

Staff Briefing Papers

Meeting Date August 25, 2022

Agenda Item 6**

Company Xcel Energy

Docket No. E-002/CN-08-510

In the Matter of the Application of Northern States Power Company d/b/a Xcel Energy for a Certificate of Need for Additional Dry Cask Storage at the Prairie Island Nuclear Generating Plant

Issues:

1. Should the Commission approve Xcel Energy's request for use of an alternative dry cask storage technology?
2. If approved, what, if any, additional condition(s) should be included in the Commission's Order?
3. Should the Commission make any findings regarding cost recovery in this docket?

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Relevant Documents

Date

PINGP Final Environmental Impact Statement (10 parts)	July 28, 2009
Order accepting Environmental Impact Statement, and Granting Certificates of Needs and Site Permit with Conditions	December 18, 2009
Xcel Informational Update	December 29, 2020
Xcel Request for Change in Spent-Fuel Storage Technology	April 30, 2021
Notice of Comment Period	May 14, 2021
EERA Comments on Spent Fuel Storage Change Request	May 27, 2021
DER Comments	May 28, 2021
L Murray (Deep Geo, Inc.) Comments	June 1, 2021
Xcel Reply Comments	June 17, 2021
Overland – Legalectric Late-Filed Comments	September 13, 2021



Relevant Documents

	Date
EERA Notice of Comment Period on Scope of Supplemental EIS	September 14, 2021
Overland – Legalectric Comments	September 21, 2021
DER Letter	September 24, 2021
Order Delaying Action Pending SEIS	October 1, 2021
Overland Regarding Draft Scoping Decision	October 19, 2021
EERA Supplemental EIS Scoping Decision	December 7, 2021
EERA Draft Supplemental EIS	February 1, 2022
EERA Notice of Draft Availability of SEIS in Newspaper	February 11, 2022
Xcel Comments on Draft SEIS	March 3, 2022
EERA Information from Xcel Energy to Aid in Preparation of SEIS	April 11, 2022
EERA Final SEIS (13 parts)	April 26, 2022
EERA Notice of Final SEIS Availability in EQB Monitor	April 27, 2022
EERA Comments Received on Adequacy of Final SEIS	May 12, 2022
EERA Order – Findings and Order Determining ISFSI Design to the Protective of Groundwater (2 parts)	May 26, 2022
Notice of Comment Period	May 5, 2022
EERA Notice of Final SEIS Adequacy in EQB Monitor	May 31, 2022
EERA Comments	June 17, 2022
Overland – Legalectric Comments (3 parts)	June 24, 2022
Prairie Island Indian Community Comments	June 24, 2022
DER Comments	June 24, 2022
PINGP Study Group Comments	June 29, 2022
Xcel Energy Reply Comments	July 1, 2022

The attached materials are work papers of the Commission Staff. They are intended for use by the Public Utilities Commission and are based upon information already in the record unless noted otherwise.

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I. Statement of the Issues

1. Should the Commission approve Xcel Energy's request for use of an alternative dry cask storage technology?
2. If approved, what, if any, additional condition(s) should be included in the Commission's Order?
3. Should the Commission make any findings regarding cost recovery in this docket?

II. Statutes and Rules¹

Minnesota Statute § 116C.776 (Alternative Cask Technology for Spent Fuel Storage) states:

If the Public Utilities Commission determines that casks or other containers that allow for transportation as well as storage of spent nuclear fuel exist and are economically feasible for storage and transportation of spent nuclear fuel generated by the Prairie Island nuclear power generating plant, the commission shall order their use to replace use of the casks that are only usable for storage, but not transportation. If the commission orders use of dual-purpose casks under this section, it must authorize use of a number of dual-purpose casks that provides the same total storage capacity that is authorized under sections 116C.77 to 116C.779; provided, that the total cask storage capacity permitted under sections 116C.77 to 116C.779 may not exceed the capacity of the TN-40 casks authorized under section 116C.77.

Minnesota Statute § 116C.83, Subd. 4(a) (Authorization for Additional Dry Cask Storage – Other Conditions) states:

The storage of spent nuclear fuel in the pool and in dry casks at a nuclear generating plant must be managed to facilitate the shipment of waste out of state to a permanent or interim storage facility as soon as feasible in a manner that allows the continued operation of the plant consistent with sections 116C.71 to 116C.83 and 216B.1645, subdivision 4.

[Minnesota Statute § 216B.243](#), (Certificate of Need for Large Energy Facility) provides the criteria for assessment of need for large energy facilities.

