Energy has in place today.

A: NorthWestern Energy in South Dakota has two capacity agreements in place today:

- The first agreement is a three-year agreement with MidAmerican Energy (MEC) which was signed in 2010. For each year of the MEC contract, NorthWestern is entitled to receive specific capacity resources: 2010 - 74 MWs; 2011 - 77 MWs; and 2012 - 80 MWs.

- The second agreement is a new four-year agreement with Basin Electric that starts in 2012. The Basin contract provides NorthWestern with the following capacity resources for the summer season (April–September) by year: 2012 - 5 MWs; 2013 - 11 MWs; 2014 - 15 MWs; and 2015-19 MWs. The Basin agreement was signed in September 2011.

Q: What is the reason for the difference in amounts of capacity needed in the two agreements?

A: Aberdeen Generating Station #2 was introduced as a possible new peaking resource for NorthWestern Energy in 2008. The unit has been approved by the Board of Directors and will be online by the end of 2012. With this resource of an estimated 52 MWs and the planning reserve reduction from 15% to 7.1%, NorthWestern will be able to reduce its capacity needs from 80 MWs to 11 MWs in 2013.

Q: Why are NorthWestern's capacity agreements for short periods of time?

A: NorthWestern capacity agreements typically average three-year periods. Transmission service requests allow utility companies to request transmission services from other utilities. The MISO was formed a number of years ago because the FERC mandated the electric utility industry to form Regional Transmission Organizations (RTOs). The MISO was formed a number of years ago because the FERC mandated the electruc utilty industry to form RTOs. MISO is a large RTO just to the east of the MAPP. MISO only allows transmission service requests to be made 17 months before needed. Western Area Power Administration (WAPA) follows a similar time limit of about 18 months. Therefore, it does not pay to do long-term agreements because you cannot complete the transmission service requests.

Q: Do the capacity agreements that NorthWestern has today contain an energy clause?

A: Yes, NorthWestern's agreements contain an energy clause. This gives NorthWestern the ability to purchase energy for consumption under these agreements. The price of this power has been higher than the market, so we have never purchased it in a time of need. We have always been able to find energy in the market at a cheaper price.

Aberdeen Generating Station #2

Q: How does the addition of a generating station built by NorthWestern in NorthWestern's service territory factor into NorthWestern's obligation to meet capacity?

A: Adding the Aberdeen Generating Station #2 serves two big purposes. First, it gives us a large amount of capacity (52 MWs summer) to fill the void left by the expiration of the MEC contract. Second, it gives the City of Aberdeen a large reliability improvement.

Q: Why is this an advantage to NorthWestern's customers?

A: In the past, there have been times when Aberdeen has lost all three 115-kV transmission lines serving the city. With the new unit plus the existing 20-MW unit we will be able to serve the Aberdeen area in most emergencies. In addition, this plant provides capacity available to all customers and reduces market purchases as further discussed below.

Q: Please explain the different types of generation assets NorthWestern could consider to meet capacity requirements?

A: *Base load*: generation that runs continuously year-round. The fuel source for NorthWestern is coal.

Peaking: generation that is used during peaking on the system for short periods of time.

Renewable: wind generation is a variable source that depends on when the winds blow and at what speed.

Q: Please explain the type of generating unit (of those listed above) that NorthWestern decided to build to meet its capacity requirements.

A: NorthWestern decided to build the peaking unit because of reliability, capacity, cost, and ability to plan, engineer, procure, construct, and commission the unit in a relatively short period of time.

Q: How long has the Aberdeen Generating Station #2 been planned?

A: Planning for the Aberdeen Generating Unit #2 (sometimes referred to as the Aberdeen "Peaker") started about 2008. The NorthWestern Board of Directors approved the unit in 2008 when a capacity short-fall was forecasted. However, the unit was deferred at that time because a cost-effective capacity agreement was developed with MEC (MidAmerican Energy) while MEC was still a part of the MAPP (Mid-Continent Area Power Pool). The Board again gave final approval to start building Aberdeen Generating Station #2 for the second time on April 26, 2011. It was not cost effective to enter into another contract with MEC due to the fact that MEC is now part of MISO.

