MINNESOTA
PUBLIC UTILITIES COMMISSION

Staff Briefing Papers

Meeting Date	July 29, 2021		Agenda Item 4**
Company	Northern States Power Company, d/b/a Xcel Energy		
Docket No.	**E,G-002/D-19-723** **In the Matter of the Petition of Northern States Power Company for Approval of its 2020 Annual Review of Remaining Lives and Five-Year Depreciation Study**		
Issues	Should the Commission approve: • A two-year passage of time adjustment for most of Xcel Energy's electric and natural gas production and gas storage facilities; • Modification to the remaining lives for the Wescott Gas Storage facility and the Luverne Wind2Battery System; • Initial remaining life and net salvage rates for Blazing Star II, Crowned Ridge, Freeborn, and Dakota Range wind projects; • Initial remaining life and net salvage rates for the Community Wind North and Jeffers Wind projects (Docket No. E-002/M-18-777) and the Mower Wind project (Docket No. E-002/M-19-553); • Reserve reallocations to certain Steam and Other Production accounts; and • Updates to the net salvage rates for electric and natural gas production and gas storage facilities based on the 5-year Dismantling Study.		
Staff	Ray Hetherington	raymond.hetherington@state.mn.us	651-201-2203
	James Worlobah	james.worlobah@state.mn.us	651-201-2238

✓ **Relevant Documents**	**Date**
Extension Requests	
Xcel Energy – Request for Extension	November 18, 2019
Department of Commerce – Comments on Extension Request	December 18, 2019
PUC – Order Granting Extension	January 22, 2020
Xcel Energy – Request for Further Extension	May 15, 2020
Department of Commerce – Comments on Extension Request	May 21, 2020
PUC – Order Granting Extension	July 13, 2020
Petition and Comments	
Xcel Energy – Petition	August 18, 2020
Xcel Energy – Petition, Dismantling Study	August 18, 2020
Department of Commerce – Comments	February 16, 2021
Office of the Attorney General – Comments (TS)	February 16, 2021
Xcel Energy – Reply Comments (TS)	March 29, 2021
Department of Commerce – Reply Comments (TS)	June 15, 2021

Table of Contents

I. Statement of the Issues

Should the Commission approve Xcel's request for:

- A two-year passage of time adjustment for most of Xcel Energy's electric and natural gas production and gas storage facilities;
- Modification to the remaining lives for the Wescott Gas Storage facility and the Luverne Wind2Battery System;
- Initial remaining life and net salvage rates for Blazing Star II, Crowned Ridge, Freeborn, and Dakota Range wind projects;
- Initial remaining life and net salvage rates for the Community Wind North and Jeffers Wind projects (Docket No. E-002/M-18-777) and the Mower Wind project (Docket No. E-002/M-19-553);
- Reserve reallocations to certain Steam and Other Production accounts; and
- Updates to the net salvage rates for electric and natural gas production and gas storage facilities based on the 5-year Dismantling Study.

II. Background

Extension Requests

On November 18, 2019, Northern States Power doing business as Xcel Energy (Xcel Energy, Xcel or the Company) requested that the Commission grant a three-month extension to the February 18, 2020 filing deadline in Ordering Point 7 of the Commission's October 22, 2019 order in Docket No. E,G-002/D-19-161. The Company cited unanticipated onboarding issues that prevented its contractor, TLC Services, Inc. from completing its five-year dismantling study in time for inclusion by the February 2020 depreciation filing.

On December 18, 2019, the Department of Commerce, Division of Energy Resources (the Department) filed comments supportive of Xcel's extension request.

On January 22, 2020, the Commission issued an order granting a three-month extension to Xcel to file its 2020 Annual Review by May 18, 2020.

On May 15, 2020, Xcel requested a further three-month extension citing the COVID-19 pandemic and Commissioner Sullivan's May 5, 2020 memo in Docket No. E,G-999/CI-20-425 asking utilities to submit responses regarding "near term, planned for, and prudent utility infrastructure investments or other programs that can aid in Minnesota's economic recovery from COVID-19". The Company stated that it was diligently working on a plan and that plan would likely have an impact on the Annual 2020 Petition.

On May 21, 2020, the Department submitted comments stating that it did not see any conflicts or issues with granting Xcel's extension request and was therefore recommending that the Commission grant an additional three-month extension until August 18, 2020.

On July 13, 2020, the Commission issued its order granting Xcel's request for an additional extension of time.

Petition and Comments

On August 18, 2020, Xcel Energy submitted its request for approval of its 2020 annual review of remaining lives and its five-year depreciation study of electric and natural gas production and gas storage facilities. Xcel requested adjustments to the remaining lives of two of its production facilities as well as initial lives, salvage rates and reserve reallocations.

On February 16, 2021, the Department recommended that the Commission approve certain proposals within Xcel's Petition. The Department stated that it would withhold its recommendations of the remaining proposals, pending Xcel's submission of further requested information.

On February 16, 2021, the Office of Attorney General-Residential Utilities Division (OAG) recommended the Commission deny Xcel's proposed reserve reallocation and proposed net salvage rate for the Luverne Wind2Battery system (W2B).

On March 29, 2021, Xcel filed reply comments providing additional information on items raised by parties in comments yet continuing to recommend that the Commission approve its petition as filed.

On June 15, 2021, the Department submitted reply comments.

Related Xcel Depreciation Filings

The Commission's order on Xcel's annual 2020 update for the remaining lives and depreciation certification for its transmission, distribution and general accounts, in Docket No. E,G-002/D-20-635, was issued on March 24, 2021.

Xcel's request for approval of its triennial nuclear plant decommissioning accrual is pending in Docket No. E-002/D-20-855.

III. Relevant Statutes, Rules and Procedures

A. Minn. Stat. § 216B.11. Depreciation Rates and Practices.

> The commission shall fix proper and adequate rates and methods of depreciation, amortization, or depletion in respect of utility property, and every public utility shall conform its depreciation, amortization or depletion accounts to the rates and methods fixed by the commission.

B. Minn. Rules, pts. 7825.0500 – 7825.0900. Depreciation Certification.

1. Minn. Rules, pt. 7825.0600, subp. 1. Depreciation Certification.

Depreciation practices applicable to all utilities. All electric and gas utilities shall maintain, and have available for inspection by the commission upon request, adequate accounts and records related to depreciation practices as defined herein. Each utility has the prime responsibility for proposing the depreciation rates and methods that will be used. The commission shall certify by order to the utility the depreciation rates and methods which it considers reasonable and proper. Any allocation or adjustment of the depreciation reserve will require specific justification and certification by the commission.

Either the utility may submit, or the commission may request a petition for depreciation certification because of unusual circumstances or unique situations.

2. Minn. Rules, pt. 7825.0900. Petition for Certification Procedure (in part)

Depreciation rates and methods, once certified by order, are binding on all future rate proceedings and will remain in effect until the next certification or until the commission shall determine otherwise.

3. Minn. Rules, pt. 7825.0600, subp. 2 & 3. Depreciation Certification (in part)

[All utilities] shall: . . . review their depreciation rates annually to determine if they are still generally appropriate. Depreciation certification studies shall be made so that all primary accounts (class A & B utilities) or all functional groups of plant accounts (class C & D utilities) have been analyzed at least every five years.

C. Commission Practice

Depreciation methods, practices, and rates are evaluated in depth once every five years in a depreciation study provided by the utility and then reviewed annually, usually in a request for certification of the remaining lives of the utility's assets. The depreciation rates established in these proceedings are incorporated into the Company's revenue requirement and rates in a general rate proceeding. These stand-alone depreciation filings allow for a more thorough examination of the Company's depreciation methods, practices, and rates independent of all the other issues that are examined and analyzed in a rate case. This is important because utilities are so highly capital intensive. This is also one of the main reasons for having separate depreciation filings.

Xcel submits several different depreciation filings periodically. Every five-years, as in this docket, Xcel submits a comprehensive depreciation study of its electric and gas production and gas storage asset lives and net salvage rates. In the off years, on an annual basis, Xcel provides

an annual update of the remaining lives and depreciation rates for its electric and gas production and gas storage accounts.

Xcel also submits separate five-year comprehensive studies and annual updates and reviews of the remaining lives and depreciation rates for its transmission, distribution, and general plant facilities.

In addition, Xcel submits a separate nuclear decommissioning accrual filing once every three-years that sets the deprecation rates for its nuclear facilities.

IV. Xcel Energy Petition

A. Overview

Xcel Energy stated that after its annual review of electric and gas production and gas storage asset lives and net salvage rates, it requested Commission approval of the following[1]:

- A two-year passage of time adjustment for most of its electric and natural gas production and gas storage facilities;
- Modification to the remaining lives for the Wescott Gas Storage facility and the Luverne Wind2Battery System;
- Initial remaining life and net salvage rate for Blazing Star II, Crowned Ridge, Freeborn, and Dakota Range wind projects;
- Initial remaining life and net salvage rate for the approved acquisitions of the Community Wind North and Jeffers Wind projects (Docket No. E-002/M-18-777) and the Mower Wind project (Docket No. E-002/M-19-553);
- Reserve reallocations to certain Steam and Other Production accounts; and
- Updates to the net salvage rates for electric and natural gas production and gas storage facilities based on the 5-year Dismantling Study.