¹ DER and Staff note that Minnesota Statute § 116C.83, Subd. 4(a) and Minnesota Statute § 116C.776 are not directly applicable to this request, but they indicate clear legislative policy directives to utilize dual-purpose storage-transportation casks and allowing flexibility to substitute a different number of dual-purpose casks for the TN-40 ones provided that the authorized storage capacity is not exceeded.

Minnesota Statute § 216B.25 (Further Action on Previous Order) states:

The commission may at any time, on its own motion or upon motion of an interested party, and upon notice to the public utility and after opportunity to be heard, rescind, alter, or amend any order fixing rates, tolls, charges, or schedules, or any other order made by the commission, and may reopen any case following the issuance of an order therein, for the taking of further evidence or for any other reason. Any order rescinding, altering, amending, or reopening a prior order shall have the same effect as an original order.

[Minnesota Rule 7829.1300](#) (Miscellaneous Filing) provides the content and procedural requirements for miscellaneous filings.

III. Procedural Background

Prairie Island Nuclear Generating Plant History

The Prairie Island nuclear generating plant (PINGP) is a 1,100 megawatt (MW), two-unit, electric generating plant in Red Wing, Minnesota. Unit 1 has been in operation since 1973; Unit 2 since 1974. Spent nuclear fuel from the plant is stored on-site in an independent spent fuel storage installation (ISFSI). As of December 2021, 47 casks were placed in the ISFSI.

In 2008, Xcel Energy (Xcel) applied to the U.S. Nuclear Regulatory Commission (NRC) for a 20-year extension of the PINGP operating licenses. The NRC granted these extensions in 2011, authorizing operation of Unit 1 through 2033 and Unit 2 through 2034.

Also in 2008, to facilitate continued operation of the PINGP, Xcel Energy applied to the Minnesota Public Utilities Commission (Commission) for a certificate of need (CN) to expand storage within the Prairie Island ISFSI to accommodate a total of 2,560 spent fuel assemblies in 64 Transnuclear TN-40HT bolted lid casks to accommodate the additional spent fuel generated by operation of the PINGP through its NRC operating licenses. TN-40HT cask is certified for transportation but the previous TN-40 design cask is not. During the certificate of need proceeding, the Department of Commerce (Department) Energy Environmental Review and Analysis unit (EERA) prepared an environmental impact statement that included an analysis of the proposed ISFSI expansion (PINGP FEIS).

In 2009, the Commission granted Xcel Energy a CN authorizing Xcel Energy to expand the PINGP ISFSI by 35 casks, for a total of up to 64 casks.²

² The order also granted Xcel a certificate of need and a site permit for an extended power uprate at PINGP. *Order Accepting Environmental Impact Statement, and Granting Certificates of Need and Site*

Xcel Request for Change in Spent-Fuel Storage Technology

On April 30, 2021, Xcel filed a Request for Change in Spent-Fuel Storage Technology (request) to utilize an alternative type of canister-based spent fuel storage container at the PINGP ISFSI. Xcel requested the Commission authorize the use of any dual-purpose spent fuel storage casks approved by the NRC under their rules for dry cask storage contained in 10 CFR Part 72, and to determine that the use of NRC-approved cask designs other than the TN-40 casks currently in use at PINGP does not require recertification under Minn. Stat. 216B.243.

Additionally, as the storage capacity of a cask ultimately selected for use in the ISFSI may not hold 40 fuel assemblies (as the TN-40HT cask does), Xcel Energy requested that it not be limited to 64 casks in the ISFSI, but rather the number of casks necessary to store the approved of storage capacity of 2,560 fuel assemblies. Because the number of spent-fuel assemblies authorized under the certificate of need and the anticipated capacity of the dual-purpose casks, Xcel indicated it would likely require one additional cask.

Xcel stated that since the issuance of the CN other spent-fuel storage casks approved by the NRC have become more cost effective. Additionally, several private storage facilities have sought approval from the NRC to temporarily store used fuel away from reactor sites until the federal government takes possession of the fuel and none of these proposed interim storage facilities are designed to include the TN-40 cask in their initial license.

Xcel stated that canister-based storage systems have now been adopted by the nuclear industry as the standard way to store used fuel, and Prairie Island is the only remaining site in the United States using the bolted TN-40 design³. According to Xcel, being an outlier in dry cask design technology results in reduced efficiencies in fabrication expense, loading operations, and technology advances available to sites using the more common canister-based systems. Advances in canister system loading operations (welding, testing, etc.) can be shared throughout sites using these systems and are not available or applicable to the TN-40 design.

