



500 West Russell Street  
Sioux Falls, South Dakota 57101-0988

August 21, 2020

—VIA ELECTRONIC FILING—

Ms. Patricia Van Gerpen  
Executive Director  
South Dakota Public Utilities Commission  
State Capitol Building  
500 East Capitol Avenue  
Pierre, South Dakota 57501-5070

RE: INFORMATIONAL FILING  
NON-DOCKETED

Dear Ms. Van Gerpen:

Northern States Power Company, doing business as Xcel Energy (NSP or the Company), submits this informational filing to the South Dakota Public Utilities Commission. Attachment A to this filing is a copy of the *2020 Review of Remaining Lives & Five-Year Depreciation Study* submitted to the Minnesota Public Utilities Commission on August 19, 2020 – Docket No. E,G002/D-19-723.

If you have any questions regarding this filing, please contact Amber Hedlund at (612) 337-2268 or [amber.r.hedlund@xcelenergy.com](mailto:amber.r.hedlund@xcelenergy.com) or me at (605) 339-8350 or [steven.t.kolbeck@xcelenergy.com](mailto:steven.t.kolbeck@xcelenergy.com).

Sincerely,

/s/

STEVEN T. KOLBECK  
PRINCIPAL MANAGER – SOUTH DAKOTA

Enclosure



414 Nicollet Mall  
Minneapolis, MN 55401

August 18, 2020

—Via Electronic Filing—

Will Seuffert  
Executive Secretary  
Minnesota Public Utilities Commission  
121 7<sup>th</sup> Place East, Suite 350  
St. Paul, MN 55101

RE: PETITION  
2020 ANNUAL REVIEW OF REMAINING LIVES & FIVE-YEAR DEPRECIATION  
STUDY  
DOCKET NO. E,G002/D-19-723

Dear Mr. Seuffert:

Northern States Power Company, doing business as Xcel Energy, submits the enclosed 2020 Review of Remaining Lives and Five-Year Depreciation Study Petition. This filing is submitted to satisfy the review of depreciation rates for electric and natural gas production facilities in accordance with the Commission's September 8, 1978 Order in Docket No. E002/D-77-1086A, November 13, 2015 Order in Docket No. E,G002/D-15-46, September 4, 2018 Order in Docket No. E,G002/D-18-162, October 22, 2019 order in Docket No. E,G002/D-19-161, Minn. Stat. § 216B.11, and Minnesota Rules 7825.0500 through 7825.0900.

We have electronically filed this document with the Minnesota Public Utilities Commission, and copies have been served on the parties on the attached service list. Please contact me at [laurie.j.wold@xcelenergy.com](mailto:laurie.j.wold@xcelenergy.com) or (612) 330-5510 if you have any questions regarding this filing.

Sincerely,

/s/

LAURIE J. WOLD  
SENIOR MANAGER, CAPITAL ASSET ACCOUNTING

Enclosures  
c: Service List

STATE OF MINNESOTA  
BEFORE THE  
MINNESOTA PUBLIC UTILITIES COMMISSION

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

IN THE MATTER OF THE PETITION OF  
NORTHERN STATES POWER COMPANY  
FOR APPROVAL OF THE 2020 REVIEW OF  
REMAINING LIVES AND FIVE-YEAR  
DEPRECIATION STUDY

DOCKET NO. E,G002/D-19-723

**PETITION**

**OVERVIEW**

Northern States Power Company, doing business as Xcel Energy, submits to the Minnesota Public Utilities Commission this Petition for approval of our 2020 Review of Remaining Lives. After performing our annual review of electric and gas production and gas storage asset lives and net salvage rates, we respectfully request approval of the following:

- Passage of time adjustments for all electric and natural gas production and gas storage facilities, except as discussed below;
- 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. E002/M-18-777) and the Mower Wind project (Docket No. E002/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.

Attachment A is a summary of the requested 2021 remaining lives and net salvage rates.

Additionally, in compliance with past practice and the Commission's Order in our 2019 remaining life filing<sup>1</sup>, we provide a discussion of the following items for the Commission's information:

- An explanation and schedule of the differences between depreciation remaining lives and the Integrated Resource Plan<sup>2</sup> (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.

Overall, this Petition reflects an increase in total Company depreciation and amortization expense of \$2.5 million for existing assets and includes initial lives and net salvage for several new wind projects. Consistent with our 2015 Remaining Life Petition which included the last 5-year dismantling study (Docket No. E,G002/D-15-46), we respectfully request Commission approval of the changes proposed by the Company to be effective January 1, 2021 unless noted.

While this Petition is an annual filing, the Company recognizes this Docket may not be ordered upon before the next typically scheduled filing date of mid-February 2021. Therefore, we have also provided detail of wind projects and other assets being in-serviced during 2021 for your consideration if the Commission were to delay or cancel the 2021 filing date. In the Company's 2015 Petition (Docket No. E,G002/D-15-46), the timing of the Petition and the Company's upcoming rate case were similar to the current situation. The 2015 Docket was ordered upon on November 13, 2015 with an effective date of January 1, 2016, and the Commission Ordered the next filing be made in February of 2017, waiving the subsequent 2016 filing requirement.

In response to the inquiry into the financial effect of COVID-19 (Docket No. E,G999/CI-20-425), we have proposed the use of rate mitigation tools to address the additional costs related to our proposed relief and recovery projects. While these tools are still being evaluated, they may include potential adjustments to plant remaining lives. To the extent the Company proposes and the Commission approves the uses of any rate mitigation tools that impact this docket, the Company will supplement this filing to reflect this guidance.

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<sup>1</sup> Docket No. E,G002/D-19-161, October 22, 2019 Order.

<sup>2</sup> Docket No. E002/RP-19-368



## **I. SUMMARY OF FILING**

A one-paragraph summary of the filing accompanies this Petition pursuant to Minn. R. 7829.1300, subp. 1.

## **II. SERVICE ON OTHER PARTIES**

Pursuant to Minn. Stat. § 216B.17, subd.3, we have electronically filed this Petition. A Summary of the filing has been provided to all persons on the attached service list.

## **III. GENERAL FILING INFORMATION**

Pursuant to Minnesota Rules 7825.3200, 7825.3500, and 7829.1300, subp. 3. Xcel Energy provides the following required information.