Q: Has the need for the unit ever been stated in NorthWestern's Ten-year Energy Facilities Plan for the PUC?

A: Yes. The unit was identified as a need in the June 25, 2008 and the July 19, 2010 ten-year biennial updates to the South Dakota PUC.

Q: State why the decision was made to build a peaker unit now, rather than defer the unit to a later year?

A: NorthWestern decided to build the peaker at this time to provide a long-term, reliable capacity resource for NorthWestern's customers and to take advantage of current tax incentives. Also, obtaining transmission service is getting more difficult to plan to bring capacity into NorthWestern's service area; therefore, having a capacity resource in NorthWestern's service area is an advantage to provide reliable capacity.

Q: Why is the unit called the "Aberdeen Generating Unit #2"?

A: The unit at Aberdeen is labeled #2 because of an existing combustion turbine unit (28 MWs) that was installed in 1978.

Q: Has construction started? When do you plan to complete the project? What type of generating unit will it be?

A: Construction started in September 2011. The estimated completion is December 2012. A Pratt & Whitney natural gas driven FT-8 SWIFTPAC simple-cycle unit was selected with a rating of 60 MWs (winter rating). The unit will be used to supply peaking energy and emergency backup if needed. NorthWestern expects this generating station to be online by December 2012.

Capacity Accreditation Process

Q: What is capacity accreditation, and why is it important?

A: Capacity accreditation is important as it can be used to help a utility meet its planning reserve requirement to stay compliant with NERC.

Q: Can you explain the accreditation process NorthWestern uses for its Titan Wind Farm?

A: The Titan I Wind Farm is located near Ree Heights, South Dakota, and came about through a relationship between NorthWestern and BP Wind Energy. In 2008, NorthWestern and BP Wind Energy entered into a Power Purchase Agreement (PPA) for the purchase of 25 MWs. NorthWestern follows the MISO method for establishing the wind accreditation for Titan I. The MISO method uses, for a given year, the historical wind farm hourly contributions at the time of the eight highest hourly system peak loads during that year. They then average those eight data points and compare them to the maximum output capability of the wind farm. This comparison ultimately becomes the accredited capacity level. The process is a continual process. MISO continually accumulates data points for successive years until a multi-year rolling average can be computed. Currently, it is expected to be a ten-year period. For example, using this method for the Titan I Wind Farm in 2010, the average accredited capacity for the project is 5 MWs, or 20%

of the 25-MW maximum capability. At the time of this writing, the 2011 data has yet to be incorporated into the computation.

Q: Would the accreditation process be similar for Oak Tree?

A: Yes, Oak Tree accreditation would be done in the same way. The accredited capacity may change every year.

Risks of Wind as a Resource

Q: Is there a difference between a wind energy resource and a peaking unit like Aberdeen?

A: Yes, Aberdeen as a peaking unit can be called on at any time for need; whereas, a wind resource can only supply when wind is available for generation.

Q: What risks can be associated with predicting wind accreditation amounts?

A: The risks with wind are that it is a variable resource, and you cannot predict with certainty when the wind will blow. If it does not blow on the eight highest days, accreditation for the wind farm would be zero for a certain year. This is part of the reason MISO likes to see a ten-year period to have a blend of averages.

Q: Does this conclude your testimony?

A: Yes.

Affidavit of Dennis L. Wagner

STATE OF SOUTH DAKOTA)
: ss
COUNTY OF BEADLE)

Dennis L. Wagner, being first duly sworn upon oath, states and alleges as follows:

1) I am the Director of South Dakota Production for NorthWestern Corporation d/b/a NorthWestern Energy.

2) I have read this document and am familiar with its contents, and the same are true to the best of my knowledge and belief.

Further affiant sayeth naught.

Dated at Huron, South Dakota, this 13 day of January, 2012.

Dennis L. Wagner

SUBSCRIBED AND SWORN to before me this 13th day of January, 2012.

JOANNE H. PETERSON
Notary Public
SEAL
South Dakota

Notary Public, South Dakota
My commission expires: June 10, 2016