As further support of its position, Xcel noted that the two Consolidated Interim Storage Facilities (CISFs) for spent nuclear fuel currently pending before the Nuclear Regulatory Commission are not designed to accept the TN-40 cask as part of their initial license. Xcel argued that allowing the use of alternative technologies would facilitate earlier off-site shipment of spent nuclear fuel from PINGP to an offsite CISF.

Permit with Conditions, e-Dockets No. [200912-45206-02](#), December 18, 2009.

³ TN-40 HT designs are based on the TN-40 cask and are collectively referred to as the “TN-40” cask design.

Xcel Energy indicated that its proposed change in spent fuel storage technology would likely result in lower customer costs because the alternative casks are estimated to cost approximately 40-50% less than the TN-40 casks and have a lower fabrication cost. Xcel noted that contemporary canister-based systems generally have greater capacity than previously available which could facilitate storage of between 32 and 37 PINGP fuel assemblies, significantly reducing the previous cost advantage of the TN-40 design.

Xcel requested the Commission approve its request prior to its selection of a particular cask technology so that it could complete a competitive bidding process to obtain the best option for its customers and stakeholders. Xcel stated that the flexibility to select any NRC-approved technology would ensure the broadest range of options is considered and the optimal technology is selected.

Xcel emphasized that it is not requesting to modify the length of its authorization to operate PINGP or operational changes to the plant. Xcel noted the new storage casks would facilitate the storage of an equivalent number of spent-fuel assemblies and would not expand the total amount of spent fuel storage previously authorized by the Commission.

Commission Notice for Comments

The Commission issued a Notice for Comment on May 14, 2021, establishing an initial comment period through May 28, 2021 and a reply comment period through June 17, 2021. The notice requested comments on the following topics:

- Should the Commission approve Xcel Energy's proposal to change the type of spent fuel storage casks used at its Prairie Island Nuclear Plant?
- Is additional information needed before the Commission can make a decision, and if so, what information is needed?
- Does Xcel Energy's request require further proceedings, such as recertification?
- Should the Commission consider Minnesota Statutes, Section 116C.776, as part of its proceeding?

Comments were received from EERA on May 27, 2021, the Department of Commerce Division of Energy Resources (DER) on May 28, 2021, and Link Murray of Deep Geo, Inc. on June 1, 2021.

EERA May 27, 2021 Comments

On May 27, 2021, EERA notified the Commission that it had determined that the proposed change in spent fuel cask technology at the ISFSI constituted substantial new information affecting the potential human and environmental effects of spent fuel storage at PINGP. EERA stated that, because of this, the 2009 PINGP final environmental impact statement (FEIS) must be supplemented in accordance with [Minnesota Statutes section 116D.04](#) and [Minnesota Rule](#)

[4410.3000](#). The Department of Commerce is the responsible governmental unit (RGU) for the PINGP FEIS and Supplement to the FEIS (SEIS). As RGU, the Commissioner of the Department of Commerce has the authority to determine the adequacy of the final SEIS on Xcel's request. EERA requested that the Commission take no action on Xcel Energy's request until EERA could supplement the 2009 FEIS.

DER May 28, 2021 Comments

In its initial comments, DER provided its review of the operative administrative rules and statutes and concluded that recertification is not required under Minnesota Statute § 216B.243.

DER stated it was generally supportive of a competitive bidding process for selecting resources to be able to deliver the best overall project at the least cost. DER requested that, if the Xcel's request is approved, it should be noted that the approval is based upon Xcel's representation that Xcel is not requesting to run PINGP longer than currently authorized and is not seeking approval for an operational change at the plant.

DER agreed with Xcel that the company should be required to make a filing providing the Commission with information regarding the selection process and its outcome. DER recommended the Commission require the following types of information be included in the filing:

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

DER also noted that while Minnesota Statute § 116C.776 is not directly applicable to this decision because it does not include replacement of the existing single-use (TN-40) casks, it provides a legislative policy directive providing for replacement of these casks with dual-purpose casks.

Link Murry (DeepGeo, Inc.) June 1, 2021 Comments

Mr. Murray wrote to express support for Xcel's request noting that, while the existing TN-40 system casks remain safe, there are now better alternatives available. Mr. Murry also noted that the two CISF under review by NRC would require that a particular cask system and approval of the request would enable Xcel to seek the best and safest choice for disposal.