### **A. Name, Address, and Telephone Number of Utility**

Northern States Power Company doing business as:  
Xcel Energy  
414 Nicollet Mall  
Minneapolis, MN 55401  
(612) 330-5500

### **B. Name, Address, and Telephone Number of Utility Attorney**

Matt B. Harris  
Lead Assistant General Counsel  
Xcel Energy  
414 Nicollet Mall, 401 – 8<sup>th</sup> Floor  
Minneapolis, MN 55401  
(612) 330-7641

### **C. Date of Filing and Date Proposed Rates Will Take Effect**

The date of the filing is August 18, 2020. The Company requests that the Commission approve our proposed remaining lives and net salvage rates effective January 1, 2021. The Company requests that effective dates for the lives of the various new or purchased wind farms coincide with the month the investment is placed in service or acquired as noted later in this petition.

#### **D. Statute Controlling Schedule for Processing the Filing**

Under Minn. R. 7829.0100, subp. 11, this request for approval of remaining lives is a “miscellaneous” filing because no determination of Xcel Energy’s general revenue requirements is necessary. Comments on a miscellaneous filing are due within 30 days of filing, with replies due 10 days thereafter.

#### **E. Utility Employee Responsible for the Filing**

Laurie J. Wold  
Senior Manager, Capital Asset Accounting  
Xcel Energy  
414 Nicollet Mall, 401 – 3<sup>rd</sup> Floor  
Minneapolis, MN 55401  
(612) 330-5510

### **IV. MISCELLANEOUS INFORMATION**

Pursuant to Minn. R. 7829.0700, subp. 2, the Company requests that the following persons be placed on the Commission’s official service list for this matter:

Matt B. Harris  
Lead Assistant General Counsel  
Xcel Energy  
414 Nicollet Mall, 401 – 8<sup>th</sup> Floor  
Minneapolis, Minnesota 55401  
[Matt.B.Harris@xcelenergy.com](mailto:Matt.B.Harris@xcelenergy.com)

Lynnette Sweet  
Regulatory Administrator  
Xcel Energy  
414 Nicollet Mall, 401 – 7<sup>th</sup> Floor  
Minneapolis, Minnesota 55401  
[regulatory.records@xcelenergy.com](mailto:regulatory.records@xcelenergy.com)

Any information requests in this proceeding should be submitted to Regulatory Records.

### **V. REVIEW OF REMAINING LIVES AND NET SALVAGE RATES**

#### **A. Background**

The Commission approved our current remaining lives and net salvage rates effective January 1, 2019, in their October 22, 2019 Order in Docket No. E,G002/D-19-161. This 2020 review uses the previously approved remaining lives and net salvage rates—assuming a two-year passage of time adjustment—as the starting point for this filing. Thus, we have reviewed the remaining lives of our electric and natural gas production and gas storage facilities as of January 1, 2021, considering system demand, availability

of fuel supplies, operating and maintenance costs, and future technological advancements that influence the decision about retiring electric and natural gas facilities.

In this filing we request approval of the following changes effective January 1, 2021:

- Passage of time adjustments for all electric and natural gas production and gas storage facilities, except as discussed below;
- 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 farms;
- Initial remaining life and net salvage rate for the approved acquisitions of the Community Wind North and Jeffers Wind projects (Docket No. E002/M-18-777) and the Mower Wind project (Docket No. E002/M-19-568);
- 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.

## **B. Passage of Time Adjustment**

As mentioned above, to begin our analysis of remaining lives, we incorporated a two-year passage of time adjustment to the 2019 certified remaining lives of all facilities. Subtracting two years from the present certified remaining life results in the proposed remaining lives as of January 1, 2021. The passage of time adjustment does not change the annual depreciation accrual, but simply reflects that Xcel Energy production facilities will have aged two years since January 1, 2019.

Attachment B shows our Comparison of Present and Proposed Lives, as it relates to 2021 estimated depreciation expense.

Pursuant to Minn. R. 7825.0700, subp. 1, we provide with this filing, the following three attachments for our electric and gas assets:

- Attachment C – 2019 Plant In-service;
- Attachment D – 2019 Analysis of Depreciation Reserve; and
- Attachment E – 2019 Summary of Annual Depreciation Accruals.

## C. Recommended Changes to Remaining Lives for Production Facilities

As discussed below, we are requesting approval of changes to the remaining lives of two facilities and changes to the net salvage rate of all facilities which results in an increase in total Company depreciation and amortization expense of approximately \$2.5 million for existing assets. In addition, we request a new remaining life for our wind facilities anticipated to be in-serviced during 2020 and 2021.

### 1. *Electric Utility – Other Production – Laverne Wind2Battery System*

The Company installed a one megawatt (MW) wind energy battery-storage system in December 2009 with an initial life of 15 years. This project was a pilot to demonstrate the system's ability to store wind energy, move it to the electricity grid when needed, and to validate energy storage in supporting greater wind penetration on the Xcel Energy system. Located in Laverne, Minnesota (about 30 miles east of Sioux Falls, South Dakota), the battery was connected to a nearby 11 MW wind farm formerly owned by Minwind Energy, LLC.

The battery consists of twenty 50-kilowatt battery modules that are roughly the size, in total, of two semi-truck trailers and weigh approximately 80 tons. The battery has an approximate storage capacity of 7.2 MW-hours of electricity, with a charge/discharge capacity of one MW.

The original cost of the asset is \$4.1 million. As of December 31, 2020, the estimated accumulated depreciation for this asset will be \$3.2 million, leaving a remaining undepreciated net book value of \$0.9 million.

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.

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. This means if we were able to find a company who could make and service the parts necessary to reconnect, estimated capital costs of nearly \$2 million would be required along with estimated operating and maintenance (O&M) expenses of approximately \$0.2 million per year.

Thus, even in the unlikely event the Company were able to find a supplier, the cost to continue operation would be prohibitively expensive and would not provide enough benefit to customers to warrant the additional capital and O&M.

Due to the materials used in this pilot, finding a channel to dispose of the battery has proven difficult and costly not only for Xcel Energy but for other utility companies in the United States. The Company is exploring options with three vendors (the battery manufacturer, the manufacturer of the controls system, and a battery recycling company) to determine the best route to safely remove and dispose of the battery. The battery uses sodium-sulfur technology which must be specially sealed as the compound will spontaneously burn when in contact with air and moisture. Therefore, there is a need to provide on-going monitoring of the asset's condition to ensure against a potential fire or other catastrophic event. Because of the limited disposal options and the safety concerns, removal costs are estimated at \$5.6 million.

This experimental battery storage pilot project was the first use of direct wind energy storage technology in the United States. The Company and many direct and indirect partners learned a great deal from this small-scale 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.