Xcel also stated that, in compliance with past practice and the Commission's Order[2] in its 2019 remaining life filing, it provided the following:

- An explanation and schedule of the differences between depreciation remaining lives and the Integrated Resource Plan (IRP) lives of electric production plants.
- An update on removal costs for Black Dog Units 3 and 4, Minnesota Valley, Key City, and Granite City.
- A supplemental schedule showing the total (in addition to the remaining) depreciable lives of the Company's electric production facilities.

[1] Xcel Petition, p. 1. Note: Xcel's Attachment A is a summary of the requested 2021 remaining lives and net salvage rates.

[2] ORDER SETTING DEPRECIATION LIVE, SALVAGE RATES, AND ADDITIONAL FILING REQUIREMENTS, Docket No. E,G-002/D-19-161, October 22, 2019.

The Company explained that its petition reflected an increase in total company depreciation and amortization expense of $2.5 million for existing assets and additionally requested initial lives and net salvage for new wind projects. Like its 2015 Remaining Life Petition[3] which included the last five-year dismantling study, Xcel is requesting an effective date of January 1, 2021, unless otherwise noted.

The Company also said that, in anticipation of a possible delay in ordering, it has provided details of wind projects and other assets with in-service dates in 2021 for consideration if the Commission were to delay or cancel the 2021 filing date.

Xcel also explained that in response to the financial effect of COVID-19,[4] it has proposed using rate mitigation tools in the Commission's COVID-19 investigation docket and these may include potential adjustments to remaining lives. If so, and if the Commission approves of such rate mitigation tools, Xcel will supplement this filing to reflect these changes.

B. Review of Remaining Lives and Net Salvage Values

1. Passage of Time Adjustment

Xcel stated that it incorporated a two-year passage of time adjustment to the 2019 certified remaining lives of all facilities, this resulted in the proposed remaining lives as of January 1, 2021. The Company pointed out that this does not change the annual depreciation accrual but reflects that Xcel production facilities have aged two-years since January 1, 2019.

2. Recommended Changes to Remaining Lives for Production Facilities

a. Electric Utility – Other Production: Luverne Wind2Battery System

Xcel said that the Luverne Wind2Battery System is a one-megawatt wind energy battery storage system that was installed in December 2009 with an initial life of 15 years and was a pilot demonstration project. The battery consists of twenty fifty-kilowatt battery modules, each roughly the size of two semi-truck trailers and weighing about 80 tons.

The original cost of the asset was $4.1 million and as of December 31, 2020, the estimated accumulated depreciation would be $3.2 million, leaving a remaining net book value of $0.9 million.

Xcel reported that, in 2019, the wind farm that the battery system was connected to was sold to another party and disconnected. This has led the Company to revisit the future use of this asset.

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[3] Docket No. E,G-002/D-15-46.

[4] Docket No. E,G-999/CI-20-425.

Xcel stated that it explored re-connecting the battery with the new plant owners or to independently tie the asset back into the grid. However, due to changing battery technology, both the battery and its support structure reached an age where vendor assistance and repair is scarce or unavailable. Also, costly upgrades would be required to re-connect, with estimated capital costs of nearly $2 million in addition to ongoing operating and maintenance expenses of about $0.2 million per year. Xcel concluded by saying that the cost to continue operation of the system would be prohibitively expensive and would not provide sufficient benefit to customers.

Xcel said that it is exploring options with three vendors (including the manufacturer) to safely remove and dispose of the battery. The battery uses sodium-sulfur technology which must be specially sealed to prevent spontaneous burning when exposed to air and moisture. Because of safety concerns and limited disposal options removal costs are estimated to be $5.6 million.

Xcel explained that the experimental battery storage pilot project was the first direct wind energy storage technology used in the United States. Xcel said that it and its partners learned a great deal from the pilot, including:

- Abilities of large-scale battery storage technology to effectively firm wind energy, enabling a shift of wind-generated energy from off-peak to on-peak availability;
- Testing of ancillary service support to the grid;
- Assess value of storage in the Midwest Independent System Operator market for current wind penetration scenarios; and
- Assess the overall operating characteristics of the system, including impacts on system performance as a function of operational mode and external weather conditions.

Xcel is requesting that the Commission approve a remaining life of zero years, effective January 1, 2021. This would accelerate the retirement date by three years. The Company requested approval of a reserve reallocation from other plants within the Other Production function to this asset of $6.5 million ($0.9 million for the estimated remaining net book value, plus $5.6 million for removal costs) in order to safely remove and dispose of the battery.

b. Electric Utility – Other Production: Blazing Star II, Crowned Ridge, Freeborn, and Dakota Range

Xcel reported that, during 2020 and 2021, it plans to place into service the four new wind projects listed in Table 1 below.

Xcel said that, consistent with its IRP and the Renewable Energy Standard Rider,[5] it is proposing an initial life of 25 years from their estimated in-service dates. The Company said that the proposed lives are consistent with its treatment of its other wind facilities and with the manufacturer's remaining life expectations for the wind turbines used.

[5] Docket No. E-003/M-17-818.

Based on the proposed life and a proposed negative 10.5 percent salvage rate, Xcel estimated 2020 depreciation of $2.4 million, which represents a partial year of depreciation. 2021 depreciation expense is estimated at $40.2 million.

Table 1: Summary of 2020-2021 Proposed Depreciation Expense on New Wind Facilities[6]

Plant	MW	Estimated In-Service Date	2020 Depreciation Expense	2021 Depreciation Expense
Crowned Ridge	200	November 2020	$1.8 million	$14.1 million
Blazing Star II	200	December 2020	$0.6 million	$13.9 million
Freeborn	200	March 2021		$11.5 million
Dakota Range	300	December 2021		$0.7 million
		Total	**$2.4 million**	**$40.2 million**

c. Electric Utility – Other Production: Approved Wind Project Acquisitions

Xcel stated that its acquisition of Community Wind North (CWN) and Jeffers Wind Facility was approved in Docket No. E-002/M-18-777 and these repowered wind facilities are assumed to operate for 25 years. The Commission has also approved Xcel's purchase of the Mower Wind farm in Docket No. E-002/M-19-568. The Company is proposing 25 year lives for these three assets, along with a negative 10.5 percent salvage rate, which aligns with the average net salvage rate on new wind farms.

d. Gas Utility – Gas Storage: Wescott

Xcel said that the Wescott Liquified Natural Gas (LNG) was placed into service in 1972. The plant cools and then stores LNG in large storage tanks and, when needed, the LNG is converted back to gas for use in the Company's distribution system. The Company said that Wescott provides about 17% of necessary supply to meet Xcel's capacity demands on the coldest days. Without Wescott, Xcel would have to use more expensive options for its gas supply, such as a pipeline.

At this time Xcel believes that it can operate Wescott, at minimum, for an additional 10 years. Xcel said that designers/suppliers offer a "design life" of between 25 to 40 years.

For the above reasons, Xcel is recommending that the remaining lives of the Wescott accounts be extended as shown in Table 2 below.

[6] Derived from Xcel Petition, August 18, 2020, Table 1, p 8-9.

Table 2: Wescott Plant Account Lives[7]

Account	Account Name	Approved Remaining Life as of 1/1/2021	Proposed Remaining Life as of 1/1/2021	Change
G361	Structures & Improvements	3	12	+9 Years
G362	Gas Holders	3	12	+9 Years
G363	Purification Equipment	3	12	+9 Years
G363.1	Liquefaction Equipment	3	12	+9 Years
G363.2	Vaporizing Equipment	7	12	+5 Years
G363.3	Compressor Equipment	12	12	0
G363.4	Measuring & Regulating Equipment	3	12	+9 Years
G363.5	Other Equipment	3	12	+9 Years

Staff notes that in Xcel's April 3, 2021 initial filing, in Docket No. G-999/CI-21-135, on p. 40, Xcel reports that Wescott is currently not operational. In Xcel's, May 20, 2021 reply comments in the 21-135 investigation docket, on p. 7, Xcel argues that "the prudence of our maintenance and investments in the plants is more appropriately considered in a separate proceeding, and we believe the appropriate forum is the natural gas rate case the Company intends to file this fall."

3. Change in Net Salvage Rates

In compliance with the Commission's last five-year depreciation study order,[8] Xcel stated that it completed an analysis of the costs of removal and net salvage for all its current electric and gas facilities.

a. Completion of the study and net salvage calculations

Xcel reported that it contracted with TLG Services, Inc. (TLG) to perform a comprehensive dismantling study on all electric generating plants as well as gas production and storage facilities.

The Company stated that it used the Dismantling Study costs estimate divided by original cost as the starting point for the net salvage analysis. Salvage is then modified to account for the possibility of interim rate retirements and additions to arrive at the proposed salvage. The Company noted that overall, dismantling costs have risen since the prior study, due largely to decreasing scrap prices and general inflation in skilled labor costs.

[7] Xcel Petition, August 18, 2020, Table 2, p. 11.

[8] Docket No. E,G-002/D-15-46, Order, November 13, 2015.

b. Wind farm dismantling

For the current Dismantling Study, Xcel asked TLG for two estimates for two scenarios that differ only in the depth of the foundations to be removed. One estimate was for removal of 48 inches below grade, as required by North Dakota. The second estimate was for full removal of all equipment below grade, as required by the Minnesota Pollution Control Agency (MPCA).

Xcel then used a simple average from the eight currently operating wind farms included in the Dismantling Study, as shown in Table 3 below.

