

## Staff Briefing Papers

Meeting Date	December 12, 2019	Agenda Item 5**
Company	Northern States Power Company d/b/a Xcel Energy (Xcel, Company)	
Docket Nos.	<b>E-002/M-17-828</b>	
	<b>In the Matter of the Petition of Northern States Power Company for Approval of the 2019-2021 Triennial Nuclear Decommissioning Study and Assumptions</b>	
Issue	<ol style="list-style-type: none"> <li>1. Does Xcel's July 15, 2019 Nuclear Decommissioning Accrual Filing comply with the Commission's January 7, 2019 Order?</li> <li>2. Should the Commission revise the approved annual decommissioning and end of life nuclear fuel accruals?</li> <li>3. Should the annual decommissioning and end of life nuclear fuel accruals go into effect on January 1, 2020?</li> </ol>	
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 <b>Relevant Documents</b>	<b>Date</b>
Minnesota Public Utilities Commission – Order Approving Decommissioning Study, Decommissioning Accrual, and Taking Other Action	January 7, 2019
Xcel Energy – Compliance Filing	July 15, 2019
Department of Commerce – Comments	August 19, 2019
OAG – Comments	August 19, 2019
Xcel Energy – Reply Comments	August 29, 2019

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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.

 **Relevant Documents**

**Date**

OAG – Reply Comments

August 29, 2019

Department of Commerce – Response to Reply Comments

September 16, 2019

Docket #E-002/M-19-688

Xcel Energy – Petition for Approval of True-Ups Initial Filing

November 1, 2019

Department of Commerce – Comments

November 18, 2019

## I. Statement of the Issues

- Does Xcel's July 15, 2019 Nuclear Decommissioning Accrual Filing comply with the Commission's January 7, 2019 Order?
- Should the Commission revise the approved annual decommissioning and end of life nuclear fuel accruals?
- Should the annual decommissioning and end of life nuclear fuel accruals go into effect on January 1, 2020?

## II. Background

On December 1, 2017, Xcel filed its 2019-2021 Triennial Nuclear Plant Decommissioning Accrual Petition (Petition) and, on April 1, 2018, corrections to the filing. In the petition, Xcel provided various possible decommissioning scenarios that could have resulted in annual decommissioning accruals for the Nuclear Decommissioning Trust (NDT) ranging as low as \$16.0 million to as high as \$115.9 million. Additionally, the Petition requested that the annual end of life (EOL) nuclear fuel accrual be revised to \$2,029,394.

On January 7, 2019, the Commission issued its Order Approving Decommissioning Study, Decommissioning Accrual, and Taking Other Action which, starting in 2020, set the annual decommissioning and EOL accruals at \$44.4 million and \$2,003,526, respectively. Both accruals were subject to revision based on a subsequent accrual filing to be made on July 15, 2019 that updated inputs and considers the possible implications of:

- Department of Energy continuing refunds for dry cask storage during the decommissioning process;
- The use of the SAFSTOR decommissioning method; and
- The possible use of third-party contractors for nuclear decommissioning.

On July 15, 2019, Xcel made its compliance filing proposing to reduce the annual decommissioning accrual to \$22.8 million and increase the EOL accrual to \$2,029,394.

On August 19, 2019, the Department of Commerce (Department) filed comments recommending an annual decommissioning accrual to \$27.4 million, a correction to the EOL accrual and requesting additional information before making its EOL accrual recommendation.

Also on August 19, 2019, the OAG filed comments recommending that the annual decommissioning accrual remain at \$44.4 million.

In its August 29, 2019 reply comments, Xcel agreed with the Department's recommendation to set the annual decommissioning accrual at \$27.4 million, complied with the Department's request for information related to the EOL accrual calculation and revised that accrual calculation to \$2,087,026.

Also on August 29, 2019, the OAG filed reply comments continuing to recommend that the annual decommissioning accrual remain at \$44.4 million; however, if the Commission modifies the accrual, then the Commission should adopt the Department's recommendation.

On September 16, 2019, the Department of Commerce filed a response to reply comments continuing to recommend an annual decommissioning accrual of \$27.4 million and recommending that the EOL accrual calculation be set at \$2,087,026.