While fruitful, wind generation, battery equipment, and energy storage technology have all changed dramatically over the past decade since this pilot was installed. As with any investigational initiative, it is difficult to project the lifespan or costs with absolute accuracy from the inception.

Therefore in this petition, we are requesting the Commission approve a remaining life of zero years as of January 1, 2021, which would accelerate the retirement date by three years and 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.

The impacts resulting from the adjustments to the Wind2Battery System are shown in Attachment B, Comparison of Present and Proposed Lives.

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

During 2020 and 2021, the Company plans to in-service four new wind projects – Blazing Star II, Crowned Ridge, Freeborn, and Dakota Range. Below are details on each plant:

- The Blazing Star II wind farm is a 200 MW wind project located in southwest Minnesota's Lincoln County. The estimated in-service date is December 2020.
- Crowned Ridge wind farm, located in Codington County in northeastern South Dakota, is a 200 MW project estimated to be in-serviced in November 2020.
- Freeborn wind farm will have turbines located in both southern Minnesota and northern Iowa. The 200 MW project is anticipated to be in-serviced in March 2021.
- Dakota Range is a 300 MW wind project, located in South Dakota's Codington and Grant counties. The estimated in-service date is December 2021.

The Company is continually monitoring the COVID-19 pandemic and the effect it could have on these, and all, projects. We will continue to update the Commission on any COVID-19 pandemic effects as conditions warrant.

Consistent with our actions in the IRP and the Renewable Energy Standard Rider<sup>3</sup>, the Company proposes the initial life for these four wind farms be set to 25 years from their in-service dates as estimated above. A 25-year life is consistent with the treatment of the Company's Grand Meadow, Nobles, Border Winds, Pleasant Valley, Courtenay, Blazing Star I, Lake Benton, and Foxtail wind facilities. A 25-year life is also consistent with remaining life expectations stated by the manufacturer of the turbines being used at these facilities.

Based on the remaining life of 25 years as of the estimated in-service dates, along with the net salvage rate of negative 10.5 percent as discussed in Section D below, the Company has calculated 2020 depreciation for these projects of approximately \$2.4 million. This represents a partial year of depreciation as these plants will be in-serviced during the year. 2021's depreciation expense will be approximately \$40.2 million which represents a full year of depreciation on 2020 in-serviced wind farms and a partial year on those in-serviced during 2021.

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<sup>3</sup> Docket No. E002/M-17-818

**Table 1: Summary of 2020-2021 Depreciation Expense on New Wind Facilities**

| <b>Plant</b>    | <b>Estimated in-service date</b> | <b>2020 depreciation expense</b> | <b>2021 depreciation expense</b> |
|-----------------|----------------------------------|----------------------------------|----------------------------------|
| 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                    |
| <b>Total</b>    |                                  | <b>\$2.4 million</b>             | <b>\$40.2 million</b>            |

3. *Electric Utility – Other Production: Approved Wind Project Acquisitions*

The Community Wind North (CWN) and Jeffers Wind project acquisitions were approved in Docket No. E002/M-18-777. The CWN Facilities and Jeffers Wind Facility are currently owned by Longroad Energy and the Company proposed to acquire, own, and operate two 13.2 MW refurbished wind facilities (the CWN Facilities) and the 44 MW refurbished Jeffers Wind Facility. CWN is located in Lincoln County, Minnesota, and achieved commercial operation in May 2012. Jeffers is located in Cottonwood County, Minnesota, and achieved commercial operation on October 10, 2008. Under the acquisition scenario, the repowered wind resources are assumed to operate for 25 years.

On August 13, 2020 in Docket No. E002/M-19-568, the Commission approved the purchase of the Mower Wind farm. Mower is currently under a purchase power agreement. Mower Wind is a 98.9 MW facility located in Mower County in southern Minnesota.

We are also proposing a negative 10.5 percent net salvage rate for these acquisitions to align with the average net salvage rate on new wind farms as discussed in further detail in Table 3 below.

4. *Gas Utility – Gas Storage: Wescott*

The Wescott Liquefied Natural Gas (LNG) Plant was placed in-service in 1972. The plant cools then stores the LNG in large storage tanks. Vaporizing equipment is used later to warm and convert the liquefied methane back to a gas for use in the distribution system.

The cold box, which is a critical piece of equipment in the liquefaction process, failed in 2019 and was replaced in 2020. With the addition of new equipment at the facility, we believed it was important to evaluate the rest of the lives for the Wescott Gas Storage facility. The LNG facilities at the Wescott plant remain an important part of gas operations for the Company, especially during extreme cold weather incidents.

At this time, Company personnel believe we would be able to operate the LNG facilities at minimum another 10 years. While there are no major capital additions planned for the next year, the Company plans to maintain the facility and complete capital upgrades when needed, such as the replacement of the cold box in 2020. The LNG storage tanks at Wescott were in-service in 1972 and 1975.

Designers/suppliers of LNG storage vessels typically offer a “design life” of anywhere from 25 to 40 years from in-service date. After this date, however, it does not mean they are no longer useful. When properly maintained, LNG tanks may last years, even decades, beyond their original design life as evidenced by the number of in-service LNG tanks in the United States to date. Very few have been decommissioned since their original construction in the 1960s and 1970s, and very few have been found to have deficiencies significant enough to adversely impact their longevity.

The Wescott LNG facility is an important part of the Xcel Energy system. In order to meet our capacity demands on the coldest day of the year, Wescott provides about 17% of necessary supply. Without this source, Xcel Energy would have to utilize more expensive options such as a pipeline.

For these reasons, we are recommending that the remaining lives of the Wescott accounts be extended as shown in Table 2 below. This would make the retirement date for all Wescott plant accounts be December 2032 to align with the life of Account 363.3 Compressor Equipment. This change in remaining lives results in a decrease in annual depreciation of approximately \$1.3 million.



**Table 2: Wescott Plant Account Lives**

| <b>Account</b> | <b>Account Name</b>              | <b>Approved<br/>Remaining<br/>Life as of<br/>1/1/2021</b> | <b>Proposed<br/>Remaining<br/>Life as of<br/>1/1/2021</b> | <b>Change</b> |
|----------------|----------------------------------|---|---|---------------|
| 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      |

#### **D. Change in Net Salvage Rates**

The Commission’s November 13, 2015 order in Docket No. E,G002/D-15-46 requires the Company to submit, “its next five-year depreciation study and net salvage rate study for electric and gas production and gas storage facilities on February 17, 2020.”<sup>4</sup> To meet this requirement, we have completed an analysis of the cost of removal and net salvage for all of our current electric and gas facilities and present as a part of this filing several recommended changes to our net salvage rates.