Xcel Energy June 17, 2021 Reply Comments

In their reply comments, Xcel stated it does not believe its request represents a substantial change to the ISFSI but that it appreciated EERA's comments and would work with them to supplement the FEIS.

Xcel expressed agreement with DER's recommendations regarding reporting on the competitive bidding process with one exception. Xcel noted it would not be utilizing an independent monitor because it would not be bidding into the Request for Proposals and therefore there would be no potential conflict of interest. Xcel cited DER's supplemental comments in Xcel's last integrated resource plan docket where DER identified a potential conflict of interest should Xcel bid into its own request for proposals as a rationale for use of an independent monitor to support its position⁴.

EERA June 17, 2021, Reply Comments

EERA provided a draft schedule for completion of the supplement to the 2009 FEIS in 2022.

Carol Overland - Legalectric – September 13, 2021 and September 21, 2021 Late-Filed Comments

Carol Overland argued that Xcel's requested action constitutes a change to the size and type of the ISFSI and therefore requires recertification of its CN. According to Ms. Overland, Minn. Stat. §116C.776 requires that the Commission to replace the existing TN-40 casks with dual-purpose ones that are designed for both storage and transportation. Ms. Overland stated that Xcel should be required to provide additional information on the proposal before a decision is made.

Ms. Overland also filed updated comments arguing that the NRC PINGP ISFSI license granted under 10 CFR Part 72 would need to be amended to allow the use of any cask technology other than the TN-40 casks.

DER September 24, 2021

DER wrote in response to Xcel's reply comments regarding the use of an independent monitor. Based on its review, DER concluded that use of an independent monitor would not be required if Xcel did not bid on the RFP and modified its recommendations accordingly.

⁴ *Supplemental Comments*, Department of Commerce DER, Docket E002/RP-15-21 e-Dockets No. [20169-124833-01](#), September 13, 2016.

Commission October 1, 2021 Order

On October 1, 2021, the Commission issued its order stating the Commission would take no action on Xcel's request to change the type of waste storage technology until the supplement to the 2009 FEIS has been issued as recommended by EERA.

EERA SEIS Development

The following actions were taken during development of the SEIS:

September 14, 2021 - EERA issued a notice of public scoping meetings and scoping comment period for the SEIS.

October 5-6, 2021 - EERA conducted public scoping meetings in the city of Red Wing and by remote access. EERA met with tribal members of the Prairie Island Indian Community (PIIC) at the Prairie Island Community Center on November 10, 2021. During the comment period, approximately 35 persons attended the meetings and approximately 18 scoping comments were received.

December 17, 2021 - EERA issued its scoping decision for the SEIS on December 7, 2021.

February 1, 2022 - EERA staff issued the draft SEIS to analyze the issues and mitigation measures identified in the Department's scoping decision of December 7, 2021. It evaluated the potential human and environmental impacts of the Xcel Energy's proposed change in spent fuel storage technology and possible mitigation measures for these impacts.

February 16-17, 2021 - EERA held meetings seeking comments on the draft SEIS in preparation for issuance of the final SEIS. Written and oral comments from the meetings were filed to e-Dockets on March 10, 2022.⁵

April 11, 2021 - Xcel filed *Information Provided by Xcel Energy to Department of Commerce, Energy Environmental Review and Analysis Staff to Aid Preparation of the Supplemental Environmental Impact Statement for Xcel Energy's Proposed Change in Spent Fuel Storage Technology at the Prairie Island Nuclear Generating Plant*. The

⁵ Oral Public Meeting Comments on Draft SEIS, e-Dockets No. [20223-183648-01](#), and Written Comments on Draft SEIS, Parts 1-12, [20223-183648-02](#), [20223-183648-03](#), [20223-183648-04](#), [20223-183648-05](#), [20223-183648-06](#), [20223-183648-07](#), [20223-183648-08](#), [20223-183648-09](#), [20223-183420-01](#), [20223-183420-02](#), and [20223-183420-03](#).

document provided responses to comments received on the draft SEIS, and additional information about the transport and storage of spent nuclear fuel.