On November 1, 2019, Xcel filed a new multi-year rate plan<sup>1</sup> (MYRP) and, on the same date, the Company filed an alternative "stay-out" proposal<sup>2</sup> that, if approved, will result in the Company withdrawing its MYRP. Included in the stay-out proposal is a request that the Commission delay any increase to the Nuclear Decommissioning Trust (NDT) accrual until January 1, 2021, or—alternatively—approve of a deferral will allow the Company to fund the revised 2020 accrual and defer the increase so that it can recover that amount in a future rate case.

### **III. Parties' Comments**

#### **A. Xcel Energy – Compliance Filing**

##### **1. Nuclear Decommissioning Trust Accrual**

Xcel stated that, since the November 29, 2018 hearing in this docket, the Company has been working with an independent consultant, AHL Consulting (AHL), in evaluating the NDT accrual. Upon AHL, the Company considered the three trends first previously discussed in this docket: the continuation of DOE reimbursements during decommissioning, the SAFSTOR alternative to immediate decommissioning, and the use of third-party decommissioning firms. The work concluded that it was reasonable to pursue additional analyses regarding the continuation of DOE reimbursements into and through decommissioning. Therefore, AHL's report<sup>3</sup> focused on the DOE reimbursement issue. Based on that report, along with its own analysis, Xcel concluded the NDT accrual should be reduced from \$44.4 million to \$22.8 million. Additionally, it was concluded that Xcel should continue monitoring trends related to SAFSTOR and the use of third-party decommissioning firms; however, Xcel considers it premature to make recommendations with respect to the SAFSTOR alternative or the emergence of third-party firms at this time.

Xcel noted that the Standard Contract underlying potential legal claims and settlements with the Department of Energy (DOE) states that:

The term of this contract shall be from the date of execution until such time as DOE has accepted, transported from the Purchaser's site(s) and disposed of all [spent nuclear fuel] and/or [high-level radioactive waste] of domestic origin from the civilian nuclear power reactor(s) specified in appendix A.<sup>4</sup>

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<sup>1</sup> Docket E-002/GR-19-564.

<sup>2</sup> Docket E-002/M-19-688.

<sup>3</sup> Attachment A.

<sup>4</sup> Xcel asserted that both Prairie Island and Monticello are specified in Appendix A.

Similarly, the section of the contract defining scope states:

The services to be provided by DOE under this contract shall begin, after commencement of facility operations, not later than January 31, 1998 and shall continue until such time as all [spent nuclear fuel] and/or [high-level radioactive waste] from the civilian nuclear power reactors specified in appendix A . . . has been disposed of.

Based on this language and AHL’s experience and judgment it is reasonable to assume that Xcel will continue to receive DOE reimbursements for dry fuel storage costs into and through the decommissioning process. Moreover, it should be noted that, if in the future, the DOE elected not to renew Xcel’s settlement agreement, the Department of Justice (representing DOE) has failed to meaningfully prevail in actual litigation over the Standard Contract and, in fact, has often been required to pay more in damages than it agrees to reimburse through its various settlement agreements. Therefore, Xcel’s revised accrual has incorporated DOE reimbursements through the decommissioning process.

Xcel explained that its experience has shown that the Company has historically been able to recover 90% of its qualifying costs from the DOE; therefore, Xcel believes that, as shown in Table 1, it is prudently conservative to select an accrual near the midpoint of the 90% and 75% outcomes. However, the Company acknowledged that the Commission could also reasonably move closer to the 75% scenario for DOE reimbursements and set the accrual approximately \$27 million.

**Table 1 – Xcel’s Proposed Allocation of Accrual**

Unit	2020 Accrual with 75% of DOE Funds	Allocation Based on 75 % Accrual	Allocation of Proposed Accrual
Monticello	\$8,507,110	31%	\$7,074,153
Prairie Island Unit 1	\$12,399,703	45%	\$10,311,069
Prairie Island Unit 2	\$6,511,608	24%	\$5,414,778
Total	\$27,418,421	100%	\$22,800,000

Xcel added that its 2019 Integrated Resource Plan (IRP) includes a 10-year extension of the Monticello plant to 2040.<sup>5</sup> If approved, the extension increase the time for collecting an accrual during the plant’s operation which could put additional downward pressure on our accrual calculation.