We provide our Comparison of Present and Proposed Lives as Attachment B to this filing, summarizing the depreciation expense impact of our proposed change to net salvage rates in combination with the proposed changes to remaining lives. Further, we are providing Attachment I, which is a comparison of Present and Proposed Net Salvage Rates. This attachment shows the calculation of proposed net salvage rates and compares them to the previously approved net salvage rates.

##### *1. Completion of the study and net salvage calculations*

In 2019, the Company contracted with TLG Services, Inc. (TLG) to perform a comprehensive dismantling study on all steam, hydro, and other production electric generating plants as well as gas production and storage facilities. We provide as Attachment J to this filing, the 2020 TLG Dismantling Study (Dismantling Study).

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<sup>4</sup> The Commission’s Orders dated January 22, 2020 and July 13, 2020 in this Docket granted our requests for three-month extensions to submit this petition, extending the filing date to May 18, 2020, then to August 18, 2020, respectively.

The main purpose of the Dismantling Study was to estimate the present-day costs for retiring and demolishing the facilities, also known as final removals of existing facilities. We provide with the Dismantling Study a complete list of the assumptions used in the cost estimates.

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. By taking the calculated net salvage rates from the Dismantling Study and applying the logic described below, we recommend the use of modified net salvage rates for most generating facilities or units, which we believe accounts for the possibility of interim retirements and additions that may lengthen the unit's life in the future.

Consistent with our last filing that used an updated dismantling study, we recommend adjustments to net salvage rates. We request that the proposed net salvage rates be applied to all FERC accounts for each unit or by plant where the units are not segregated. Applying a net salvage rate to all FERC accounts will better capture all costs which will ultimately be incurred for removal.

When comparing the 2015 Dismantling Study to the 2020 Dismantling Study, there are several notable differences, including:

- six new wind farms have been placed into service,
- one new natural gas plant has been completed (Black Dog 6),
- the Wescott Gas Production plant was sold,
- the sale of three large storage tanks from Inver Hills, and
- the Company has completed major site remediation activities at the Black Dog and Minnesota Valley sites.

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. Scrap markets have been on the decline for over a decade. As salvage proceeds from the sale of scrap such as steel and copper are used to offset dismantling costs, a decline in these proceeds cause the net estimate to increase.

## *2. Wind farm dismantling*

For the 2020 Dismantling Study, the Company requested TLG to provide two different removal scenarios. The scenarios are identical except for the depth as to which foundations are required to be removed. The first scenario is full removal of all equipment below grade. The second scenario was to remove only the equipment 48

inches below grade and above. As Xcel Energy operates in multiple states, each state has different removal requirements. North Dakota only requires removal of equipment to a depth of 48 inches. Therefore, to calculate the net salvage percent for wind facilities located in North Dakota, the Company used the 48 inches scenario. Xcel Energy's contracts with the land owners also states we will remove equipment to a depth of 48 inches.

In Minnesota, the Minnesota Pollution Control Agency (MPCA) regulates removal of below grade structures. Current MPCA rules require full removal of all foundations and equipment. Therefore, for facilities located in Minnesota, we are basing the net salvage percent based on the full removal scenario.

The wind farms which are anticipated to go in-service in 2020-2021 (Blazing Star II, Crowned Ridge, Freeborn, and Dakota Range) were not included in the Dismantling Study because the projects are still under construction. The Company used a simple average of the net salvage percentages from the eight farms included in the Dismantling Study.

**Table 3: Average Net Salvage Percent Calculation**

| <b>Plant</b>        | <b>Location</b> | <b>Proposed net salvage percent</b> |
|---------------------|-----------------|-------------------------------------|
| 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%                              |
| <b>Average</b>      |                 | <b>-10.5%</b>                       |

The average of the net salvage rates for the wind facilities already placed in service will serve as a guideline until a site-specific study can be completed for these facilities. This is reasonable and keeps with prior practice as the six wind farms placed in-service between 2015 and 2020 used an average based on the two plants included in the 2015 Dismantling Study.

Thus, we are requesting that the initial net salvage rate for Blazing Star II, Crowned Ridge, Freeborn, Dakota Range, Jeffers, Community Wind North, and Mower be set at negative 10.5 percent, effective as of their respective in-service dates.

## **E. Removal Update**

Order Point 10 of the Commission's October 22, 2019 Order for our 2019 remaining life filing, required the Company to continue 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." We provide the requested information below.

Order Point 9 required, "In 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." This information is provided for Black Dog and Minnesota Valley in Attachment H. As discussed in further detail below, the Company is not far enough along in the process of plant demolition to have detailed estimates for Key City or Granite City.

In preparing for this filing, the Company has reviewed its estimate of dismantling costs as shown in the TLG cost estimate and compared them to internal estimates. In general, the Company believes that estimates provided by TLG are reasonable. In total, the Company does not believe it has reason to expect a deficit during the dismantling of the plants. The dismantling and decommissioning management process the Company follows typically involves a combination of internal removal work as well as contract work with outside vendors. Various activities are submitted to contract firms for bid and the Company then works to supervise and cooperate with vendors as they perform the dismantling activities. The work performed by these vendors often includes more than one of the subcategories provided by TLG and is paid for in aggregate. For example, the cost quoted by a contractor may or may not include a credit for salvage, and typically does not break out fees involved in management and supervision, worker access, contingency, etc. The use of vendors external to Xcel Energy makes it impossible to assign actual costs back to TLG's estimate, but the Company has attempted to get as close as is feasible. The location specific details of the Companies analysis are discussed below.

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

Black Dog Units 3 and 4 were officially retired from service in April 2015. These two units were coal-burning steam production units. Their removal from service ends the coal-fired production of electricity at Black Dog after more than 60 years.

As of January 1, 2020, the Unit 4 turbine, generator, and boiler have been removed. The ash ponds have been dredged, filled, and covered. The original coal stacks for Units 2 and 3 and the tall common stack have been removed. The coal yard remediation has been started and will be completed in 2020. The Unit 3 turbine, the boiler for Units 2 and 3, and related plant equipment are planned for removal in 2021-2025. There is also a portion of the facility that is necessary for the continued operation of Units 5 and 6. It is anticipated that these shared portions of the generating facility will not be removed until the cessation of all Black Dog location operations.

To the extent possible, the Company has provided its estimated removal dollars using the categories provided by TLG and has provided this analysis in Table 4. As indicated above, certain categories could not be identified as they are not broken out in separate, specific vendor contracts. While they are not specifically identified in the Company's estimate, they are included in the removal activities that have been specifically identified.

