

BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

Katie J. Sieben	Chair
Valerie Means	Commissioner
Matthew Schuerger	Commissioner
Joseph K. Sullivan	Commissioner
John A. Tuma	Commissioner

In the Matter of the Petition of Northern States Power Company d/b/a Xcel Energy for Certification of Need for Additional Dry Cask Storage at the Prairie Island Nuclear Generating Plant in Goodhue County

ISSUE DATE: October 5, 2022

DOCKET NO. E-002/CN-08-510

ORDER APPROVING PETITION

**PROCEDURAL HISTORY**

On April 30, 2021, Northern States Power Company d/b/a Xcel Energy (Xcel or the Company) requested authorization to use spent fuel storage technology approved by the Nuclear Regulatory Commission (NRC) at the Prairie Island Nuclear Generating Plant Independent Spent Fuel Storage Installation (the Petition). Xcel requested a determination from the Commission that the Company's proposal to use alternative spent-fuel containers is acceptable without recertification under Minn. Stat. § 216B.243.

On May 14, 2021, the Commission issued a notice soliciting comments on the Petition and on the appropriate processes for considering Xcel's request.

By June 1, 2021, the Commission received initial comments from the following:

- The Department of Commerce, Energy Environmental Review and Analysis (DOC-EERA)<sup>1</sup>
- The Minnesota Department of Commerce, Division of Energy Resources (DOC-DER)
- Deep Geo Inc.

By June 17, 2021, the Commission received reply comments from the following:

- Xcel
- DOC EERA

On September 13, 2021, the Commission received late filed comments from Carol Overland.

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<sup>1</sup> DOC-EERA recommended that the Commission take no action on Xcel's Petition until DOC-EERA could supplement the 2009 Prairie Island Final Environmental Impact Statement (2009 Prairie Island EIS) in accordance with Minn. Stat. § 116D.04 and Minn. R. 4410.3000.

On October 1, 2021, the Commission determined that it would take no action on Xcel's Petition until a supplement to the 2009 Prairie Island EIS could be prepared by DOC-EERA.

On April 26, 2022, DOC-EERA issued the Final Supplemental Environmental Impact Statement (the Final SEIS).

On May 26, 2022, the Commissioner of the Department of Commerce (the Commissioner of Commerce) concluded that the Final SEIS is adequate per Minn. R. 4410.2800, subp. 4, and that the design of the Prairie Island Nuclear Generating Plant (PINGP) Independent Spent Fuel Storage Installation (the Prairie Island ISFSI) provides a reasonable expectation that operation of the ISFSI will not result in groundwater contamination that exceeds the standards established in Minn. Stat. § 116C.76, subd. 1.

On May 31, 2022, the Commission issued a notice soliciting comments on the Petition.

By June 29, 2022, the Commission received comments from the following:

- DOC-EERA
- the Prairie Island Indian Community
- the Prairie Island Nuclear Generating Plant Study Group
- Carol Overland
- DOC-DER

On July 1, 2022, the Commission received reply comments from Xcel.

On August 25, 2022, the Commission met to consider the matter.

## **FINDINGS AND CONCLUSIONS**

### **I. Summary**

The Commission finds that Xcel's request to use new spent fuel storage technology in the Prairie Island ISFSI does not require recertification under Minn. Stat. § 216B.243. The Commission authorizes Xcel to use a Nuclear Regulatory Commission-approved spent nuclear fuel storage cask certified for dual-use as storage and transportation under 10 CFR § 72.212 (b).

### **II. Background**

The PINGP is a 1,100 megawatt (MW), two-unit, electric generating plant in Red Wing, Minnesota. Spent nuclear fuel from the PINGP is stored on-site in the Prairie Island ISFSI.

In the 1970s, the NRC granted Xcel licenses to operate PINGP Units 1 and 2 until 2013 and 2014, respectively. The NRC is responsible for overseeing the safe operation of nuclear generation and storage facilities.

In 1992, The Commission approved a certificate of need allowing 17 TN-40 dry casks to be stored at the Prairie Island ISFSI.<sup>2</sup>

On May 16, 2008, Xcel petitioned the Commission for a certificate of need to increase the storage capacity of the Prairie Island ISFSI and to increase the PINGP's generating capacity. The Company requested to increase the PINGP's generating capacity by 164 MW and to increase the number of casks at the Prairie Island ISFSI from 29 to 64. Xcel also requested authorization to use TN-40HT bolted casks. The TN-40HT cask is an improved version of the TN-40 cask that the Commission approved in 1992.

On December 18, 2009, the Commission authorized Xcel to store 2,560 spent-fuel assemblies in 64 TN-40HT casks in the Prairie Island ISFSI (the 2009 Order).<sup>3</sup> The Commission granted Xcel a certificate of need authorizing the Company to operate PINGP Units 1 and 2 until 2033 and 2034, respectively.