## 2. End of Life Nuclear Fuel Accrual

Xcel explained that EOL provides funding for the unused nuclear fuel in the reactor at the end of the plants license. The accrual amount is calculated by using a sinking fund formula which takes into account the remaining life of the plant and the amount already collected. Since the

<sup>5</sup> Docket E-002/RP-19-368, Chapter 1, Page 2 of 139.

proposed lower 2019 nuclear fuel accrual was deferred to 2020, the accrual would need to be increased to \$2,029,394.<sup>6</sup>

**B. Department of Commerce – Comments**

**1. Nuclear Decommissioning Trust Accrual**

As part of its analysis, the Department asked Xcel to provide the following in a table, by plant and in total:

- Column 1 – breakout of the \$44.4 million decommissioning accrual approved by the Commission;
- Column 2 – reduction caused by including 75% of DOE reimbursement;
- Column 3 – increase caused by lower earnings projections; and
- Column 4 – resulting adjusted decommissioning accrual.

Xcel’s response is shown in Table 2.

**Table 2 – Breakdown of Changes to NDT Accrual**

Unit	2020 Accrual Approved in 2019 Triennial	Decrease from 75% DOE Reimbursements	Increase Due to Earnings Assumptions	2020 Resulting Accrual	Increase Due to Passage of Time	2020 Accrual with 75% DOE Reimbursements
Monticello	\$20,824,536	(\$19,568,914)	\$7,210,054	\$8,465,676	\$41,435	\$8,507,111
Prairie Island Unit 1	\$14,749,471	(\$7,402,273)	\$3,840,806	\$11,188,004	\$1,211,699	\$12,399,703
Prairie Island Unit 2	\$8,825,903	(\$6,853,934)	\$3,863,068	\$5,835,037	\$676,570	\$6,511,607
Total	\$44,399,910	(\$33,825,121)	\$14,913,928	\$25,488,717	\$1,929,704	\$27,418,421

Subsequently, the Department asked for similar information for the decommissioning accrual assuming the 75% and 90% midpoint DOE assumption. In response, Xcel recalculated the decommissioning accrual assuming an 82.5% midpoint which resulted in a \$21.4 million decommissioning accrual. Xcel explained that the difference to its proposed \$22.8 million was because Xcel had assumed a simple average of the 75% and 90% DOE recovery scenarios. After reviewing Xcel’s reasoning and assumptions, the Department agreed that it is reasonable to include the DOE reimbursement (revenues) for dry fuel storage costs during decommissioning into the decommissioning accrual. However, the Department noted that, since Xcel has had problems estimating the DOE reimbursement amount in the past, the DOC recommended that the accrual be set at the 75% reimbursement level, or \$27.4 million.

The Department disagreed with Xcel’s alternative proposal to maintain the current \$14 million accrual. Since that alternative is based in part based on the proposed, but not approved, Monticello life extension, the Department considered continuation of the \$14 million decommissioning to be inappropriate.

<sup>6</sup> The revised EOL accrual calculation was provided in Attachment E.

The Department agreed that basing the accrual on the SAFSTOR alternative or the use of a third-party are significant changes in the nuclear decommissioning plan and concluded that, if such a change is appropriate in the future, including such a proposal in the initial filing of a future nuclear decommissioning petition may provide better assurance that parties interested in nuclear decommissioning have a chance to weigh in on such issues.