In order to arrive at the TLG amounts in the table below, Xcel Energy took TLG's estimate for the entire Black Dog site (both steam and other production units) and determined which costs would be anticipated to be incurred at the shutdown of the Other Production units and what would be incurred during the current removal project for the former steam units. Of the total \$48.7 million TLG estimate for the entire Black Dog site, \$19.6 million was allocated to current removal work and \$29.1 million was allocated to the final site removal.

**Table 4: Comparison of Steam Black Dog Removal Estimates**

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

The boiler deficit is due to the additional effort required to retain the associated structures during the boiler removal since they will continue to support the remaining Other Production function. The Company has a higher contingency buffer as the unused contingency from prior years has been rolled forward until the project is complete.

The Company 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.

## *2. Electric Utility –Steam Production: Minnesota Valley*

The Minnesota Valley Plant is a former steam production facility located in Granite Falls, Minnesota along the Minnesota River. Minnesota Valley last burned coal in 2004, and the air permit was formally retired in 2009. The plant is no longer in operation.

The removal and remediation of the coal yard was completed in 2019. Asbestos abatement will occur in 2021, with the full site demolition date to be completed in 2022. As costs of removal are incurred at the Minnesota Valley Plant, the costs are treated as a debit to the depreciation reserve and the reserve balance are reduced. At final removal of the plant assets, if there is reserve in excess of the plant balance, we plan to transfer this reserve to other steam production accounts.

In sum, while the dam removal efforts have been completed much of the remediation process still needs to be completed. Table 5 below compares the Company's removal estimates to the TLG study's 5.2 table using the same categories as the Black Dog estimate. At present, the Company does not believe any of the line items are unrealistic. Any decommissioning process will present unique and unexpected challenges. Additionally, the scrap and contract labor markets, which are impacted by macro-economic events, can be difficult to predict and will swing cost estimates.

**Table 5: Comparison of Steam Minnesota Valley Removal Estimates**

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

As the estimates between Black Dog and Minnesota Valley are nearly offsetting, the Company is proposing a reserve reallocation as noted on Attachment B in order to align the balances with the removal budgets. The Company notes the Dismantling Study is a methodical, routine process to determine a reasonable level of overall cost of removal to be collected from customers over the life of the plant. Actual detailed budgets and vendor quotes to complete the work will undeniably vary from this routine process based on granular conditions of the location, condition, and requirements of the facility at the time of removal. The current removal reserve for Minnesota Valley is \$22.1 million and the Company's estimate to remove is \$11.8 million. By reallocating \$10.3 million of reserve from Minnesota Valley to Black Dog, this will provide transparency for parties going forward to see how the Company is managing to the individual site budgets and ensure more accurate reporting of cost savings or overruns. This reallocation does not change expense charged to or revenues collected from customers. It simply moves the reserve from one project to the other in order to best align with the work to be performed. 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.

### *3. Electric Utility – Other Production: Key City and Granite City*

The Key City Peaking Plant is located in Mankato, Minnesota, adjacent to Xcel Energy's Wilmarth Power Plant. The Key City plant had four units that generated a total of 64 MW of electricity using natural gas and oil as fuel. The plant became operational in 1970 and reached its end of life at the end of 2012.

The Granite City Peaking Plant is located in St. Cloud, Minnesota, and was built in 1969 and operationally retired in mid-2019. The plant consisted of four units that generated a total of 61 MW of electricity using natural gas and oil.

The Key City units were similar enough to the units at Granite City to allow them to be used as a source of spare parts. Thus, the Company maintained the Key City facility in a dormant state to support continued operations of the Granite City facility until it was shut down in 2019. Now that both facilities are shut down, a small amount of work was performed in 2019 in order to disconnect the plants from the grid. Certain bus interconnections and interfaces were removed and retired as well as breaker panels and some transformers.

As costs of removal are incurred at these plants, the costs will be treated as a debit to the depreciation reserve, and the reserve balance will be reduced. At final removal of



the plant assets, if there is reserve in excess of the plant balance, we plan to transfer this reserve to the remaining production accounts.

The Company is not far enough along in the process of plant demolition to have detailed estimates available for comparison. Instead, the Company has had its engineers review the line item detail from the Dismantling Study's Table 5.1. At present, the Company does not believe any of the line items are unrealistic. Any decommissioning process will present unique and unexpected challenges. Additionally, the scrap and contract labor markets, which are impacted by macro-economic events no company or consultant can perfectly predict, will swing cost estimates. With those considerations in mind, the Company believes the Key City and Granite City cost estimates presented by TLG in the Dismantling Study are reasonable, and the Company has no variances to address at this time.

## **F. Resource Plan Comparison**

Consistent with past practice, we provide an IRP Comparison for our electric production plant facilities that identifies, and provides a rationale for, differences between our proposed depreciation lives and the planning lives used in the IRP Reference Plan as Attachment F.

The IRP is currently pending before the Commission. After that docket is settled, any agreed upon changes to plant lives will then be reflected in the annual remaining life docket following IRP acceptance.

## **VI. MINNESOTA JURISDICTIONAL DEPRECIATION**

For *regulatory* purposes, the depreciation expense and the accumulated provision for depreciation are based solely on the remaining lives and net salvage rates approved by the respective Public Utility Commissions. For *financial* purposes, we must account for the impact of those differences in our approved rates in Company retail jurisdictions. We do this by calculating a depreciation expense for each jurisdiction based on its remaining lives, then apply a jurisdictional allocator to each resulting amount and add the amounts together to get a total Company financial view. The Attachments to this filing show the reserve amounts applicable to the Minnesota jurisdiction, shown at a total Company level. This method has been in use for the Minnesota assets since 2009 and has been filed in the last four electric rate case proceedings.

However, the depreciation reserve using Minnesota-approved lives and net salvage rates in this filing cannot be compared directly with total Company financial results reported in Securities and Exchange Commission or other financial filings. This stems

from the fact that the North Dakota Public Service Commission and the South Dakota Public Utilities Commission have applied remaining lives for some production plants that are materially different from what the Minnesota Commission has approved in previous remaining life filings.<sup>5</sup>

## **VII. EFFECT OF THE CHANGE IN RATES**

This Petition will not impact customer rates, the price of Xcel Energy natural gas and electric service, or the terms and conditions of service. Rather, the changes will reflect the way the Company recognizes depreciation expenses for relevant assets in the current year.