Table 3: Average Net Salvage Percent Calculation[9]

Plant	Location	Proposed Net Salvage Percent
Blazing Star I Wind	Minnesota	-11.6%
Border Winds	North Dakota	-9.5%
Courtenay Wind	North Dakota	-10.4%
Foxtail Wind	North Dakota	-9.1%
Grand Meadow Wind	Minnesota	-12.5%
Lake Benton II Wind	Minnesota	-10.8%
Nobles Wind	Minnesota	-8.5%
Pleasant Valley	Minnesota	-11.7%
	Average	**-10.5%**

Xcel proposed to use the average of negative 10.5% as the initial net salvage rate for Blazing Star II, Crowned Ridge, Freeborn, Dakota Range, Jeffers, Community Wind North, and Mower, effective as of their respective in-service dates.

4. Removal Update

Xcel stated that Order Point 9 in the Commission's October 22, 2019 Order[10] required "[i]n its next depreciation filing, the Company shall provide a supplemental schedule with the (1) actual costs to date, (2) projected future costs, and (3) percentage of completion to date for the Minnesota Valley Plant, Key City Plant, Granite City Plant, and Black Dog Units 3 & 4, as applicable." The required information is provided in Attachment H in the Company's petition. However, Xcel explained that it is not far enough along in the process of plant demolition to have detailed estimates for Granite City or Key City.

Xcel said that the estimated dismantling costs provided in the TLG cost estimate are reasonable and that, in total, the Company does not believe it has reason to expect a deficit during dismantling of the plants.

[9] Petition, August 18, 2020, p. 13.

[10] Docket No. 19-161, ORDER SETTING DEPRECIATION LIVES, SALVAGE RATES, AND ADDITIONAL FILING REQUIREMENTS.

Order Point 10 of the 2019 Order[11] required it to provide "updates on removal costs for the Minnesota Valley Plant, Key City Plant, Granite City Plant, and Black Dog Units 3 & 4, including the impact on depreciation reserves, and a final true-up when the retirement/removal is completed." Xcel said that the estimated dismantling costs provided in the TLG cost estimate are reasonable and that, in total, the Company does not believe it has reason to expect a deficit during dismantling of the plants. Xcel stated that this information is discussed in further detail below.

a. Electric Utility – Steam Production: Black Dog Units 3 and 4

Black Dog Units 3 and 4 were officially retired in April 2015. As of January 1, 2020, the Unit 4 turbine, generator, and boiler have been removed and ash ponds have been dredged, filled, and covered. The original coal stacks for Units 2 and 3 and the common stack have been removed. Coal yard remediation has started and will be completed in 2020.

The Company said that, to the extent possible, it has provided its estimated removal dollars using categories provided by TLG, as shown in Table 4.

Table 4: Comparison of Steam Black Dog Removal Estimates[12]

Amounts in Millions ($)	Per Xcel Energy	Per TLG	Over/ (Under)
Identified Items			
Asbestos Remediation	1.0	3.9	(2.9)
Ash/Ponds/Coal Yard	4.2	3.2	1.0
Boilers	9.6	3.2	6.4
Contingency	9.5	3.4	6.1
Equipment Removal	5.2	3.4	1.8
Project/Constr Mgmt/Indirects	2.5	1.5	1.0
Total Identified	32.0	18.6	13.4
Unidentified Items	0.0	4.6	(4.6)
Total Removal Costs	32.0	23.2	8.8
Scrap Credit	(0.5)	(3.6)	3.1
Total (including Scrap)	31.5	19.6	11.9

Xcel noted that the $19.6 million estimate per TLG represents an allocation of total Black Dog site costs (both steam and other production) of $48.7 million. The remaining $29.1 million is allocated to final site removal.

[11] Ibid.

[12] Petition, August 18, 2020, Table 4, p. 16.

The Company said that it:

> *… believes the Black Dog removal process continues to be progressing as expected as the majority of the net deficit between removal and salvage is explained in the higher contingency and lower salvage values used by Xcel Energy and not a net cost over-run on activities. This would indicate that variances remain within the planned for allowance.*

b. Electric Utility – Steam Production: Minnesota Valley

The Minnesota Valley Plant is a former steam generation facility that last burned coal in 2004, and its air permit was formally retired in 2009; it is no longer in operation.

The removal and remediation of the coal yard was finished in 2019, while the asbestos abatement will occur in 2021 and the full site demolition is scheduled to be completed in 2022. Table 5, below, compares Xcel's removal estimates to the TLG study's Table 5.2.

Table 5: Comparison of Steam Minnesota Valley Removal Estimates[13]

Amounts in Millions ($)	Per Xcel Energy	Per TLG	Over/ (Under)
Identified Items			
Asbestos Remediation	1.1	3.6	(2.5)
Ash/Ponds/Coal Yard	0	0	0
Boilers	1.1	1.2	(0.1)
Contingency	6.0	3.9	2.1
Equipment Removal	0.9	2.9	(2.0)
Pre-Demolition Cleaning	0.2	0.5	(0.3)
Project/Constr Mgmt/Indirects	1.2	5.2	(4.0)
Structures Demolition	1.1	5.3	(4.2)
Utilities Allowance	0.2	0	0.2
Total Identified	11.8	22.6	(10.8)
Unidentified Items	0	5.2	(5.2)
Total Identified and Unidentified	11.8	27.8	(16.0)
Scrap Credit	0	(8.3)	5.3
Total (including Scrap)	11.8	22.5	(10.7)

Since the estimates between Black Dog and Minnesota Valley are nearly offsetting, Xcel proposed a reserve reallocation[14] to align the balances with the removal budgets. The current removal reserve for Minnesota Valley is $22.1 million and Xcel's estimate to remove is $11.8 million. Xcel argued that reallocating $10.3 million of reserve from Minnesota Valley to Black Dog will provide transparency for parties going forward to see how Xcel is managing to the

[13] Petition, August 18, 2020, Table 5, p. 17.

[14] Ibid, Attachment B.

individual site budgets and will ensure more accurate reporting of cost savings or overruns. Then, the remaining $0.8 million reallocation will bring the total Black Dog removal reserve (including the remaining coal yard costs to amortize) to align with the $31.5 million budgeted removal.

c. Electric Unity – Other Production Key City and Granite City

The Key City Peaking Plant in Mankato, MN became operational in 1970 and reached the end of its life at the end of 2012. The Granite City Peaking Plant in St. Cloud, MN was built in 1969 and operationally retired in mid-2019. Now that both facilities are shut down a small amount of work was performed to disconnect them from the grid. As costs are incurred, they are debited to the depreciation reserve, reducing the reserve. Xcel stated that, if there is reserve more than the plant balance after final decommissioning, the Company plans to transfer this to the remaining production accounts.

5. Resource Plan Comparison

The Company pointed out that its current IRP is before the Commission and that the required comparison to electric plant records is attached to the Petition as Attachment F.

C. Conclusion

Xcel is requesting Commission approval of a total increase in depreciation and amortization expense of $2.5 million for existing electric and gas utility assets based on the proposed remaining lives and salvage rates, with an effective date of January 1, 2021 for assets in base rates and effective with in-service dates for asset included in riders. The Company also requested initial remaining lives and net salvage for wind facilities anticipated to be in-serviced in 2020 and 2021, including reserve reallocations to certain Steam and Other Production accounts.

V. Department of Commerce Position

After its review and analysis, the Department recommended that the Commission approve certain proposals within Xcel's petition. The Department said that it withheld its recommendations on the remaining proposals pending receipt of further information from the Company.

A. Department Review and Analysis

1. Compliance with Depreciation Statutes and Rules

The Department said that, based on its review, Xcel's Petition complied with all applicable statutes and rules.

2. Compliance with Prior Commission Orders

Order point 5 of the Commissioner's October 22, 2019 Order in Docket No. E,G-002/D-19-161 required Xcel to return the net decrease in electric utility depreciation expense approved in that docket to ratepayers in the 2019 capital true-up filing in Docket No. E-002/GR-15-826. The order also required a number of additional schedules and reports.

The Department said, after reviewing the relevant portions of Xcel's petition, it concluded that the Company had complied with portions of the 2019 Order. However, the petition did not address the Commission's requirement that Xcel return the decrease in depreciation expense in the 2019 Capital True-Up.

In reviewing Xcel's 2019 Capital True-Up Compliance Report,[15] the Department noted that it mentioned "transmission, distribution and general depreciation accounts" but not production depreciation accounts. Additionally, Attachment B in the report did not show how the TD&G depreciation was netted with the capital true-up. Therefore, the Department requested that Xcel, in its reply comments, explain and show calculations demonstrating how the Company incorporated the decrease in 2019 production depreciation expense into its 2019 capital true-up calculations. The Department said that Xcel should provide additional explanation if 2019 actual depreciation expense differed from approved rates by more than $1 million.

3. Two Year Passage of Time Adjustment

Xcel proposed a two-year passage of time adjustment for all natural gas and electric production and gas storage facilities except for two other production plants that are discussed separately in the next section. The Department explained that a two-year passage of time was necessary due to Xcel's filing extensions and that the adjustment does not change previously approved depreciation rates, the rates from 2019 are simply carried forward into 2020.

The proposed passage of time adjustment reflects the two-year period from January 1, 2019 through January 1, 2021. The Department said it considers this adjustment to be reasonable.