### **III. Legal Standards**

A certificate of need is required for the initial construction or expansion of a nuclear waste storage facility.<sup>4</sup> Minn. R. 7855.0030 further provides that a new certificate of need is required for the "expansion of an existing nuclear waste storage or disposal facility by at least 20 percent of the base capacity of the facility."

Minn. Stat. § 116C.83 requires an EIS for a proposal to construct and operate a new or expanded ISFSI. Under Minn. R. 4410.3000, subp. 3, the EIS must be supplemented when "substantial changes have been made in the proposed project that affect the potential significant adverse environmental effects of the project."

The Commissioner of Commerce must make a finding that the EIS adequately addresses the environmental impact of the proposed expansion of storage facilities.<sup>5</sup> Prior to finding the EIS adequate, the Commissioner of Commerce must find that the applicant has demonstrated that the facility is designed to provide a reasonable expectation that the operation of the facility will not result in groundwater contamination that exceeds the standards established in Minn. Stat. § 116C.76, subd. 1.

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<sup>2</sup> *In the Matter of an Application for a Certificate of Need for Construction of an Independent Spent Fuel Storage Installation*, Docket No. E-002/CN-91-19, Order Granting Limited Certificate of Need (August 10, 1992).

<sup>3</sup> *In the Matter of the Application of Northern States Power Company d/b/a Xcel Energy for Certificate of Need for an Extended Power Uprate at the Prairie Island Nuclear Generating Plant*, Docket No. E-002/CN-08-509, *In the Matter of the Application of Northern States Power Company d/b/a Xcel Energy for Certificate of Need for Additional Dry Cask Storage at the Prairie Island Nuclear Generating Plant*, Docket No. E-002/CN-08-510, *In the Matter of the Application of Northern States Power Company d/b/a Xcel Energy for an LEPGP Site Permit for the Extended Power Uprate Project at the Prairie Island Nuclear Generating Plant*, Docket No. E-002/GS-08-690, Order Accepting Environmental Impact Statement, and Granting Certificates of Need and Site Permit with Conditions (December 18, 2009).

<sup>4</sup> Minn. Stat. §§ 216B.243, subd. 2, 116C.83, subd. 2

<sup>5</sup> Minn. R. 4410.2800.

#### **IV. Petition**

Xcel requested that the Commission authorize the Company to use any spent fuel storage technology that has been approved by the NRC at the Prairie Island ISFSI, rather than being limited to the TN-40HT casks identified in the 2009 Order. In the Petition, Xcel does not request to replace the TN-40HT cask with a specific alternative spent fuel storage cask. The Company emphasized that the Petition seeks authorization for the flexibility to use any spent fuel storage technology approved by the NRC. Xcel explained that allowing the Company flexibility to design a competitive bidding process, without being limited to a specific alternative spent fuel storage technology, would ensure that the broadest range of options is considered, and the optimal technology is selected.

Xcel stated that the storage capacity of alternate cask designs varies from the TN-40HT cask, which holds 40 spent fuel assemblies. The Company requested that it not be limited to 64 casks at the Prairie Island ISFSI, but rather the number of casks necessary to store 2,560 spent fuel assemblies contemplated in the 2009 Order. Xcel explained that alternate cask designs generally hold 37 spent fuel assemblies, and that it would likely need 65 total casks to store the number of spent-fuel assemblies authorized in the 2009 Order. According to the Company, the new storage casks would facilitate the storage of an equivalent number of spent-fuel assemblies and would not expand the authorized storage capacity of the Prairie Island ISFSI.

#### **V. The EIS**

In its initial comments filed on May 27, 2021, DOC-EERA stated that Xcel's proposed change in spent fuel cask technology was substantial new information affecting the potential human and environmental effects of spent fuel storage at the PINGP. According to DOC-EERA, the 2009 Prairie Island EIS analyzed the potential human and environmental impacts of an expansion of the Prairie Island ISFSI based on the presumed use of TN-40HT casks and did not evaluate potential impacts of spent fuel storage alternatives. Accordingly, DOC-EERA concluded that the 2009 Prairie Island EIS must be supplemented in accordance with Minn. Stat. § 116D.04 and Minn. R. 4410.3000.