## **CONCLUSION**

Xcel Energy respectfully requests the Commission approve a total increase in depreciation and amortization expense of \$2.5 million for existing assets as proposed in this filing based on the proposed remaining lives and net salvage rates for the electric and gas utilities, with an effective date of January 1, 2021 for assets included in base rates, and effective with the in-service date for assets included in Riders. We also request initial remaining lives and net salvage for our wind facilities anticipated to be in-serviced during 2020 and 2021 along with reserve reallocations to certain Steam and Other Production accounts.

In addition, should the Commission approve the pending asset purchase filing before the Commission determines the outcome in the instant docket, we request that the remaining life and net salvage rate be incorporated into this docket and included in the Commission's order.

Dated: August 18, 2020

Northern States Power Company

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<sup>5</sup> 2012 North Dakota Electric Rate Case, Case No. PU-12-813; 2014 South Dakota Electric Rate Case, Docket No. EL14-058.

**2020 REVIEW OF REMAINING LIVES**  
**Supporting Attachments**

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- A Summary of Proposed Remaining Lives
- B Comparison of Present and Proposed Lives
- C 2019 Plant In-service Rollforward
- D 2019 Accumulated Depreciation Rollforward
- E 2019 Summary of Annual Depreciation Accruals
- F Integrated Resource Plan Comparison
- G Historical Comparison of Changes to Remaining Life
- H Removal Estimates by Year
- I Comparison of Present and Proposed Net Salvage Rates
- J 2020 5-year Dismantling Cost Study
- K Total Life of Plants

STATE OF MINNESOTA  
BEFORE THE  
MINNESOTA PUBLIC UTILITIES COMMISSION

|                    |              |
|--------------------|--------------|
| Katie J. Sieben    | Chair        |
| Valerie Means      | Commissioner |
| Matthew Schuenger  | Commissioner |
| Joseph K. Sullivan | Commissioner |
| John A. Tuma       | Commissioner |

IN THE MATTER OF THE PETITION OF  
NORTHERN STATES POWER COMPANY  
FOR APPROVAL OF THE 2020 REVIEW OF  
REMAINING LIVES

DOCKET No. E,G002/D-19-723

**PETITION**

**SUMMARY OF FILING**

Please take notice that on August 18, 2020, Northern States Power Company, doing business as Xcel Energy, filed with the Minnesota Public Utilities Commission a Petition for approval of its 2020 Review of Remaining Lives. The Company requests an increase of approximately \$2.5 million in 2021 total Company annual depreciation and amortization expense for existing assets increase for electric utility generating facilities and gas utility generation and storage facilities based on beginning of year balances for assets not presently included in rate riders. In addition, we request initial remaining lives and net salvage for our wind facilities anticipated to be in-serviced during 2020 and 2021 along with reserve reallocations to certain Steam and Other Production accounts. The Company requests that upon Commission approval, the new remaining lives become effective January 1, 2021 for assets included in base rates, and effective with the in-service date for assets included in Riders.

Electric Utility  
Steam Production

| Account              | Description                         | Net Salvage (%) | Remaining Life 01/01/2021 | Retirement date |
|----------------------|-------------------------------------|-----------------|---------------------------|-----------------|
| <b>Allen S. King</b> |                                     |                 |                           |                 |
| E311                 | Structures & Improvements           | -9.2            | 16.5 years                | Jun-37          |
| E312                 | Boiler Plant Equipment              | -9.2            | 16.5 years                | Jun-37          |
| E314                 | Turbogenerator Units                | -9.2            | 16.5 years                | Jun-37          |
| E315                 | Accessory Electric Equipment        | -9.2            | 16.5 years                | Jun-37          |
| E316                 | Miscellaneous Power Plant Equipment | -9.2            | 16.5 years                | Jun-37          |
| <b>Red Wing</b>      |                                     |                 |                           |                 |
| E311                 | Structures & Improvements           | -23.5           | 7.0 years                 | Dec-27          |
| E312                 | Boiler Plant Equipment              | -23.5           | 7.0 years                 | Dec-27          |
| E314                 | Turbogenerator Units                | -23.5           | 7.0 years                 | Dec-27          |
| E315                 | Accessory Electric Equipment        | -23.5           | 7.0 years                 | Dec-27          |
| E316                 | Miscellaneous Power Plant Equipment | -23.5           | 7.0 years                 | Dec-27          |
| <b>Sherco Unit 1</b> |                                     |                 |                           |                 |
| E311                 | Structures & Improvements           | -15.1           | 5.0 years                 | Dec-25          |
| E312                 | Boiler Plant Equipment              | -15.1           | 5.0 years                 | Dec-25          |
| E314                 | Turbogenerator Units                | -15.1           | 5.0 years                 | Dec-25          |
| E315                 | Accessory Electric Equipment        | -15.1           | 5.0 years                 | Dec-25          |
| E316                 | Miscellaneous Power Plant Equipment | -15.1           | 5.0 years                 | Dec-25          |
| <b>Sherco Unit 2</b> |                                     |                 |                           |                 |
| E311                 | Structures & Improvements           | -15.1           | 5.0 years                 | Dec-25          |
| E312                 | Boiler Plant Equipment              | -15.1           | 2.0 years                 | Dec-22          |
| E314                 | Turbogenerator Units                | -15.1           | 2.0 years                 | Dec-22          |
| E315                 | Accessory Electric Equipment        | -15.1           | 2.0 years                 | Dec-22          |
| E316                 | Miscellaneous Power Plant Equipment | -15.1           | 2.0 years                 | Dec-22          |
| <b>Sherco Unit 3</b> |                                     |                 |                           |                 |
| E311                 | Structures & Improvements           | -7.9            | 14.0 years                | Dec-34          |
| E312                 | Boiler Plant Equipment              | -7.9            | 14.0 years                | Dec-34          |
| E314                 | Turbogenerator Units                | -7.9            | 14.0 years                | Dec-34          |
| E315                 | Accessory Electric Equipment        | -7.9            | 14.0 years                | Dec-34          |
| E316                 | Miscellaneous Power Plant Equipment | -7.9            | 14.0 years                | Dec-34          |
| <b>Wilmarth</b>      |                                     |                 |                           |                 |
| E311                 | Structures & Improvements           | -25.8           | 7.0 years                 | Dec-27          |
| E312                 | Boiler Plant Equipment              | -25.8           | 7.0 years                 | Dec-27          |
| E314                 | Turbogenerator Units                | -25.8           | 7.0 years                 | Dec-27          |
| E315                 | Accessory Electric Equipment        | -25.8           | 7.0 years                 | Dec-27          |
| E316                 | Miscellaneous Power Plant Equipment | -25.8           | 7.0 years                 | Dec-27          |