4. Changes to Remaining Lives of Two Production Plants

Xcel requested to change the remaining lives of two production plants. The Department explained that since changing the remaining life of an asset affects depreciation expense, the request should be supported with verifiable operational impacts that justify the change in life.

The Department supplied Table 6, below, showing the impact of extending the remaining life of an asset.

[15] Docket No. E-002/GR-15-826, filed May 1, 2020, page 9.

Table 6: Impacts of Extending the Remaining Life of an Asset[16]

Additional Capital Investments Applied to the Asset?	***IMPACTS OF EXTENDING THE REMAINING LIFE***		
	Annual Depreciation Expense	***Total Depreciable Costs***	***Capital Asset Balance***
Yes	Increase or Decrease[17]	Increase	Increase
No	Decrease	No Effect	Higher for longer time

The Department noted two additional points:

1. Since depreciation expense in base rates is established through a general rate case, Xcel's ratepayers will pay the currently established rates through 2021, regardless of any change between rate cases, and
2. A change in remaining lives will impact the return on rate base; in other words, if an asset is depreciated more slowly, it will earn a higher rate base return.

In its Petition, Xcel has proposed to shorten the remaining life of its Luverne Wind2Battery System from three years to zero years and proposed a twelve-year life extension for components of the Westcott Gas Storage facility.

a. Luverne Wind2Battery System

The Luverne Wind2Battery System is a one-megawatt (MW) wind energy battery-storage system that was installed in December 2009 with an initial useful life of 15 years. The storage capacity is approximately 7.2 MW-hours with a charge/discharge capacity of one MW.

In its Petition, Xcel explained:[18]

> *In 2019, the plant that the battery was connected to was sold to another party and this party severed the connection from the wind farm to Xcel Energy's battery. The loss of this interconnection has caused us to revisit the future use of the asset.*
>
> *…*

[16] Department Comments, February 16, 2021, Table 1, p. 5.

[17] Whether annual depreciation expense increases or decreases depends on (1) the amount of additional capital expenditures applied to the asset and (2) the number of years the asset life is extended. For example: A $10 million asset with a 10-year remaining life will have an annual depreciation expense of $1 million ($10 million/10 years). If this same asset receives a $10 million capital improvement and a 15-year life extension, the annual depreciation expense will decrease by $200,000 per year [($10 million + $10 million) / (10 years + 15 years) – ($10 million/10 years)]. Conversely, if the asset receives a $10 million capital improvement and a 6-year life extension, the annual depreciation expense will increase by $250,000 [($10 million + $10 million) / (10 years + 6 years) – ($10 million/10 years)].

[18] Petition, August 18, 2020, page 6.

> *Xcel Energy explored the option to try to independently tie the asset back into the grid or to work with the new plant owner to establish a connection. However, due to rapidly changing battery and storage technology both the battery and its support equipment have reached an age where vendor assistance and repair hardware are unavailable or scarce. Additionally, costly infrastructure upgrades and installations would be required for continued operations as the original tie to the electrical grid was through a neighboring wind farm that is ceasing operation.*

Due to these circumstances, Xcel proposed reducing the remaining life from three years to zero years. Xcel said that the original cost of the project was $4.1 million and with an estimated accumulated depreciation of $3.2 million, the remaining net book value is $0.9 million.

Xcel pointed out that dismantling and disposing of the battery will be difficult and expensive, since the sodium-sulfur materials are hazardous and ignite when exposed to air. The Company said that it was exploring disposal options with three different vendors. Xcel estimated removal and disposal costs of $5.6 million.[19] The Company proposed to reallocate a reserve balance equal to $6.5 million ($0.9M + $5.6M) from other plants in the Other Production function.[20]

The Department further explained that the initial approval for the Wind2Battery project occurred in Docket No. E002/AI-09-379, where Xcel requested, and the Commission approved, $3.5 million for the pilot research battery.[21] In the Commission's September 14, 2009 Order, Order Point 5 stated, "Xcel may recover only up to the level of costs requested in its petition, offset by any and all revenues as a result of this research project."

The Department noted that Xcel's 2009 RES Rider[22] stated that costs for the Wind2Battery system were approximately $200,000 higher than initially requested and the Commission's April 22, 2010 Order did not allow Xcel to recover the additional costs but stated in Ordering Point #2D that it would, "Allow Xcel to seek recovery of excluded project costs on a prospective (not deferred accounting) basis in its next electric rate case, with the burden on Xcel to show why it is reasonable to recover the costs from ratepayers."

The Department asked Xcel, in its reply comments, to provide cites to the Company's initial rate case Direct Testimony requesting cost recovery for its Wind2Battery system of a total $4.1 million, and the subsequent Ordering Point(s) that allowed such recovery.

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[19] Ibid, p. 7.

[20] Petition, Attachment B, pages 15-16 show that Xcel proposed to reallocate $6,486,106 of reserve from Account E344 Generators. Some amount is reallocated from each plant, though the basis for which the allocations were calculated is not noted.

[21] Xcel proposed $3.5 million in its April 10, 2009 filing in Docket No. E002/AI-09-379, pages 2 and 8 and Schedule 1.

[22] Docket No. E-002/M-10-1066.

The Department pointed out that the currently approved life of the project is 15 years, with three years of remaining life; the wind farm that the project was connected to for 10 years – Minwind Energy, LLC was sold in 2019, which left the asset dormant for the last two years as Xcel assessed how to re-connect it to the grid.

The Department asked Xcel to discuss what the initial contract operating term (life) was with Minwind Energy and, if the term was different from the battery's 15-year life, and why? Also, the Department asked if the contract included a cancelation clause to protect against early obsolescence? And, if not, then why not?

The Department stated that there was no discussion of removal costs in the initial approval of the projects in Docket 09-379. **Based on Xcel's discussion in this instant docket, the total estimated cost for the Wind2Battery pilot now stands at $9.7 million, a 177 percent increase over the initially approved project cost** ($4.1 million initial capital cost plus $5.6million in estimated removal costs). (*Emphasis provided by the Department.)*

In response to an Information Request (IR) from the Office of Attorney General – Residential Utilities and Antitrust (OAG),[23] asking if Xcel had completed a dismantling study on the Wind2Battery System and, if not, why not; the Company stated in part:

> *. . . a dismantling study has not been performed. Dismantling costs for the pilot were presented as soon as practical and available to the Company.*
>
> *When this project was being selected, the Company worked with NGK Insulators, Ltd. (NGK), the battery manufacturer, to understand what disposal options could look like at the end of life. . ..*
>
> *Due to the representations received from the manufacturer in 2008-2011, a zero percent net salvage rate was applied as we believed it was a conservative approach to the uncertainty represented in dismantling this new type of asset. Battery technology has evolved rapidly in the decade since the asset was placed in service and the industry anticipated that recycling options would keep pace with new innovations.*
>
> *…This [$5.6 million] estimate was based on March 2020 information from NGK, who has been exploring recycling options for more than a year trying to find a capable battery recycling partner willing to dispose of that type of battery. All six companies that they have contacted have declined, stating that the industry does not currently have a solution for disposing these types of batteries in North America.*

[23] OAG Comments, February 16, 2021, Attachment 2, Information Request No. 3.

The Department pointed out that Xcel filed a 5-year dismantling study on May 18, 2015[24] but did not include the Wind2Battery System. Therefore, the Department asked Xcel to explain in its reply comments why it did not mention the possibility of removal costs between the representations from NGK in 2011 and the sale of the Minwind Energy wind farm in 2019. The Department also asked if Xcel had explored where any funding is available to offset removal costs (e.g., environmental remediation or insurance proceeds).

The Department asserted that Commission approval of the $5.6 million reserve reallocation would, in effect, be de facto approval of the amount of removal costs for the asset.

Finally, the Department requested that Xcel explain its plan to file the research project information learned from the project (as required by Ordering Point 7 of the Commission's Order[25]), including which docket(s) it will be filed in and on what timeline. If the Company has already filed this information; the explanation should include specific cites to docket numbers and filing dates.

b. Wescott Liquified Natural Gas Plant

The Wescott Liquified Natural Gas (LNG) Plant cools and then stores LNG in storage tanks. Compressor equipment for the facility failed in 2019 and was replaced in 2020. Xcel's petition proposed to increase the remaining lives of the other Wescott equipment from 3 and 7 years to 12 years, which aligns with the expected life of the replacement compressor equipment.[26] Xcel said that it expected to operate the LNG facilities for a minimum of 10 years.[27]

The Department concluded that the requested 12-year remaining life extension for non-compressor plant accounts appeared to be reasonable.

(As noted previously, the Wescott facility is currently not operational.)

5. Updated Salvage Rates

Xcel stated that it had a consultant, TLG Services, Inc. (TLG) perform a comprehensive study on all steam, hydro, and other production electric generation plants. In its petition[28], the Company said, in part:

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[24] Docket No. E,G-002/D-15-46.

[25] Docket No. E-002/AI-09-379, Order, September 14, 2009: "7. Xcel shall share information from the results of the research project and credit to ratepayers any and all revenues and any other income due to the research project."

[26] Petition, page 11, Table 2: Wescott Plant Account Lives.

[27] Petition, page 10.