On April 26, 2022, DOC-EERA filed its Final SEIS stating that the non-radiological impacts of a change in spent fuel storage technology in the Prairie Island ISFSI are expected to be minimal. The Final SEIS also found that the radiological impacts of a change in spent fuel storage technologies is expected to be minimal. DOC-EERA concluded that the environmental justice concerns of the PIIC would remain unchanged.<sup>6</sup>

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<sup>6</sup> The 2009 Prairie Island EIS identified the PIIC as an environmental justice community that would bear a disproportionate share of negative consequences from operation of the PINGP. Specifically, PIIC members receive slightly higher radiation doses (skyshine radiation) compared to communities located at a greater distance from the PINGP. According to the Final SEIS, Xcel's proposed change in spent fuel storage technology would not significantly change skyshine radiation levels associated with the Prairie ISFSI or change the likelihood of an accident at the PINGP or the Prairie Island ISFSI.

## **VI. Comments**

### **A. DOC-DER**

In its 2021 comments, DOC-DER agreed with Xcel's assertion that the request to use alternative storage technology in the Prairie Island ISFSI does not amount to a proposal to site, construct, or expand the storage capacity of a nuclear waste storage or disposal facility requiring a certificate of need under Minn. Stat. §§ 216B.243 or 116C.83.

DOC-DER recommended the Commission approve Xcel's Petition to facilitate the competitive bidding process, with additional reporting requirements. DOC-DER recommended the Commission require the following types of information to be included in the Company's report on the results of the bidding process:

- a copy of the request for proposals (RFP);
- information regarding how the RFP was advertised;
- a statement of the evaluation criteria used by the Company;
- an overview of each proposal received in response to the RFP—at a minimum the overview should include:
  - a cost estimate; and
  - how the casks will facilitate transportation out of state to a permanent or interim storage facility as soon as feasible;
- the Company's evaluation of each proposal; and
- the Company's ultimate determination regarding the RFP and resulting proposals.

DOC-DER recommended that the Commission wait until Xcel selects a specific cask technology to make any findings related to cost recovery.

### **B. Prairie Island Indian Community**

The Prairie Island Indian Community (PIIC) Reservation is located on the ancestral homeland of the Mdewakanton Dakota on Prairie Island and is adjacent to the PINGP ISFSI.

The PIIC expressed support for the conditions proposed by DOC-DER. The PIIC also recommended the Commission require Xcel to file:

- the results of its application to the NRC for a transportation license for the TN-40HT cask;
- the transportation license for any cask or canister selected for use at the Prairie Island ISFSI through Xcel's competitive bidding process; and
- documents made available for or provided to the NRC for use of a cask or canister other than a TN-40HT cask in the Prairie Island ISFSI.

PIIC also supported a condition requiring the Commission to implement a planning process or framework for institutional control of spent nuclear fuel in the Prairie Island ISFSI (or in Minnesota, generally) or adapt an existing planning process or framework that addresses institutional control to make it relatively more public-facing, transparent, and inclusive.

### **C. DOC-EERA**

DOC-EERA supported Xcel's request for a determination that a change in technology does not trigger recertification because it is not proposing to make any changes to the capacity of the facility. DOC-EERA explained that the certificate of need requirement is based upon the capacity of the facility, not necessarily the technology.

DOC-EERA recommended various mitigation measures the Commission could place on any approval of the Company's request to change cask design at the Prairie Island ISFSI. They include:

- The conditions proposed by DOC-DER requiring Xcel to file the results of its competitive bidding process with the Commission.
- A condition requiring Xcel to file: (1) the results of its application to the NRC for a transportation license for the TN-40HT cask and (2) the transportation license for any cask or canister selected for use at the Prairie Island ISFSI through Xcel's competitive bidding process.
- A condition requiring Xcel to file those documents made available for or provided to the NRC for use of a cask or canister other than a TN-40HT cask at the Prairie Island ISFSI.
- A condition requiring the Commission to implement a planning process or framework for institutional control of spent nuclear fuel at the Prairie Island ISFSI (or in Minnesota, generally) or adapt an existing planning process or framework that addresses institutional control to make it relatively more public-facing, transparent, and inclusive.

### **D. Prairie Island Nuclear Generating Plant Study Group**

The Prairie Island Nuclear Generating Plant Study Group (the Study Group) recommended that the Commission allow Xcel to consider use of an alternative dry cask storage technology in coordination with decommissioning strategies, and supported the mitigation measures proposed by DOC-EERA, with modifications.

The Study Group opposed allowing Xcel to use any NRC-approved alternative dry cask storage technology without further review by the Commission.

### **E. Carol Overland**

Ms. Overland recommended that the Commission make findings regarding cost recovery and deny Xcel's request to use any alternative dry cask storage technology.

### **F. Xcel**

In general, Xcel did not oppose the conditions proposed by DOC-EERA.

Xcel emphasized that it does not seek to make operational changes or to modify the length of its authorization to operate the PINGP through the Petition. The Company reiterated that it is not seeking to expand the capacity of the Prairie ISFSF approved in the 2009 Order.