April 26, 2022 – EERA filed its Final SEIS. The document provided answers in response to substantive written and oral comments received during review of the draft SEIS.⁶ The SEIS indicated that the non-radiological impacts of a change in spent fuel storage technology in the PING are expected to be minimal. The SEIS also found that the radiological impacts of a change in spent fuel storage technologies is expected to be minimal. According to the SEIS, the environmental justice concerns of the nearby Prairie Island Indian Community (PIIC) would remain unchanged. In response to comments received, EERA recommended the following four conditions be included with any Commission approval of Xcel's request:

- The conditions proposed by the Department of Commerce, Division of Energy Resources requiring Xcel Energy to file the results of its competitive bidding process with the Commission.
- A condition requiring Xcel Energy to file: (1) the results of its application to the Nuclear Regulatory Commission (NRC) for a transportation license for the TN-40HT cask and (2) the transportation license for any cask or canister selected for use at Prairie Island through Xcel Energy's competitive bidding process.
- A condition requiring Xcel Energy to file those documents be made available for or provided to the NRC for use of a cask or canister other than a TN-40HT cask at Prairie Island.
- A condition requiring the Commission to implement a planning process or framework for institutional control of spent nuclear at Prairie Island (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.

EERA Orders and Findings on Final SEIS

On May 26, 2022, the Department issued two orders. The first determined that the design of the PINGP ISFSI provided a reasonable expectation that operation of the ISFSI will not result in groundwater contamination more than the standards established in Minnesota Statute 116C.76, Subdivision 1, clauses (1) to (3). In its Findings of Fact, Conclusions, and Order Finding Supplemental Environmental Impact Statement Adequate, the Department concluded that the

⁶ Written and oral comments are not summarized here and can be found in the Appendix E of the SEIS at pages E1-E118.

Final SEIS adequately addressed the items identified in its Scoping Decision per Minnesota Rules part 4410.2800, Subp. 4.

Post-SEIS Issuance Comment Period

EERA May 12, 2022 Public Comments

EERA filed two public comments responding to the Final SEIS prior to the Commission's notice. The PIIC wrote in support of EERA's four proposed mitigation conditions. Comments from Kristen Eide-Tollefson argued that the Commission should use settlement money from the NRC for funding the planning and implementation of the following measures:

- 1) effective monitoring with public reporting and transparency
- 2) institutional oversight at local, state, and federal levels;
- 3) funding to promptly mitigate any unanticipated problems;
- 4) funding for multiple (at least 3) 100-year facility and cask replacements
- 5) Installation of onsite transfer and other equipment to ensure, when the time comes, that casks are readied and acceptable

Commission Notice of Comment Period

On May 31, 2022, the Commission issued a notice for comment on the merits of Xcel's request, whether the Commission should make any findings on cost recovery, and whether additional conditions should be included in any order approving the request. Initial comments were accepted through June 24, 2022, and reply comments were accepted through July 1, 2022.

EERA - June 17, 2022 Comments

EERA stated the four conditions it proposed in the SEIS were reasonable and appropriate for any approval of Xcel's request.

Prairie Island Indian Community - June 24, 2022 Comments

PIIC prefaced its comments by noting the community's concerns stemming from its proximity to PINGP and the ISFSI. PIIC supported Xcel's requested change in cask technology and EERA's proposed conditions. PIIC recommended two conditions on the approval. The first condition is related to the amount of funding Minnesota taxpayers have provided for the partial breach of the Standard Contract.⁷ The second condition would require Xcel to provide information on the likelihood of the TN-40 casks (those not designed for transport) to be transported to a federal or private storage facility.

⁷ This refers to the U.S. Department of Energy's standardized [Contract for Disposal of Spent Nuclear Fuel and/or High-level Radioactive Waste](#) set forth in 10 CFR 961. [Additional information](#) about the contract and PINGP can be found at the Minnesota Legislative Reference Library.

Carol Overland – Legalectric June 24, 2022, comments

Ms. Overland argued that it would be irresponsible to approve Xcel's request without having additional information on Xcel's preferred cask technology, and an opportunity to fully evaluate their preferred option. Ms. Overland expressed support for both DER's and EERA's conditions, but also asserted that Xcel's filings and additional comment period, if not a contested case, should be in the docket record prior to any Commission decision on Xcel's request.

June 24, 2022 PINGP-Study Group (PINGP-SG) Reply Comments

Kristen Eide-Tollefson, on behalf of the PINGP-SG, wrote in support of removing spent nuclear fuel from PINGP at the earliest opportunity to address the concerns of the PIIC. PINGP-SG emphasized that the Commission needs to coordinate the use of an alternative dry cask storage technology with its decommissioning strategies. PINGP-SG supported the adoption of EERA's four recommended mitigation measures, including a requirement for implementation of a transparent and inclusive planning process for institutional control of storage at the PINGP ISFSI. PINGP-SG recommended the Commission not approve the use of any NRC-approved technology without further review on these items.