[28] Petition, page 12

> *To arrive at the proposed net salvage rates, we started with the Dismantling Study cost estimates for final removals. We used the cost estimate divided by the original cost for the facility as the starting point for the net salvage analysis. . ..*
>
> *Overall, costs to dismantle plants have increased since the prior study primarily due to a decrease in scrap prices, refining the wind estimation process, and general inflation of skilled labor costs.*

The Department noted that its review of requested changes to salvage rates determined that they appear reasonable. The Department said that, apart from Wind2Battery, it recommended Commission approval of the proposed rates.

6. Initial Remaining Lives and Salvage Rates for New Wind Facilities

Xcel said that it plans to add the following four new wind farms during 2020 and 2021, with a requested initial remaining life of 25 years and net salvage rates of negative 10.5 percent:[29] Xcel stated that the 10.5 percent is from a simple average of the proposed net salvage percent of the eight existing facilities.[30] Further, the Company stated that the requested life is consistent with both its existing wind farms and the wind turbine manufacturer expectations.

Table 7, below, shows how the proposed initial depreciation parameters will affect Xcel's annual depreciation expense:

Table 7: Summary of 2020-2021 Depreciation Expense on New Wind Facilities[31]

Plant	Estimated In-Service Date	Depreciation Expense	
		2020	2021
Crowned Ridge	November 2020	$1.8 million	$14.1 million
Blazing Star II	December 2020	$0.6 million	$13.9 million
Freeborn	March 2021	-	$11.5 million
Dakota Range	December 2021	-	$0.7 million
Total		**$2.4 million**	**$40.2 million**

The Company noted that both years represented a partial year of depreciation for two plants and stated that the wind farms were not included in the Dismantling Study because they are still under construction.

The Department requested that Xcel provide an update in its reply comments on the actual or estimated in-service dates for these four plants.

[29] Department Comments, February 16, 2021, p. 10.

[30] Petition, August 18, 2020, Table 3 Average Net Salvage Percent Calculation, p. 13

[31] Ibid, derived from Table 1, p. 9.

The Department concluded that the proposed life and net salvage percentage is reasonable at this time and notes that it will continue to review these parameters in future comprehensive 5-year dismantling studies.

7. Initial Remaining Lives and Salvage Rates for Community Wind North, Jeffers Wind, and Mower Wind

The Jeffers and Community Wind North acquisitions were approved in Docket No. E-002/M-18-777. However, the Commission's Order[32] refused Xcel's request to recover costs through the Company's Fuel Clause Rider. The purchase of Mower Wind was approved in Docket No. E-002/M-19-553 and recovery was authorized through the RES Rider[33]. Both orders required Xcel to file final journal entries within 60 days of transaction completion.

Xcel's petition requested Commission approval of a 25- year remaining life and a net salvage rate of 10.5 percent for all three wind farms. The estimated acquisition dates were October 2020 for Community Wind North; August 2020 for Jeffers Wind; and December 2020 for Mower Wind. The Department noted that journal entries had not yet been filed[34]

The Department requested that Xcel, in its reply comments, provide updated in-service dates on the three wind farms. In addition, to provide estimated (or actual) total project costs. Finally, noting that the impacts of the acquisition of Community Wind North and Jeffers Wind were previously reported, the Department asked the Company to provide this information for Mower Wind for 2021.

8. Update on Plant Removal Costs

In its last depreciation filing, the Commission ordered[35] Xcel to "continue to provide in future depreciation filings updates on removal costs for the Minnesota Valley Plant, Key City Plant, Granite City Plant, and Black Dog Units 3 and 4, including the impact on depreciation reserves and a final true-up when the retirement/removal is completed."

a. Black Dog Units 3 and 4

Xcel reported that, as of January 1, 2020, it had incurred $39 million in overall Black Dog removal costs and completed 55 percent of its planned removal process.[36] In Table 4 of its petition (and included above in section IV.B.4), Xcel compared its internal removal estimates to

[32] Docket No. E-002/M-18-777, Order, December 3, 2019, Ordering Point 4, p. 8.

[33] Docket No. E-002/M-19-553, Order, November 5, 2020, Ordering Point 4, p. 7.

[34] Staff notes that the Mower journal entries were filed on May 24, 2021.

[35] Docket No. E,G-002/D-19-161, Order, October 22, 2019, Ordering Point 9, p. 10.

[36] Petition, Attachment H, p. 1.

those of TLG's dismantling study; showing several significant line item variances, with Xcel's total estimate approximately $11.1 million higher than TLG's total estimate.

Since Xcel's petition includes a two-year passage of time, the Department requested that the Company provide – in reply comments – an update on removal costs as of the beginning of 2021. The Department said that it realizes some manner of estimate may be required and that Xcel should include a discussion of such estimates in its update.

b. Minnesota Valley

In Table 5 of its petition (and also included above in section IV.B.4), Xcel compared its Minnesota Valley internal removal estimates to those of TLG's dismantling study. The Department said that there were significant differences and that Xcel's estimates tended to be lower than TLG on a line item basis. Xcel's total removal estimate was $10.3 million less than TLG's.

As of January 1, 2020, Xcel had incurred approximately $4.6 million in removal costs and has completed 28 percent of its overall planned removal. The Department noted that the total estimated costs for removal go through 2022 and total $16.4 million, which represents an increase of $0.9 million over the estimate filed in Xcel's previous depreciation review.[37]

The Department requested that the Company provide – in reply comments – an update on removal costs incurred for Minnesota Valley as of the beginning of 2021. The Department said that it realizes some manner of estimate may be required and that Xcel should include a discussion of such estimates in its update.

c. Reallocation of Reserve from Minnesota Valley to Black Dog

Xcel noted in its petition[38] that the differences between its internal removal estimates and TLG's nearly offset each other for Black Dog Units 3 & 4 and Minnesota Valley. Xcel under-recovered for Black Dog by $11.1 million, while it over-recovered $10.3 million for Minnesota Valley. The amounts largely offset each other with a remainder of $0.8 million. On Schedule B, page 12 of its petition, Xcel proposes reallocations within the Steam Plant function to effect this change and better align rate recovery with actual and updated estimated costs.

The Department said:

> *Since Xcel is required to report annually on the cost and progress of dismantling its Minnesota Valley plant and Black Dog Units 3 and 4, the Department concludes*

[37] Docket No. E,G-002-D-19-161, Department Comments, April 18, 2019, Attachment 9, p, 2.

[38] Petition, August 18, 2020, p. 12.

that enough transparency exists to reasonably track the budgeted versus actual removal costs.

The Department concluded that Xcel's reallocation proposal between Minnesota Valley and Black Dog appears reasonable.

d. Key City and Granite City

Xcel's petition stated that the Company maintained the Key City facility in a dormant state to support operations of the Granite City facility until that facility was retired mid-2019. After that, Xcel disconnected both facilities from the grid.

Xcel stated that it is not far enough along in the process of plant demolition to have detailed estimates available for comparison. The Company had its engineers review the line detail from TLG's study and reported that it believes TLG's estimates to be reasonable and has no variances to address currently.

TLG's Dismantling Study estimated the removal costs for Key City to be $4,530,347[39] and $4,885,143 for Granite City[40]; both estimates in 2019 dollars.

B. Department Conclusions and Recommendations

The Department requested the Xcel provide the following in its reply comments:

- an explanation of, and calculations showing, how the Company incorporated the decrease in 2019 production depreciation expense into its 2019 Capital True-Up Report calculation. Xcel's discussion should provide additional explanation if 2019 actual depreciation expense differed from approved rates by more than $1 million;

- reference cites to the Company's initial rate case Direct Testimony requesting additional cost recovery for its Wind2Battery system, from a total of $3.5 million to $4.1 million, and the subsequent Ordering Point(s) that allowed such recovery;

- the initial contract operating term with Minwind Energy for the Wind2Battery system. If the term was different from the 15-year useful life of the battery, the Company should explain why. Additionally, Xcel should explain whether a cancelation clause existed in the contract in order to protect against early obsolescence of the pilot program, and if not, why not;

- why it appears that the Company did not file any discussion regarding the potential for removal costs for the Wind2Battery System between initial representations from the

[39] Petition, August 18, 2020, Attachment J, page 65.