Electric Utility  
Nuclear Production

| Account  | Description                         | Net Salvage (%) | Remaining Life 01/01/2021 | Retirement date |
|--|-------------------------------------|-----------------|---------------------------|-----------------|
| <b>Monticello</b>                                |                                     |                 |                           |                 |
| E302   | Franchises & Consents               | 0.0             | 9.8 years                 | Sep-30          |
| E321   | Structures & Improvements           | 0.0             | 9.8 years                 | Sep-30          |
| E322   | Reactor Plant Equipment             | 0.0             | 9.8 years                 | Sep-30          |
| E323   | Turbogenerator Units                | 0.0             | 9.8 years                 | Sep-30          |
| E324   | Accessory Electric Equipment        | 0.0             | 9.8 years                 | Sep-30          |
| E325   | Miscellaneous Power Plant Equipment | 0.0             | 9.8 years                 | Sep-30          |
| <b>Monticello - Interim Storage Facility</b>     |                                     |                 |                           |                 |
| E321   | Structures & Improvements           | 0.0             | 9.8 years                 | Sep-30          |
| E322   | Reactor Plant Equipment             | 0.0             | 9.8 years                 | Sep-30          |
| <b>Prairie Island Unit 1 &amp; 2</b>             |                                     |                 |                           |                 |
| E302   | Franchises & Consents               | 0.0             | 13.3 years                | Apr-34          |
| E321   | Structures & Improvements           | 0.0             | 13.3 years                | Apr-34          |
| E322   | Reactor Plant Equipment             | 0.0             | 13.3 years                | Apr-34          |
| E323   | Turbogenerator Units                | 0.0             | 13.3 years                | Apr-34          |
| E324   | Accessory Electric Equipment        | 0.0             | 13.3 years                | Apr-34          |
| E325   | Miscellaneous Power Plant Equipment | 0.0             | 13.3 years                | Apr-34          |
| <b>Prairie Island - Interim Storage Facility</b> |                                     |                 |                           |                 |
| E321   | Structures & Improvements           | 0.0             | 13.3 years                | Apr-34          |
| E322   | Reactor Plant Equipment             | 0.0             | 13.3 years                | Apr-34          |

Note: Net salvage for nuclear production is set via the nuclear triennial filings rather than this docket so we show as zero net salvage throughout this filing.

Electric Utility  
Hydro Production

| Account                | Description                         | Net<br>Salvage<br>(%) | Remaining Life<br>01/01/2021 | Retirement<br>date |
|------------------------|-------------------------------------|-----------------------|------------------------------|--------------------|
| <b>Hennepin Island</b> |                                     |                       |                              |                    |
| E302                   | Franchises & Consents               | 0.0                   | 13.2 years                   | Feb-34             |
| E331                   | Structures & Improvements           | -26.7                 | 13.2 years                   | Feb-34             |
| E332                   | Reservoirs, Dams & Waterways        | -26.7                 | 13.2 years                   | Feb-34             |
| E333                   | Water Wheels, Turbines & Generators | -26.7                 | 13.2 years                   | Feb-34             |
| E334                   | Accessory Electric Equipment        | -26.7                 | 13.2 years                   | Feb-34             |
| E335                   | Miscellaneous Power Plant Equipment | -26.7                 | 13.2 years                   | Feb-34             |
| <b>St. Croix Falls</b> |                                     |                       |                              |                    |
| E331                   | Structures & Improvements           | -15.0                 | 7.0 years                    | Dec-27             |
| E332                   | Reservoirs, Dams & Waterways        | -15.0                 | 7.0 years                    | Dec-27             |
| <b>Upper Dam</b>       |                                     |                       |                              |                    |
| E332                   | Reservoirs, Dams & Waterways        | -26.7                 | 13.2 years                   | Feb-34             |
| E335                   | Miscellaneous Power Plant Equipment | -26.7                 | 13.2 years                   | Feb-34             |

Electric Utility  
Other Production

| Account                              | Description                           | Net Salvage (%) | Remaining Life 01/01/2021 | Retirement date |
|--------------------------------------|---------------------------------------|-----------------|---------------------------|-----------------|
| <b>Angus C. Anson Unit 2 &amp; 3</b> |                                       |                 |                           |                 |
| E341                                 | Structures & Improvements             | -6.5            | 24.4 years                | May-45          |
| E342                                 | Fuel Holders, Producers & Accessories | -11.2           | 20.0 years                | Dec-40          |
| E343                                 | Prime Movers                          | -11.2           | 20.0 years                | Dec-40          |
| E344                                 | Generators                            | -11.2           | 20.0 years                | Dec-40          |
| E345                                 | Accessory Electric Equipment          | -11.2           | 20.0 years                | Dec-40          |
| E346                                 | Miscellaneous Power Plant Equipment   | -11.2           | 20.0 years                | Dec-40          |
| <b>Angus C. Anson Unit 4</b>         |                                       |                 |                           |                 |
| E341                                 | Structures & Improvements             | -6.5            | 24.4 years                | May-45          |
| E342                                 | Fuel Holders, Producers & Accessories | -6.5            | 24.4 years                | May-45          |
| E343                                 | Prime Movers                          | -6.5            | 24.4 years                | May-45          |
| E344                                 | Generators                            | -6.5            | 24.4 years                | May-45          |
| E345                                 | Accessory Electric Equipment          | -6.5            | 24.4 years                | May-45          |
| E346                                 | Miscellaneous Power Plant Equipment   | -6.5            | 24.4 years                | May-45          |
| <b>Black Dog Unit 5</b>              |                                       |                 |                           |                 |
| E341                                 | Structures & Improvements             | -10.3           | 37.3 years                | Mar-58          |
| E342                                 | Fuel Holders, Producers & Accessories | -7.2            | 11.0 years                | Dec-31          |
| E343                                 | Prime Movers                          | -7.2            | 11.0 years                | Dec-31          |
| E344                                 | Generators                            | -7.2            | 11.0 years                | Dec-31          |
| E345                                 | Accessory Electric Equipment          | -7.2            | 11.0 years                | Dec-31          |
| E346                                 | Miscellaneous Power Plant Equipment   | -7.2            | 11.0 years                | Dec-31          |
| <b>Black Dog Unit 6</b>              |                                       |                 |                           |                 |
| E341                                 | Structures & Improvements             | -10.3           | 37.3 years                | Mar-58          |
| E342                                 | Fuel Holders, Producers & Accessories | -10.3           | 37.3 years                | Mar-58          |
| E343                                 | Prime Movers                          | -10.3           | 37.3 years                | Mar-58          |
| E344                                 | Generators                            | -10.3           | 37.3 years                | Mar-58          |
| E345                                 | Accessory Electric Equipment          | -10.3           | 37.3 years                | Mar-58          |
| E346                                 | Miscellaneous Power Plant Equipment   | -10.3           | 37.3 years                | Mar-58          |
| <b>Blazing Star I Wind</b>           |                                       |                 |                           |                 |
| E340.1                               | Wind Rights                           | 0.0             | 25.0 years*               | Apr-45          |
| E341                                 | Structures & Improvements             | -11.6           | 25.0 years*               | Apr-45          |
| E342                                 | Fuel Holders, Producers & Accessories | -11.6           | 25.0 years*               | Apr-45          |
| E343                                 | Prime Movers                          | -11.6           | 25.0 years*               | Apr-45          |
| E344                                 | Generators                            | -11.6           | 25.0 years*               | Apr-45          |
| E345                                 | Accessory Electric Equipment          | -11.6           | 25.0 years*               | Apr-45          |
| E346                                 | Miscellaneous Power Plant Equipment   | -11.6           | 25.0 years*               | Apr-45          |
| <b>Blazing Star II Wind</b>          |                                       |                 |                           |                 |
| E340.1                               | Wind Rights                           | 0.0             | 25.0 years*               | *               |
| E341                                 | Structures & Improvements             | -10.5           | 25.0 years*               | *               |
| E342                                 | Fuel Holders, Producers & Accessories | -10.5           | 25.0 years*               | *               |
| E343                                 | Prime Movers                          | -10.5           | 25.0 years*               | *               |
| E344                                 | Generators                            | -10.5           | 25.0 years*               | *               |
| E345                                 | Accessory Electric Equipment          | -10.5           | 25.0 years*               | *               |
| E346                                 | Miscellaneous Power Plant Equipment   | -10.5           | 25.0 years*               | *               |