PINGP-SG suggested that the Commission should make a finding regarding cost recovery that past, present and future federal payments to Xcel for storage 'cost recovery' are applied to fund:

- Institutional Oversight planning, with federal, state and community collaboration;
- ISFSI maintenance and management along each of the new NRC timeframes;
- Cask and pad replacement recommendations along the new NRC timeframes;
- And most critically, provision for the DTS transfer facility needed to ensure the ability at reactor site for cask repair, transfer, and preparation for transportation, which is essential to the requirements outlined in the GEIS, by NRC.

PINGP-SG also identified the following steps for developing and instituting a forum for institutional oversight for discussion purposes:

- Establish a forum and/or workgroup with objectives and a timeline.
- Identify players/stakeholders and resources - e.g., PUC & EERA staff, environmental organization, Xcel (policy/planning and engineer), NRC, PIIC (government and staff), Red Wing (government and staff), state staff (EQB and legislative), other interested parties to the dockets.
- Identify existing industry and government nuclear community engagement model/principles
- Identify state and federal EJ principles (NEI/EPA) -
- Identify existing planning, funding, and reporting mechanisms

A. State/PUC

B. Federal/NRC

- Create Timelines – for planning, funding, and reporting based on new NRC timeline framework
- Create an RFP for an independent facilitator, to do the above. (Xcel funded, see cost recovery)

According to PINGP-SG, the costs for funding a forum, community engagement and ongoing reports and information development related to that forum/workgroup for Institutional Oversight should be fully recoverable. Recoverable costs should also include costs for “Continued Storage” planning and integrating this information and analysis into existing dockets e.g., Triennial Decommissioning and Integrated Resource Planning, in addition to any other regulatory framework or process that the Commission may adopt.

June 24, 2022 DER Reply Comments

DER recommended the Commission approve the request with a requirement that Xcel report the following items from its bidding process:

- 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 the Company;
- d. 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;
- e. the Company’s evaluation of each proposal; and
- f. the Company’s ultimate determination regarding the RFP and resulting proposals.

Xcel July 1, 2022 Reply Comments

In response to EERA’s proposed four mitigation measures included in its June 17, 2022, filing, Xcel noted that it did not object to the conditions, but has comments on the conditions. Xcel also recommended modifying the measure related to NRC filings as follows to clarify the nature of the NRC review, and to make the information available to Commission and Department staff upon request:

A condition requiring Xcel Energy to file a summary of the ~~these documents~~ evaluations required to be performed under 10 CFR 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. The Company shall also make the full evaluations available to Department or Commission staff for review upon request.

Xcel stated that institutional controls are critically important and have been addressed by the NRC previously.⁸ Xcel supported development of a process or framework regarding the state's institutional controls for spent fuel but emphasized that such a process should be taken in the context of controls provided by the NRC, other federal agencies, and local governments. Xcel agreed to support a decision for EERA's condition related to institutional controls provided that it does not delay the Commission's approval of Xcel's request.

In response to PIIC's proposed information recommendations, Xcel stated it could provide an accounting of how much money the Company has received (and returned to customers) from the U.S. Department of Energy (DOE) but information on DOE's settlements is confidential and therefore Xcel cannot provide such information to the Commission.

In response to PIIC's request for additional information on the weight of the cask and the ability to ship packages of that size on railroads, Xcel noted that the TN-40 casks are designed to be shipped over the U.S. rail system. Xcel stated standard rail cars with 4 axels can carry up to 286,000 pounds; weights above this require additional axels to support the weight. Commercial rail carriers have cars that include up to 44 axels that can transport up to 1,200 metric tons. The TN-40, at a shipping weight of 136 tons (includes cask, impact limiters, and associated tie down hardware), would be transported on an 8-axel rail car, which are widely available.

IV. Staff Analysis

Based on information in Xcel's request, comments in the record, the analysis provided in the SEIS, recommendations from DER, EERA, comments received, and other evidence in the record; staff provides the following discussion and recommendations.

DER Recommendations

Staff agrees with DER's conclusion that recertification of the CN is not warranted for approval of Xcel's request. DER's proposed requirements for the competitive bidding process, RFP, and proposal evaluation(s) seem reasonable and should be included in the Commission's order on this matter.

⁸ See Appendix B, Section B.3.4 the NRC [Generic Environmental Impact Statement for Continued Storage of Spent Nuclear Fuel \(GEIS\)](#), at Appendix B, Section B.3.4, NRC, September 2014.