The Department examined Xcel's input assumptions and did not dispute the updated return assumptions presented in the Compliance Filing's Attachment D. The DOC recommended that the Commission find them reasonable and approve them. However, the Department found the specific methods used to derive the long-term expected returns by asset class shown on page 2 of Attachment D to be unclear. Between now and the time Xcel files its next triennial nuclear decommissioning filing (due December 1, 2020), the Department would like to work with Xcel to better understand how the expected returns for the asset classes are derived, as well as Xcel's method of calculating its expected portfolio returns using its target asset allocation, the expected returns by asset class and the Company's plan to convert its investments to bonds as it needs to withdraw funds from the trust to pay for decommissioning-related expenses. To that effect, the Department recommended that, by January 10, 2020, Xcel be required to provide the following information and work with the Department to explain how these processes work:

- Fully describe exactly what information and analysis Goldman Sachs provides and how the NDT Committee evaluates that information within the framework of its fund strategy to make allocation decisions to optimize the NDT's risk/return profile.
- Fully describe how Xcel's NDT Committee evaluates changes in expected long-term returns and volatility in particular asset classes in its allocation decisions.
- Fully describe how the Company:
  - decides whether to pursue an active or passive strategy within that asset class,
  - selects one or more investment managers to manage the NDT's investments in U.S. large capitalization equities,
  - monitors the performance of the managers it has selected,
  - determines whether to retain or replace those managers, and
  - manages its capital gains tax liability across its entire portfolio to minimize its capital gains tax liability, and
  - ensures that ratepayers fully benefit from Xcel's minimization of capital gains.
- Fully explain how these decisions impact expenses associated with manager turnover and asset turnover, as well as tax expense.

## **2. End of Life Nuclear Fuel Accrual**

The Department's review of Xcel's revised EOL nuclear fuel accrual revealed that Xcel used incorrect cost of capital inputs. Xcel used the capital structure and capital cost estimates (i.e. costs of long-term debt, short-term debt, and equity) approved in its 2012 rate case<sup>7</sup>; whereas, the Company should have used capital cost estimates from Xcel's most recent rate case<sup>8</sup>,

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<sup>7</sup> Docket E-002/GR-12-961.

<sup>8</sup> Docket E-002/GR-15-826.

including a 9.06% return on equity. The Department estimated that updating those inputs results in a \$63,000 increase to the Minnesota jurisdictional accrual.

The Department expressed concerns regarding Xcel's sinking fund methodology. The DOC explained that a sinking fund sets money aside in order to make a known payment in the future. It is assumed that the money being set aside will be deposited into an account that pays a fixed interest rate. The amount of the periodic deposits is set at a fixed amount such that, by the time payment is due, the sum of the deposits and the interest earned will equal the payment amount. However, while Xcel's accrual calculation assumes interest payments, Attachment E does not appear to reflect any such past interest payments. The Department requested that, in reply comments, Xcel clarify the mechanics of its EOL nuclear fuel sinking fund and the related accruals and explain whether Xcel credits ratepayers for the temporary use of the money provided by ratepayers to cover the future EOL fuel expense.

### **C. OAG – Comments**

The OAG stated that Xcel should not be allowed to change assumptions regarding DOE reimbursements. Although the Standard Contract's wording seems to indicate that the DOE will be obligated to reimburse Xcel for its dry storage fuel costs into and through decommissioning, the OAG described the DOE as unreliable with respect to honoring its nuclear commitments and any litigation to enforce those commitments, even if successful, will result in increased cost to ratepayers.

The OAG opined that, although nuclear decommissioning cost estimates have decreased in recent years, the Commission should refrain from reducing Xcel's Annual Decommissioning Accrual based on either SAFSTOR or a third-party decommissioning method. Rather, the Commission should retain the \$44.4 million accrual from its January 2019 Order, instruct Xcel to continue gathering information about all of the available nuclear decommissioning options, and require Company to provide a nuclear decommissioning methodology update in its 2020 Triennial Filing. The OAG noted that, even if SAFSTOR results in smaller annual accruals, those smaller accruals may not materialize if Xcel is not required to maintain a reasonable investment mix. If the investment mix underperforms in a SAFSTOR scenario and annual accruals are not adjusted upwards in subsequent years, ratepayers could find themselves with unanticipated and significantly increased costs as Xcel's plants move towards decommissioning. If the Commission does elect to make an accrual adjustment based on SAFSTOR it should, at a minimum, require Xcel to work with the Department to continue to improve the company's investment portfolio.