[40] Petition, August 18, 2020, Attachment J, page 61.

manufacturer in 2011 and the sale of the Minwind Energy wind farm in 2019. The Wind2Battery System was not included in its 5-year dismantling study filed in 2015;

- its plan to file information to the Commission regarding the results of the Wind2Battery research project and any revenues/income from the project not previously disclosed, including which docket(s) it will be filed in and on what timeline. If the Company has already filed this information, the explanation should include specific cites to docket numbers and filing dates;

- an update on the in-service date of each wind facility: Blazing Star II, Crowned Ridge, Dakota Range, and Freeborn;

- an update on the anticipated purchase/in-service dates for Community Wind North, Jeffers Wind, and Mower Wind. The update should also include estimated (or actual if available) total project cost for each of the three wind farms;

- the impact of Mower Wind on depreciation rates for the year 2021;

- an update on removal costs for Black Dog Units 3 and 4 and Minnesota Valley as of the beginning of 2021. The updates may be estimated for part of the year, but the nature of the estimate should be explained

Additionally, the Department recommended that the Commission take the following actions:

- approve a two-year passage of time adjustment for all natural gas and electric production and gas storage facilities, except for the Luverne Wind2Battery System and the Wescott Gas Storage facility;

- approve the proposed increase in the remaining life of certain components of the Wescott Gas Storage facility to 12 years;

- approve Xcel's proposed changes in net salvage rates, except as noted for the Wind2Battery System;

- approve the Company's proposed initial remaining lives of 25 years and net salvage rates of 10.5 percent for the Blazing Star II, Crowned Ridge, Freeborn, and Dakota Range wind farms, as of the actual in-service dates for each facility;

- approve Xcel's proposal to reallocate accumulated production reserve balances, mainly from the Minnesota Valley plant, to Black Dog plant for dismantling costs;

- require Xcel to continue to provide in future depreciation filings a comparison of depreciation remaining lives and resource planning lives for electric production with an explanation of any differences;

- require Xcel to continue to provide in future depreciation filings a historical comparison of changes in remaining lives and net salvage rates;

- require Xcel to provide in future depreciation filings a supplemental schedule showing the total (in addition to the remaining) depreciable lives of the Company's electric production facilities;

- require Xcel to continue to provide in future depreciation filings updates on the removal costs for the Minnesota Valley Plant, Key City Plant, Granite City Plant, and Black Dog Units 3-4, including the impact on depreciation reserves and a final true-up when the retirement/removal is completed, until retirement/removal is complete;

- require Xcel to provide in its next depreciation filing a supplemental schedule with the (1) actual costs to date, (2) projected future costs, and (3) percentage of completion to date for the Minnesota Valley Plant, Key City Plant, Granite City Plant, and Black Dog Units 3-4 as applicable.

The Department said that it will withhold its recommendation on whether Xcel's reserve reallocation proposal for Wind2Battery is reasonable until it has reviewed the Company's reply comments. The Department will also provide necessary updated and new recommendations on outstanding items after reviewing reply comments.

VI. Office of Attorney General Comments

A. Background

The Office of Attorney General (OAG) stated that the Wind2Battery (W2B) project was partly funded with a $1 million grant from the Renewable Development Fund (RDF) that was authorized by the Commission in Docket No. E-002/M-07-675. Xcel included the project in its Evaluation and Selection Report for the RDF's Third Funding Cycle.[41] OAG said that the project is a 1 MW energy system using sodium sulfur batter technology. Xcel's partners on the project included the National Energy Laboratories and the Great Plains Institute. The project's primary objective was "to test the hypothesis that energy storage will enable effective storage of wind energy, and therefore engage 'firming' of wind energy and a reduction in impacts from compensating for variability and limited predictability of wind generation resources".[42]

In 2009, Xcel placed Wind2Battery into service and included the project in Xcel's annual remaining lives certification. The Company requested an initial life of 15 years based on manufacturer's expectations and proposed a zero percent net salvage rate. Xcel said that the salvage rate was "a conservative approach to the uncertainty represented in dismantling this

[41] OAG Comments, February 16, 2021, p, 2.

[42] Docket No. E-002/M-07-675, RDF Project Selection and Funding Report at 55.

new type of asset".[43] OAG pointed out that Xcel also made a commitment to determine W2B's appropriate salvage rate, saying that "we expect to conduct an in depth review of the net salvage rates for the Wind2Battery Storage project in our 2010 demolition study".[44]

On April 10, 2009, Xcel submitted a petition seeking Commission authorization that the project qualified as an "eligible energy technology" and qualified for RES Rider cost recovery for approximately $3.5 million in capital costs remaining after the application of both the $1 million RDF grant and the contribution of about $368,000 from Xcel's W2B project partners.

The Commission's September 14, 2009 Order stated that "Xcel may recover only up to the level of costs requested in its petition, offset by any and all revenues as a result of this research project," and that "[b]efore any future cost recovery above the costs approved in this Order is allowed, Xcel shall fully explain and justify any such cost recovery."[45]

In 2010, Xcel sought approval to move the W2B project into base rates.[46] The Commission's Order reduced the Company's W2B cost recovery by $200,000 which Xcel had attributed to an "accounting error" in its original filing for the RDF grant. As a result, the Company received grant funding of $797,527 instead of $1,000,000.[47]. The Commission also authorized the opportunity for the Company to seek recovery of excluded costs on a prospective basis (no deferred accounting) in a subsequent rate case.[48]

The OAG pointed out that since Xcel's 2009 Annual Review of Remaining Lives filing, the Company has included Wind2Battery in each subsequent annual remaining lives petition, including dockets E,G-002/D-10-173, 11-144, 12-151, 13-1158, 14-181, 15-46, 17-147, 18-162, and 19-161.[49] The OAG said:

> *In each such filing, however, the Company never once included W2B in any of applicable 5-Year Dismantling Studies or otherwise estimated W2B's net salvage rates. Moreover, Xcel failed to estimate or recover from ratepayers W2B's removal costs while that asset was used and useful despite numerous situations affecting W2B's ability to remain in service. For example, Xcel removed W2B from service without once estimating or accounting for Wind2Battery's removal costs despite: (1) a 2012 fire shutting W2B down for an entire year; (2) the January 2015 bankruptcy filing of the windfarm to which W2B was connected; (3) the late 2018*

[43] Docket No. E,G-002/D-09-160, Petition, p. 8.

[44] Ibid.

[45] Docket No. E-002/AI-09-379.

[46] Docket No. E-002/M-09-1083.

[47] Ibid, Xcel Corrected Reply Comments, February 10, 2010, p. 10.

[48] Ibid, Order, April 22, 2010, Ordering Points 2.C. and 7, p. 8.

[49] OAG Comments, February 16, 2021, Xcel Response to OAG IR No. 18, Attachment 1.

notice from vendors that W2B was "entering legacy status;"[50] *(4) the 2019 disconnection of W2B to the wind farm to which it was connected; and (5) the manufacturer of W2B's efforts, since at least March 2019, "trying to find a capable battery recycling partner willing to dispose of that type of battery."*[51]

B. OAG Analysis and Recommendations

The OAG said that Xcel's instant petition seeks Commission approval to: 1) accelerate W2B's retirement date by three years, such that the remaining life for W2B would be zero years as of January 1, 2021; and (2) reallocate $6.5 million from other plants within the Other Production function to the Wind2Battery asset ($0.9 million for estimated remaining net book value and $5.6 million for removal costs) to fully depreciate, retire, remove and dispose of that asset.[52]

The OAG argued that:

> *Xcel's Petition presents scant evidence, at best, to support the Company's contention that W2B's removal costs are $5.6 million and that such costs should be borne by ratepayers through a reserve reallocation. Indeed, Xcel never once—despite its earlier promises—included W2B in any of the Company's 5-Year Dismantling Studies. Moreover, even in this Petition, Xcel neglected to provide the Commission with an in-depth analysis to support its estimated $5.6 million in removal costs to dismantle W2B.*

The OAG maintained that the Commission should reject Xcel's proposed net salvage rate and reserve reallocation because the Company has not met its burden of proof that these actions are supported by evidence. Alternatively, the Commission should reject the Company's W2B proposals because: 1) Xcel totally failed to estimate or collect removal costs from ratepayers during the project's useful life, and 2) the proposed removal costs are excessively high.[53]

Finally, the OAG argued that it is neither reasonable nor in the public interest to rely on reserve reallocations to wholly fund removal costs that were neither estimated nor collected during an asset's useful life.

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[50] Ibid, Xcel Response to OAG IR No. 18 ("Regarding longevity of the installation, Xcel Energy was verbally notified in late 2018 by vendors that the battery and control system was entering legacy status. Parts would no longer be manufactured for the installation and technical support would be limited going forward.").

[51] Ibid, Xcel Response to OAG IR No. 3, Attachment 2.

[52] Petition, August 18, 2020, p. 7.

[53] OAG Comments, February 16, 2021, p. 11.

VII. Xcel Response Comments

On March 29, 2021, Xcel responded to the issues raised in comments and reiterating its recommendation for complete approval of the Company's original petition.

A. 2019 Capital True-Up Report

The Department asked Xcel to show calculations and explain how the Company included the decrease in 2019 production depreciation expense in its 2019 Capital True-Up Report.

Xcel explained that it used the new remaining lives from its 2019 Review of Remaining Lives[54] when the Company performed a retroactive recalculation. Since the recalculation was done on actual 2019 year-end amounts, the decrease in 2019 production expense from the Capital True-Up Report was incorporated.

The Department also requested further explanation "if 2019 actual depreciation expense differed from approved rates by more than $1 million". Xcel responded that, due to use of the remaining life methodology, the Company follows a formula to calculate depreciation expense rather than a rate; therefore, there are no "approved rates" for a comparison.

B. Wind2Battery

Xcel prefaced its comments on this subject by saying that a rate case proceeding may be the best place to "assess the prudence of the Company's actions and investments related to this project[55]" rather than the instant depreciation docket.

Xcel stated that its Wind2Battery project was the first use of direct wind energy storage technology in the United States. Xcel said (in part):

> *The Company, the utility industry, the wind energy industry, and the energy storage industry (nationally and internationally) have all benefited from the information gained from this project. Due to the numerous benefits provided by this battery pilot, and its relatively small scope, the Company believes the reserve reallocation we have proposed at this time is reasonable and in the public interest. Should such costs ultimately be less than the current $5.6 million estimate, the Company would propose a reserve reallocation back to other remaining plants.*

[54] Docket No. E,G-002/D-19-161.