In response to DER's recommendation that the Commission determine the appropriate timing requirements for these filings, staff has included a 60-day period for the filings for discussion purposes in Decision Option B.2.g below.

Final SEIS

The Department of Commerce is the responsible governmental unit for the SEIS and its Commissioner is authorized to determine whether the SEIS adequately addressed the issues identified in the Scoping Decision.

Staff supports the Department's orders on Final SEIS adequacy and ground water protection. Because the Department is the designated RGU in this matter, the Commission is not required to take any further action on the orders. Staff recommends that the Commission take administrative notice and accept the determinations of the Department's May 26, 2022 Orders finding the Final SEIS to be adequate and the ISFSI design to be protective of groundwater.

Staff also supports EERA's recommended conditions from the Final SEIS Summary except for the provisions for institutional controls planning discussed below.

Approval of the Change in Cask Storage Technology

There were no comments received that recommended rejecting an alternate cask storage design that would facilitate an earlier shipment of the spent nuclear fuel from PINGP. Similarly, despite disagreements on the process and conditions, the adequacy determination by the Department was not challenged. Staff believes the SEIS provides substantive replies to all comments received. Staff recommends the Commission approve Xcel's request with conditions.

Planning for Institutional Controls

Several commenters supported a requirement for a planning process for institutional control of spent nuclear fuel storage installations at PINGP. For example, the PINGP-SG recommend policy makers such as the Commission should:

- 1) Adopt an open, transparent, and broadly participatory approach to managing radioactive waste,
- 2) Use the time for dialogue with all stakeholders to address any remaining long-term technical and social uncertainties, and
- 3) Foster international dialogue at the strategic and policy levels to facilitate the exchange of existing experiences and approaches.

In response, EERA recommended in the Final SEIS Executive Summary and in its June 17, 2022 comments that a condition that the Commission be "required" to implement a planning process for institutional control at PINGP:

A condition requiring the Commission to implement a planning process or framework for institutional control of spent nuclear in the PINGP 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.

As an initial matter, staff believes the condition as written is unnecessary because the Commission does not need to direct itself to act. Notwithstanding this, staff believes that more granular information related to the objectives, scope, milestones, deliverables, and budget of the process or framework should be provided prior to making a commitment on the planning process.

Regarding the timing for institutional controls, Xcel's annual accrual for decommissioning was found by the Commission to be appropriate to support safe spent fuel management for 60 years after plant shutdown through the year 2095.⁹ Given this timeframe, staff believes there is ample time to address the institutional control processes.

Staff notes that there are numerous active storage options under consideration, including two Consolidated Interim Storage Facilities, a consensus-based siting approach that seeks to locate a Deep Geological Repository in an area whose people and government are willing to accept a storage facility, reprocessing technologies, and others. Staff believes the existence of an interim storage or long-term disposal site is a reasonable assumption in this timeframe.

The Commission may wish to open an investigatory docket on its own motion in response to the institutional control condition and request that Xcel and EERA jointly facilitate further dialog with interested parties to develop a more complete project plan including the objectives, scope, milestones, deliverables, and budget. Staff notes that the Prairie Island Indian Community should be invited to participate early in the process. Staff recommends the Commission approve Decision Option B.11 below to adopt this approach.

Cost Recovery

Staff believes the Commission is best served when cost recovery questions are considered jointly when possible. Staff agrees with DER's assessment that issues related to cost recovery could be addressed once Xcel has analyzed available technologies and reached its decision.

⁹ Direct Testimony and Schedules of Peter A. Gardner at Page 57, e-Dockets No. [202110-179119-07](#), PUC Docket E002/GR-21-630, October 25, 2021 (Trade Secret version also available as e-Dockets No. 202110-179119-03).

V. Decision Options

A. Recertification of the Certificate of Need

1. Determine that Xcel's requested change requires recertification under Minnesota Statute 216B.243 and delay a decision pending further proceedings.
(Overland, PINGP-SG)
2. Determine that Xcel's requested change does not require recertification under Minnesota Statute 216B.243. *(Xcel, DER, EERA, Staff)*

B. Use of Alternative Cask Technology

1. Approve Xcel's request to use an NRC-approved spent nuclear fuel storage cask technology certified for dual-use as storage and transportation under Nuclear Regulatory Commission regulation 10 CFR § 72.212 (b). *(Xcel, DER, EERA, Staff)*
2. Do not approve Xcel's request. *(Overland, PINGP-SG)*
3. Accept the Department'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*. *(Staff Recommendation)*

Competitive Bidding Process Recommendations from DER:

4. Require Xcel to provide the following:
 - a. a copy of the request for proposals
 - b. information regarding how the RFP was advertised
 - c. a statement of the evaluation criteria used by the Company;
 - 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. the Company's evaluation of each proposal
 - f. the Company'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.
(DER, Xcel, EERA, Overland, PINGP-SG, PIIC, Staff,
Staff Additional Recommendation Underlined in red)

- 5. Determine that the Commission will address issues regarding cost-recovery in a future proceeding once the alternative cask technology selected is known.