Although it has not yet been used by an NRC-licensed facility, the DOE mentioned that another decommissioning option available to Xcel is the ENTOMB, or In Situ (ISD), decommissioning method. Under the ENTOMB/ISD method, radioactive contaminants are permanently encased on site in structurally sound material such as concrete. The facility is maintained and monitored until the radioactivity decays to a level permitting restricted release of the property. In fall 2012, the DOE released information regarding ISD closures at a number of facilities throughout the Savannah River Site. The DOE closure program was established to accelerate the reduction of risk and cost associated with excess nuclear facilities and it was so successful that the DOE listed among the advantages of ISD the fact that it costs a fraction of the cost of demolition –



the fully-burdened costs for each of the reactor [ISD] decommissioning projects was about 29% of the estimated cost for full demolition of the above-grade structures along with reactor vessel removal and below grade decontamination of each reactor complex. The OAG acknowledged that the ENTOMB/ISD method of decommissioning may not be the right choice for Xcel; however, as nuclear decommissioning methods continue to evolve and, given the real cost savings the ENTOMB/ISD method may present, it may prove to be a viable alternative by the time Xcel's plants reach the end of their operating lives. Since Xcel already plans to report on the developing nuclear decommissioning landscape, the OAG stated that the Commission should require Xcel to consider the ENTOMB/ISD option as well.

#### **D. Xcel Energy – Reply Comments**

##### **1. Nuclear Decommissioning Trust Accrual**

Xcel agreed with the Department that the 75% scenario is a reasonable, conservative option and did not object to using this approach. The Company also understands that OAG's reasoning for not changing course regarding the use of DOE reimbursement funds; however, Xcel believes that using the DOE Reimbursement to offset decommissioning costs will provide an immediate benefit to customers and is the appropriate approach.

##### **2. End of Life Nuclear Fuel Accrual**

Xcel acknowledged that use of the wrong capital inputs in its calculation and made the appropriate correction which results in an accrual \$57,632 increase to \$2,087,026.

Regarding the Department's concerns about EOL assumed interest, the Company explained that, as every year that passes, the assumed accrual will increase without an increase to rates to compensate for the assumed interest until another general rate case is filed. To illustrate this impact from 2020 through 2023, the Company provided Schedule B.

##### **3. Department's Request for Additional Information**

Xcel stated that it has no issues with providing the requested information by January 10, 2020.

#### **E. OAG – Reply Comments**

The OAG continued to recommend that the NDT accrual remain at \$44.4 million; however, if the Commission is persuaded to modify the accrual, the OAG recommended that the Department's 75% scenario be approved. The OAG also supported the Department's recommendation that Xcel be required to work with the DOC to improve the Company's NDT financial inputs.

#### **F. Department of Commerce – Response to Reply Comments**

The Department stated that it agreed with Xcel's updated EOL accrual of \$2,087,026 and recommended that it be approved. The Department also concluded that Xcel's explanation regarding the EOL accrual calculations' mechanics and ratepayers' interest earned on collected accruals is reasonable.

### **G. Xcel Energy – Petition for Approval of True-Ups Initial Filing**

One of the terms in Xcel's Petition for Approval of True-Ups Initial Filing (stay-out proposal) includes Commission approval to delay, until January 1, 2021, any increase to the NDT accrual of the \$14,030,831 currently included in rates. Alternatively, if the final 2020 NDT accrual is higher, the Company requested that it be allowed to defer any increase so that it can seek recovery of that amount in a future rate case. Both this proceeding and the Company's stay-out proposal are scheduled to be heard at the agenda meeting.

### **H. Department of Commerce – Comments, Docket 19-688**

The Department noted the current rates reflect a \$14 million NDT accrual and the most recent comments by Xcel and the Department in this proceeding support an NDT accrual of \$22.8 million or \$27.4 million. Since, as a general principle, the Department does not support deferred accounting and, since the Department does not believe that deferral of the 2020 NDT accrual would not meet the deferred accounting criteria, the DOC supports an additional one-year delay until January 1, 2021 to increase the NDT accrual. The Department added that, if the approved amortization period is shorter than when Xcel files its future rate case, there could be the potential for over recovery of the NDT accrual.