According to Xcel, several developments have occurred in dry cask storage technology since the issuance of the 2009 Order. Xcel contends that other available technologies may be in the best

interest of the Company's customers and other stakeholders by reducing costs and facilitating expeditious shipment of spent fuel casks to an offsite facility. The Company discussed several factors that suggest that the TN-40HT cask is not the most economical technology for storing used fuel at the Prairie Island ISFSI. These factors include the relative fabrication costs of different storage technologies, increased capacity of competing welded canister-based systems, and the increased use of welded canister dry cask systems.

Xcel stated that it would provide the Commission with information regarding its selection process, including costs, technologies considered, and details regarding how the Company selected a particular cask type.

## **VII. Commission Action**

The Commission finds that Xcel's request to use alternative NRC-approved spent-fuel containers is acceptable and does not require recertification under Minn. Stat. §§ 216B.243 or 116C.83.

The Commission agrees with DOC-DER's analysis that Xcel's request to use alternate dry cask storage technology at the Prairie Island ISFSI does not amount to an expansion of the storage capacity of a nuclear waste storage in a manner that would alter the plant's operations or otherwise require a certificate of need under Minn. Stat. §§ 216B.243 or 116C.83.

However, the Commission needs to be fully informed about the casks selected. The Commission will therefore require Xcel to file reports setting forth details of the procurement and development of the project, as well additional NRC transport licensure requirements, as set forth in the ordering paragraphs below.

The Commission will also require Xcel to file a summary of the NRC- required evaluations performed pursuant to 10 C.F.R. § 72.212.

The Commission has reviewed the Final SEIS prepared by DOC-EERA and agrees with the Commissioner of Commerce's conclusion that the Final SEIS is adequate per Minn. R. 4410.2800, subp. 4, and that the design of the Prairie Island ISFSI provides a reasonable expectation that operation of the ISFSI will not result in groundwater contamination that exceeds the standards established in Minn. Stat. § 116C.76, subd. 1.

The Commission agrees with DOC-DER's recommendation to address issues pertaining to cost recovery in a future proceeding after the Company identifies an alternative spent fuel storage technology to be used at the Prairie Island ISFSI.

The Commission recognizes the importance of institutional controls concerning spent nuclear fuel. The Commission will solicit comments on improving public input regarding new or existing planning processes that address new or existing institutional controls in the next Triennial decommissioning docket.

## ORDER

1. The Commission determines that Xcel's requested change does not require recertification under Minn. Stat. § 216B.243.
2. The Commission approves Xcel's request to use a Nuclear Regulatory Commission (NRC)-approved spent nuclear fuel storage cask technology certified for dual-use as storage and transportation under NRC regulation 10 C.F.R. § 72.212 (b).
3. The Commission accepts the Commissioner of the Department of Commerce's May 26, 2022, Findings and Order Determining Final SEIS to be Adequate and Findings and Order Determining ISFSI Design to be Protective of Groundwater.
4. Xcel shall provide the following:
  - a. a copy of the request for proposals (RFP);
  - b. information regarding how the RFP was advertised
  - c. a statement of the evaluation criteria used by Xcel;
  - d. an overview of each proposal received in response to the RFP—at a minimum the overview should include:
    - i. a cost estimate; and
    - ii. a description of how the cask design, if selected, would facilitate transportation out of state to a permanent or interim storage facility as soon as feasible;
  - e. Xcel's evaluation of each proposal; and
  - f. Xcel's ultimate determination regarding the RFP and resulting proposals.
  - g. Items a-f must be filed within 60 days of the close of the RFP.
5. Xcel shall file the following:
  - a. the results of its application to the NRC for a transportation license for the TN-40HT cask; and
  - b. the transportation license for any cask or canister selected for use at Prairie Island through Xcel Energy's competitive bidding process.
6. Xcel shall file a summary of evaluations required to be performed under 10 C.F.R. § 72.212 prior to use of an approved cask and made available for or provided to the NRC for use of a cask or canister other than a TN-40HT cask at Prairie Island. Xcel shall also



make the full evaluations available to Department of Commerce or Commission staff for review upon request.

7. This order shall become effective immediately.

BY ORDER OF THE COMMISSION

*William C. Butcher* for

Will Seuffert  
Executive Secretary



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## **CERTIFICATE OF SERVICE**

I, Chrishna Beard, hereby certify that I have this day, served a true and correct copy of the following document to all persons at the addresses indicated below or on the attached list by electronic filing, electronic mail, courier, interoffice mail or by depositing the same enveloped with postage paid in the United States mail at St. Paul, Minnesota.

### **Minnesota Public Utilities Commission ORDER APPROVING PETITION**

Docket Number **E-002/CN-08-510**

Dated this 5th day of October, 2022

/s/ Chrishna Beard

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