[55] While the implementation of the capital true-up does create the potential for true-ups related to changes in our overall capital recovery, we note any changes related to assumptions around the Wind2Battery project will not be sufficient to trigger a refund.

Xcel also refuted the OAG's argument that the project's net salvage rate of 135% as being "excessive"[56], saying that "[s]imply put, just because a project has a high negative net salvage percent does not automatically mean the costs are "excessive"[57].

1. Rate Case Recovery

The Department requested and Xcel provided references to the Company's initial rate case Direct Testimony requesting cost recovery for its Wind2Battery system of a total $4.1 million, and the subsequent Ordering Point(s) that allowed such recovery.

Xcel said:

> *[T]he Wind2Battery gross investment of $4.2 million and additional recovery of $202,473 for project partners were not explicitly identified in a rate case order, but they were included in the calculation of final rates and depreciation filings approved by the Commission.*[58]

2. Contract Operating Terms and Cancelation Clauses

In response to the Department's requests regarding the contract, Xcel said that the contract was written for the 20-year life of the wind Power Purchase Agreement and was intended to be in effect until February 1, 2025. However, Minwind Energy entered bankruptcy in 2015 and in 2019 defaulted on the associated PPA. Further, Xcel explained that termination clauses existed contractually[59] for Minwind but were not tied to early obsolescence of the battery. The Company stated that it performed due diligence by including cancellation clauses in the contracts.

3. Dismantling Estimate

The Department asked Xcel to explain why it appeared that the Company did not address the potential for removal costs for the W2B System between initial representations from the manufacturer in 2011 and the sale of the Minwind Energy wind farm in 2019.

Xcel said that:

> *In the Company's 2008 Contract Agreement and Purchase Order with NGK Insulators, Ltd. (NGK), the battery manufacturer, there was a clause for the end of life disposal which stated, "Upon notification from [NSP-Minnesota] that the goods*

[56] OAG Comments, February 16, 2021, p. 16-17.

[57] Xcel Response Comments, March 29, 2021, p. 5.

[58] Ibid, p. 6.

[59] Xcel notes the cancellation clause is Item 10 within the Minwind access agreement which was provided as Attachment A to Data Request OAG-006 in this docket filed October 7, 2020.

> *and/or services have reached end of life, [NGK] agrees to dispose of the goods and/or services. Supplier shall invoice company for the fees related to such disposal, at its cost, which may be verify [sic] by Company at Company's discretion."*[60]

Xcel said that a zero percent net salvage rate was applied since the Company believed it was the conservative approach to the uncertainty of dismantling and, due to manufacturer's representations that the battery was mostly recyclable, Xcel believed the dismantling costs would be minimal.

The Company further stated that at the time of the 2015 Dismantling Study the asset was operating as intended and Xcel had no indication that future disposal options were becoming a problem. Due to this and the low capital cost of the project, the asset was not included in the 2015 study. Also, Xcel said it did not include it in the 2020 study because, at the time, it was researching dismantling options with the vendor (NGK and its U. S. representative S&C Electric). The Department also asked if there was any other funding (e.g., environmental remediation grants or insurance proceeds) to help offset the disposal costs, but the Company responded that it wasn't aware of any.

4. Research Information

In response to the Department's request for Xcel to disclose research information and any credits to ratepayers, Xcel said:

> *Beginning in 2010, the Company provided updates on the Wind2Battery project annually as part of our Smart Grid Report (Docket No. E-002/M-08-948) with the final update being on April 1, 2014 as that was the final annual Smart Grid Report.*
>
> *Additionally, on October 5, 2010 the Company provided our Data Collection and Analysis Report as Attachment B to the Company's 2011 Renewable Energy Standard Rider and 2010 RES Tracker Report.*[61] *No credits to ratepayers were paid or are due, as no income was received as part of this research project.*

C. 2020 and 2021 Wind In-Service Update

Xcel said that in its initial petition, there were several wind facilities under construction or in the process of being acquired. Table 8, below, outlines the actual in-service date for those facilities which have been acquired or have come online and the current forecast in-service date for the plants still under construction.

[60] Xcel Response Comments, March 29, 2021, p. 7.

[61] Note – this filing was later submitted in Docket No. E002/AI-09-379 on January 10, 2012. It was originally intended to be filed in this docket in October of 2010 but was not due to an oversight.

Table 8: Actual and Forecast Wind Project In-Service Dates[62]

Facility	Actual In-Service Date	Forecast In-Service Date
Crowned Ridge	December 2020	
Community Wind North	December 2020	
Jeffers	December 2020	
Blazing Star 2	January 2021	
Mower	March 2021	
Freeborn		April 2021
Dakota Range		December 2021

Xcel also said that total estimated 2021 depreciation and amortization expense for Community Wind North was $2.7 million and for Jeffers was $2.9 million. In addition, Xcel noted that the Mower Wind project was approved for recovery through the renewable energy standard (RES) rider including its acquisition adjustment.[63] Total capital and acquisition costs for these projects is trade secreted information.

D. Removal Cost Update

Xcel responded to the Department's request for an update on the status of removal costs as follows:

1. Minnesota Valley

In March 2021, the Company contracted for a pre-demolition building survey and to prepare information for a demolition bid package. Abatement of regulated wastes is expected to begin in the second half of 2021; structural demolition and site restoration are scheduled for 2022. Project contingencies were reduced by $3 million reflecting a rebound in scrap pricing.

Table 9: Minnesota Valley Dismantling Estimate (in millions)[64]

Year	Initial Estimate	Updated Estimate
2020 Actual	$0.10	$0.01
2021 Forecast	2.60	0.41
2022 Forecast	7.80	8.36
2023 Forecast	0.10	0.00
Total	$10.60	$8.78

[62] Xcel Response Comments, March 29, 2021, Table 3, p. 10

[63] Docket No. E-002/PA-19-553.

[64] Xcel Response Comments, March 29, 2021, Table 4, p. 11

2. Black Dog

Xcel said that:

> *Since filing our initial petition, removal work at the Black Dog site has been further evaluated. Unlike Minnesota Valley, there is a portion of the Black Dog Steam facility that is necessary for the continued operation of Units 5 and 6. The Company determined there are economies of scale if the removal of the Unit 2 and 3 boilers occur simultaneously with the full dismantling of the site after Unit 5 and 6 shutdown which is intended to make the total removal of the Black Dog site less expensive for customers in the long run rather than performing targeted removal in the near term without disrupting current operations. Therefore, the updated estimate represents $1 million of costs in 2021 for asbestos removal from the Unit 3 boiler along with small trailing project close out work in 2021-2023.*

Table 10: Black Dog Dismantling Estimate (in millions)[65]

Year	Initial Estimate	Updated Estimate
2020 Actual	$2.70	$3.55
2021 Forecast	6.80	1.49
2022 Forecast	4.40	0.18
2023 Forecast	4.50	0.24
2024 Forecast	4.80	0.00
2025 Forecast	4.40	0.00
Total	$30.60[66]	$5.46

3. Key City and Granite City

Xcel reported that it was not far enough into its demolition planning to have detailed removal estimated for Key City or Granite City. Through the net salvage percent over the lives of the projects, Xcel has built reserves of $4.1 million for Key City and $4.4 million for Granite City. Also, in Q1 2021, Xcel received bids and currently anticipates the removal costs to be approximately $0.75 million per facility.

4. Overall discussion of removal

Xcel pointed out that "5-year dismantling studies are meant to ascertain a reasonable level of recovery for removal costs over the operating life of the asset, which can be over many decades. It is not meant to be a definitive calculation of costs at a very detailed level nor is it a comprehensive project management guide"[67]. The Company went on to observe that, although

[65] Xcel Response Comments, March 29, 2021, Table 4, p. 11

[66] Staff notes that the correct total for Initial Estimate is actually $27.60.

[67] Ibid, p. 13.

the Wind2Battery reserve allocation was too low, Key City and Granite City are probably too high when compared to the ultimate total costs.

E. Future Reporting

Regarding future filings, Xcel explained that its Production depreciation filing has always been an annual filing as it has always used an average remaining life which requires an annual filing. In its 2017 TD&G Petition[68] the Company received approval to switch from an average service life methodology (which required 5-year filings) to the annual remaining life methodology, requiring an annual filing. Since these two types of assets now can use annual filings, the Company plans to combine the filings. However, for 2021 Xcel will keep the filings separate (forward-looking with an effective date of January 1, 2022) and do a combined filing starting in 2022 (forward-looking with an effective date of January 1, 2023).

VIII. Department of Commerce Reply Comments

The Department said that it appreciated the detailed reply comments from the Company and noted that all issues between the parties have been resolved, except for issues regarding the Luverne Wind2Battery (W2B) System.

A. Department Analysis

The Department agreed with Xcel that the W2B original cost of $4.1 million was reviewed by the Department in Xcel's 2010 rate case. However, there is currently a $0.9 million remaining net book value for assets not currently used or useful for providing electric services and the Department recommended that this $0.9 million remaining net book value be written off as required by generally accepted accounting principles.

The Department expressed surprise that there was no clause in the wind facilities contract that would have required the new third party purchaser to continue to allow Xcel to utilize the W2B system.

The Department said that both it and the OAG-RUD have significant concerns about Xcel's proposal to pay for $5.6 million in removal costs of W2B by reallocating accumulated depreciation reserves collected for other plants. The Department pointed out that Xcel has neither requested nor collected any removal costs over the life of the battery and those costs should be collected from ratepayers during that time so those that benefitted from the assets are the ones that pay for it. Xcel did a 5-year dismantling study in 2015[69] but did not include any removal costs for W2B in that study.