## **IV. Staff Analysis**

Staff agrees with the Department's calculation that the annual NDT and EOL accruals should be set at \$27.4 million and \$2,087,026, respectively. However, in its support of Xcel's stay-out proposal in docket 19-688, the Department recommended that, if the Commission approves that request, then the accruals should remain at current levels. Staff points out that, if the Commission were to approve Xcel's stay-out proposal and accept the DOC's recommendation to not increase the accruals, then, all things being equal and as a result of the passage of time, future accruals will be higher than the \$27.4 million and \$2,087,026. Regardless of the Commission's action on this matter, Xcel's next triennial study will be due December 1, 2020 and will include a fresh analysis of what the appropriate accruals should be.

Finally, Staff is concerned that due to delays in bringing this matter in front of the Commission, the Department's recommendation that Xcel make a compliance filing by January 10, 2020 may no longer be realistic. For this reason, the Commission may want ask the Company if it can still comply with that deadline.

## **V. Decision Options**

### Compliance Filing

1. Accept Xcel's July 15, 2019 filing as compliant with the Commission's January 7, 2019 Order. (Xcel, OAG)
2. Do not accept Xcel's July 15, 2019 filing as compliant with the Commission's January 7, 2019 Order.

### 2020 Annual Decommissioning Accrual

3. Maintain the currently approved \$44.400 million Annual Decommissioning Accrual. (OAG primary position)
4. Reduce the Annual Decommissioning Accrual to \$22.8 million. (Xcel initial position)
5. Reduce the Annual Decommissioning Accrual to \$27.4 million. (DOC, Xcel agreed, OAG alternate)
6. Reduce the Annual Decommissioning Accrual to the \$14,030,831 that is included in current rates. (Xcel if stay out proposal is approved, DOC if stay out proposal is approved)<sup>9</sup>

### Annual End of Life Nuclear Fuel Accrual

7. Increase the Annual End of Life Nuclear Fuel Accrual to \$2,029,394. (Xcel initial position)
8. Increase the Annual End of Life Nuclear Fuel Accrual to \$2,087,026. (Xcel revised position, DOC).
9. Maintain the currently approved Annual End of Life Nuclear Fuel Accrual of \$2,003,526.

### Deferral

10. If decision options 1, 2 or 3 are adopted, allow Xcel to defer any increase from the current \$14,030,831 so that it can recover that amount in a future rate case.<sup>10</sup> (Xcel, DOC)
11. If decision options 1, 2 or 3 are adopted, do allow Xcel to defer any increase from the current \$14,030,831.

### Compliance filing:

12. Order Xcel required to provide the following information and work with the Department to explain how these processes work:
  - Fully describe exactly what information and analysis Goldman Sachs provides and how the NDT Committee evaluates that information within the framework of its fund strategy to make allocation decisions to optimize the NDT's risk/return profile.
  - Fully describe how Xcel's NDT Committee evaluates changes in expected long-term returns and volatility in particular asset classes in its allocation decisions.
  - Fully describe how the Company:

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<sup>9</sup> Xcel's alternate proposal in Docket E-002/M-19-688 is decision option #10 in this docket.

<sup>10</sup> As proposed in Docket E-002/M-19-688.

- decides whether to pursue an active or passive strategy within that asset class,
  - selects one or more investment managers to manage the NDT's investments in U.S. large capitalization equities,
  - monitors the performance of the managers it has selected,
  - determines whether to retain or replace those managers, and
  - manages its capital gains tax liability across its entire portfolio to minimize its capital gains tax liability, and
  - ensures that ratepayers fully benefit from Xcel's minimization of capital gains.
- Fully explain how these decisions impact expenses associated with manager turnover and asset turnover, as well as tax expense. (DOC, Xcel agreed, OAG supports)

13. Take no action.

2020 Triennial Initial Filing:

14. Order Xcel to continue gathering information about all of the available nuclear decommissioning options and require Company to provide a nuclear decommissioning methodology update in its 2020 Triennial initial filing. (OAG)

15. Take no action.