SEIS Mitigation Measures from EERA:

- 5. Require Xcel Energy to file the following:
 - a. the results of its application to the Nuclear Regulatory Commission 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.
(EERA, Xcel, Overland, PINGP-SG, PIIC, Staff)
- 7. Require Xcel Energy 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 Prairie Island.
(EERA, Overland, PINGP-SG, PIIC)
- 7.a Require Xcel to file a summary of evaluations required to be performed under 10 CFR 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. The Company shall also make the full evaluations available to Department or Commission staff for review upon request. *(Xcel revision of Decision Option 4, Staff)*
- 8. Require the Commission to implement a planning process or framework for institutional control of spent nuclear at Prairie Island (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.
(Xcel – provided the process does not delay the approval of its request, EERA, Overland, PINGP-SG, PIIC))
- 9. Direct Xcel and EERA to facilitate further discussion with PIIC, PINGP-SG and other interested parties to develop a project plan identifying the objectives, scope, milestones, deliverables, and budget for an institutional control planning process. Direct the Executive Secretary to open a docket for institutional controls of nuclear generating plants in Minnesota.
(Staff Recommendation)

Overland – Legalectric Recommendations

10. Require Xcel to do the following:

- a. Require Xcel to seek Commission approval only after cask model selection
(Overland)
- b. Delay approval of the cask technology until Xcel has provided the following items and a subsequent comment period evaluating its compliance is completed:
 - i. a copy of the request for proposals;
 - ii. information regarding how the RFP was advertised
 - iii. a statement of the evaluation criteria used by the Company;
 - iv. an overview of each proposal received in response to the RFP—at a minimum the overview should include:
 1. a cost estimate; and
 2. 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;
 - v. the Company's evaluation of each proposal;
 - vi. the Company's ultimate determination regarding the RFP and resulting proposals;
 - vii. items a-f must be filed within 60 days of the close of the RFP;
 - viii. the results of its application to the Nuclear Regulatory Commission for a transportation license for the TN-40HT cask and the transportation license for any cask or canister selected for use at Prairie Island through Xcel Energy's competitive bidding process; and
 - ix. those documents made available for or provided to the NRC for use of a cask or canister other than a TN-40HT cask at Prairie Island.
- c. Require Xcel to file for cost recovery of the project once costs are known.
(Overland)
- d. Require cost recovery findings including those for replacement of the ISFSI.
(Overland)

11. Refer the matter to the Office of Administrative Hearings for a contested case proceeding on Xcel's request. *(Overland)*

Prairie Island Indian Community Recommendations

12. Require Xcel to provide a general accounting of funding received from Minnesota taxpayers for the breach of the partial standard contract. *(PIIC, Overland)*
13. Require Xcel to provide information regarding the likelihood of the TN-40 casks being transported to a federal or private storage facility. *(PIIC, Xcel, Overland)*

Prairie Island Nuclear Generating Plant – Study Group Recommendations

14. Direct that Xcel applies past, present, and future settlement money from the DOE for funding the planning and implementation of the following measures:
 - Effective monitoring with public reporting and transparency
 - Institutional oversight at local, state, and federal levels;
 - Funding to promptly mitigate any unanticipated problems;
 - Funding for multiple (at least 3) 100-year facility and cask replacements
 - Installation of onsite transfer and other equipment to ensure, when the time comes, that casks are readied and acceptable *(PINGP-SG)*
15. Determine that the following costs should be fully recoverable:
 - a. The costs for funding a forum, community engagement and ongoing reports and information development related to that forum/workgroup for Institutional Oversight.
 - b. Costs for "Continued Storage" planning and integrating this information and analysis into existing dockets – Triennial Decommissioning and Integrated Resource Planning, in addition to any other regulatory framework or process that the Commission may adopt. *(PINGP-SG)*

Staff Recommendation: A.2, B.1, B.3, B.4(a-g, with a 60-day review), B.5, B.6, B.7(a), and B.9.