[68] Docket No. E,G-002/D-17-581.

[69] Docket No. E,G-002/D-15-46.

The Department argued that Xcel's statement from its 2008 contract with the vendor NGK does not support an expectation of zero removal costs; specifically, on page 7 of its reply comments, Xcel stated:

> *Upon notification from [NSP] that the goods and/or services have reached end of life (NGK) agrees to dispose of the goods and/or services. Supplier shall invoice the Company for fees related to such disposal, at its cost, which may be verify [sic] by Company at Company's discretion.*

The Department concluded that the above statement and additional trade-secreted comments from the vendor in 2011 did not support that the expected removal costs at the time of installation should be zero. Therefore, it was unreasonable that Xcel did not collect any removal costs over the operational life of the asset.

Finally, the Department said:

> *As a result of Xcel's failure to request recovery of removal costs over the life of Wind2Battery System, the Company not properly studying and addressing the removal costs in its 2015 five-year dismantling study, the significance of the removal costs being greater than the original costs of the Wind2Battery System, and Xcel's citations from the 2008 contract with NGK and the December 2011 Renewable Development Fund not supporting Xcel's claim that the costs were expected to be zero, the Department recommends that Xcel's request for removal costs of $5.6 million for the Wind2Battery System be denied.*[70]

B. Department Recommendations

The Department recommended the following:

Wind2Battery System

- Write off the $0.9 million remaining net book value of W2B as required by generally accepted accounting principles.
- Deny Xcel's request for removal costs of $5.6 million for W2B.

Previous Recommendations Finalized

- approve a two-year passage of time adjustment for all natural gas and electric production and gas storage facilities, except for the Luverne Wind2Battery System and the Wescott Gas Storage facility;
- approve the proposed increase in the remaining life of certain components of the Wescott Gas Storage facility to 12-years;
- approve Xcel's proposed changes in net salvage rates, except as noted for the Wind2Battery System;

[70] Department Reply Comments, June 15, 2021, p. 5.

- approve the Company's proposed initial remaining lives of 25 years and net salvage rates of 10.5 percent for the Blazing Star II, Crowned Ridge, Freeborn, and Dakota Range wind farms, as of the actual in-service dates for each facility;
- approve Xcel's proposal to reallocate accumulated production reserve balances, mainly from the Minnesota Valley plant, to Black Dog plant for dismantling costs;
- require Xcel to continue to provide in future depreciation filings a comparison of depreciation remaining lives and resource planning lives for electric production with an explanation of any differences;
- require Xcel to continue to provide in future depreciation filings a historical comparison of changes in remaining lives and net salvage rates;
- require Xcel to provide in future depreciation filings a supplemental schedule showing the total (in addition to the remaining) depreciable lives of the Company's electric production facilities;
- require Xcel to continue to provide in future depreciation filings updates on the removal costs for the Minnesota Valley Plant, Key City Plant, Granite City Plant, and Black Dog Units 3-4, including the impact on depreciation reserves and a final true-up when the retirement/removal is completed, until retirement/removal is complete;
- require Xcel to provide in its next depreciation filing a supplemental schedule with the (1) actual costs to date, (2) projected future costs, and (3) percentage of completion to date for the Minnesota Valley Plant, Key City Plant, Granite City Plant, and Black Dog Units 3-4 as applicable.

IX. Staff Comments

Staff concurs with Xcel's proposals and the Department's recommendations on the depreciation parameters, except for the Wind2Battery system.

Regarding the Wind2Battery system, staff shares the concerns of the Department and the Office of Attorney General about the high and, until recently, hidden removal costs. It appears that technical obsolescence and the costs of recycling hazardous materials have increased over the life of the project. However, the Company did not follow through on commitments to research and update estimated removal costs and did not include the project in its most recent five-year dismantling cost study.

Staff agrees with the OAG and the Department that Xcel has offered no proof of the validity of its $5.6 million estimate of removal costs. However, as Xcel acknowledges, proof of rate base costs for recovery has not generally been required outside of a rate case proceeding.

Regarding the Wescott Gas Storage facility, staff notes that Xcel submitted information in the recent 'Commission Investigation into the Impact of Severe Weather in February 2021 on Minnesota Natural Gas Utilities and Customers', stating that "Wescott is currently non-operational".[71] This status is due to faults observed during testing of vaporizing operations on

[71] Docket No. G-999/CI-21-135, Xcel Energy, Compliance Report, April 9, 2021, pp. 37-40.

December 31, 2020 and on January 4, 2021. Due to timing, staff recognizes that the Company submitted its instant filing, in this depreciation docket, before this recent testing occurred. As far as staff is aware, Wescott has been offline since that time. The Company reports that it will be making necessary repairs and investments over three years to make Wescott "available to vaporize LNG for the 2021-22 natural gas heating season and beyond".

Although it was not recommended by any party, Staff provides an alternative decision option related to the Wescott LNG plant. In its initial filing, Xcel requested a remaining life extension of 12 years for the Wescott plant. It appears, however, that the reasonableness of costs and the future plans for the Wescott facility will be further evaluated in Docket 21-135 and in Xcel's next natural gas rate case. If the Commission would prefer, it could withhold a decision on the remaining life extension for the Wescott LNG Plant until its status is reviewed in Docket 21-135 or a future rate proceeding, which would correspond to Decision Option #3. Alternatively, the Commission could grant Xcel's request to extend the remaining life of the facility, continue to evaluate these other issues in other dockets, and revisit the remaining life in the future if any changes are needed.

Staff also notes that since the plant is not currently operational, Xcel could potentially request permission to recognize an impairment and remove that facility from in-service status, halting current depreciation expense until the facility can be returned to full in-service status. Xcel has not requested permission to do this.

Staff also notes that, in general, the Commission has held that determinations in depreciation proceedings are for accounting purposes only and are not a determination for purposes of setting rates.

X. Decision Options

Passage of Time Adjustment

1) Approve a two-year passage of time adjustment for all natural gas and electric production and gas storage facilities, except for the Luverne Wind2Battery System and the Wescott Gas Storage facility (DOC, Xcel)

Remaining Lives - Wescott

2) Approve the proposed increase in the remaining life of certain components of the Wescott Gas Storage facility to 12 years (DOC, Xcel)

Or

3) Deny Xcel's request to extend the remaining life of the Wescott LNG Plant until the status and prudence of the plant can be reviewed in another proceeding. (Staff offered alternative)

Remaining Lives – Wind2Battery

4) Approve a remaining life of zero years for the inoperable Wind2Battery System (accelerating retirement by three years) as of January 1, 2021 (Xcel, DOC did not object)

Net Salvage Rates

5) Approve Xcel's proposed changes in net salvage rates, including the Wind2Battery System (Xcel)

OR

6) Approve Xcel's proposed changes in net salvage rates, except as noted for the Wind2Battery System (DOC, OAG)

Wind2Battery Salvage

7) Approve a reserve reallocation from other plants within the Other Production function to this asset in the amount of $6.5 million ($0.9 million for estimated remaining net book value and $5.6 million for removal costs) in order to fully depreciate and retire the battery and then safely remove and dispose of it. (Xcel)

OR

8) Deny Xcel's request for removal costs of $5.6 million for the Wind2Battery System and require Xcel to write off the $0.9 million remaining net book value as required by generally accepted accounting principles. (DOC, OAG)

Reserve Reallocation

9) Approve Xcel's proposal to reallocate accumulated production reserve balances (mainly from the Minnesota Valley plant to Black Dog plant) for dismantling costs (Xcel)

OR

10) Approve Xcel's proposal to reallocate accumulated production reserve balances (mainly from the Minnesota Valley plant to the Black Dog plant for dismantling costs) but exclude Wind2Battery (DOC, OAG)

Initial Wind Farm Lives

11) Approve the Company's proposed initial remaining lives of 25 years and net salvage rates of 10.5 percent for the Blazing Star II, Crowned Ridge, Freeborn, and Dakota Range wind farms, as of the actual in-service dates for each facility (DOC, Xcel)

Future Filings

12) Require Xcel to continue to provide in future depreciation filings a comparison of depreciation remaining lives and resource planning lives for electric production with an explanation of any differences (DOC, Xcel)

13) Require Xcel to continue to provide in future depreciation filings a historical comparison of changes in remaining lives and net salvage rates (DOC, Xcel)

14) Require Xcel to provide in future depreciation filings a supplemental schedule showing the total (in addition to the remaining) depreciable lives of the Company's electric production facilities (DOC, Xcel)

15) Require Xcel to continue to provide in future depreciation filings updates on the removal costs for the Minnesota Valley Plant, Key City Plant, Granite City Plant, and Black Dog Units 3-4, including the impact on depreciation reserves and a final true-up when the retirement/removal is completed, until retirement/removal is complete (DOC, Xcel)

16) Require Xcel to provide in its next depreciation filing a supplemental schedule with the (1) actual costs to date, (2) projected future costs, and (3) percentage of completion to date for the Minnesota Valley Plant, Key City Plant, Granite City Plant, and Black Dog Units 3-4 as applicable (DOC, Xcel)

17) Require Xcel to file its next five-year depreciation study no later than February 1, 2025. (Staff)