

**STATE OF NORTH DAKOTA**  
**PUBLIC SERVICE COMMISSION**

**Northern States Power Company  
Advance Determination of Prudence - Prairie Island  
Application**

**Case No. PU-10-127**

**ORDER ON ADVANCE DETERMINATION OF PRUDENCE**

**November 28, 2012**

**Preliminary Statement**

Under North Dakota Century Code, Section 49-05-16, a public utility that intends to make a resource addition may file an application with the Commission for an advance determination of prudence (ADP) regarding the resource addition.

On April 19, 2010, Northern States Power Company (NSP) filed an application with the Commission for ADP for modifications at its Prairie Island Nuclear Generating Plant (Prairie Island). The proposed modifications included extending the life of Unit 2 by replacing the steam generator at a cost of \$259 million, and expanding the combined capacity of Units 1 and Unit 2 by 164 megawatts for at a cost of \$330 million. NSP has operated its two Prairie Island nuclear units of 550 megawatts each since 1973.

NSP is an investor-owned electric utility headquartered in Minneapolis, Minnesota authorized to provide public utility service in North Dakota.

Prairie Island is a 1,100 megawatt (MW) nuclear generating facility located in Red Wing, Minnesota. Prairie Island is owned and operated by NSP. Prairie Island consists of two 550 MW units, Unit 1 and Unit 2. Prairie Island's Nuclear Regulatory Commission (NRC) issued operating license is set to expire in 2013 for Unit 1 and 2014 for Unit 2. The average capacity factor for these nuclear facilities is 90 percent, providing approximately 28 percent of NSP's electrical energy needs for its Upper Midwest operations.

On November 24, 2010, the Commission issued a Notice of Opportunity for Hearing providing until January 24, 2011 for comments and requests for hearings. The Notice identified the issue to be considered is whether NSP's proposed investments in the projects are prudent. The Notice indicated that the Commission can determine the matters without a hearing. No comments or requests for hearing were received.

On January 31, 2012, NSP filed a request that the application be suspended so that NSP could provide an update to its original application and provide a more complete evaluation of the prudence of going forward with the capacity expansion proposal.

On June 5, 2012 and October 23, 2012, NSP filed updates with the Commission. NSP requests that consideration of ADP move forward for the replacement of the Unit 2 steam generator with an updated cost estimate of \$288 million. NSP also requests that the Commission postpone consideration of the Unit 1 and Unit 2 capacity expansion proposal due to a number of factors including additional design and development work now required by the Nuclear Regulatory Commission (NRC) prior to filing a license amendment request; uncertainty regarding when the NRC would approve the license amendment; smaller capacity needs; higher cost estimates; lower forecasts for load growth; and more competitive alternatives due to lower forecasted natural gas prices.

On November 8, 2012, Commission Advocacy Staff filed a response to NSP's application for ADP concluding that NSP's proposal to extending the life of its Prairie Island Unit 2 nuclear generator by replacing the steam generator is reasonable and that continuing to operate Prairie Island for another 20 years is in the best interest of North Dakota ratepayers.

While the cost of replacing the Unit 2 steam generator is estimated at \$288 million, other costs associated with extending Unit 2 life for 20 years include additional dry cask storage for spent fuel, routine capital improvements and life cycle management over the life of the plant. The total cost for the Unit 2 life extension is estimated at \$1.3 billion.

The estimated cost of the Prairie Island life extension project results in a levelized cost of 7 cents per kWh compared to 9 cents per kWh for the next lowest alternative of a new generic coal plant without CO<sub>2</sub> sequestration.

Significant infrastructure exists at Prairie Island, including the Unit 1 steam generator that was replaced in 2004. The existing infrastructure supports the proposal to extend the life of Prairie Island. Also, NSP has received the critical licenses to proceed with the life extension, including renewal of NRC operating licenses for Unit 1 and Unit 2 for an additional twenty years as well as Minnesota Public Utility Commission approval for additional dry cask storage facilities.

The Commission has jurisdiction over the applicant, NSP, and over the subject matter of this application under North Dakota Century Code Chapter 49-05.

The proposed Unit 2 steam generator project is prudent.

Having allowed all interested persons an opportunity to be heard and having heard, reviewed and considered all testimony and evidence presented, the Commission makes the following:

### **Order**

The Commission orders:

1. Northern States Power Company's request for an advance determination of prudence for the Unit 2 steam generator project is granted.

2. The Commission takes no action concerning Northern States Power Company's request for an advance determination of prudence for the Unit 1 and Unit 2 capacity expansion proposal.

3. Northern States Power Company may apply for an advance determination of prudence for Unit 1 and Unit 2 capacity expansion at any time.

**PUBLIC SERVICE COMMISSION**

*Absent*

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**Kevin Cramer**  
**Commissioner**

*Brian P. Kalk*

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**Brian P. Kalk**  
**Chairman**

*Bonny M. Fetch*

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**Bonny M. Fetch**  
**Commissioner**