Electric Utility  
Other Production

| Account                          | Description                           | Net Salvage (%) | Remaining Life 01/01/2021 | Retirement date |
|----------------------------------|---------------------------------------|-----------------|---------------------------|-----------------|
| <b>Blue Lake Units 1 thru 4</b>  |                                       |                 |                           |                 |
| E341                             | Structures & Improvements             | -12.7           | 24.4 years                | May-45          |
| E342                             | Fuel Holders, Producers & Accessories | -30.6           | 2.5 years                 | Jun-23          |
| E343                             | Prime Movers                          | -30.6           | 2.5 years                 | Jun-23          |
| E344                             | Generators                            | -30.6           | 2.5 years                 | Jun-23          |
| E345                             | Accessory Electric Equipment          | -30.6           | 2.5 years                 | Jun-23          |
| E346                             | Miscellaneous Power Plant Equipment   | -30.6           | 2.5 years                 | Jun-23          |
| <b>Blue Lake Units 7 &amp; 8</b> |                                       |                 |                           |                 |
| E341                             | Structures & Improvements             | -12.7           | 24.4 years                | May-45          |
| E342                             | Fuel Holders, Producers & Accessories | -12.7           | 24.4 years                | May-45          |
| E343                             | Prime Movers                          | -12.7           | 24.4 years                | May-45          |
| E344                             | Generators                            | -12.7           | 24.4 years                | May-45          |
| E345                             | Accessory Electric Equipment          | -12.7           | 24.4 years                | May-45          |
| E346                             | Miscellaneous Power Plant Equipment   | -12.7           | 24.4 years                | May-45          |
| <b>Border Winds</b>              |                                       |                 |                           |                 |
| E340.1                           | Wind Rights                           | 0.0             | 20.0 years                | Dec-40          |
| E341                             | Structures & Improvements             | -9.5            | 20.0 years                | Dec-40          |
| E342                             | Fuel Holders, Producers & Accessories | -9.5            | 20.0 years                | Dec-40          |
| E343                             | Prime Movers                          | -9.5            | 20.0 years                | Dec-40          |
| E344                             | Generators                            | -9.5            | 20.0 years                | Dec-40          |
| E345                             | Accessory Electric Equipment          | -9.5            | 20.0 years                | Dec-40          |
| E346                             | Miscellaneous Power Plant Equipment   | -9.5            | 20.0 years                | Dec-40          |
| <b>Courtenay Wind</b>            |                                       |                 |                           |                 |
| E340.1                           | Wind Rights                           | 0.0             | 20.9 years                | Nov-41          |
| E341                             | Structures & Improvements             | -10.4           | 20.9 years                | Nov-41          |
| E342                             | Fuel Holders, Producers & Accessories | -10.4           | 20.9 years                | Nov-41          |
| E343                             | Prime Movers                          | -10.4           | 20.9 years                | Nov-41          |
| E344                             | Generators                            | -10.4           | 20.9 years                | Nov-41          |
| E345                             | Accessory Electric Equipment          | -10.4           | 20.9 years                | Nov-41          |
| E346                             | Miscellaneous Power Plant Equipment   | -10.4           | 20.9 years                | Nov-41          |
| <b>Crowned Ridge Wind</b>        |                                       |                 |                           |                 |
| E340.1                           | Wind Rights                           | 0.0             | 25.0 years*               | *               |
| E341                             | Structures & Improvements             | -10.5           | 25.0 years*               | *               |
| E342                             | Fuel Holders, Producers & Accessories | -10.5           | 25.0 years*               | *               |
| E343                             | Prime Movers                          | -10.5           | 25.0 years*               | *               |
| E344                             | Generators                            | -10.5           | 25.0 years*               | *               |
| E345                             | Accessory Electric Equipment          | -10.5           | 25.0 years*               | *               |
| E346                             | Miscellaneous Power Plant Equipment   | -10.5           | 25.0 years*               | *               |

Electric Utility  
Other Production

| Account                  | Description                           | Net Salvage (%) | Remaining Life 01/01/2021 | Retirement date |
|--------------------------|---------------------------------------|-----------------|---------------------------|-----------------|
| <b>Dakota Range Wind</b> |                                       |                 |                           |                 |
| E340.1                   | Wind Rights                           | 0.0             | 25.0 years*               | *               |
| E341                     | Structures & Improvements             | -10.5           | 25.0 years*               | *               |
| E342                     | Fuel Holders, Producers & Accessories | -10.5           | 25.0 years*               | *               |
| E343                     | Prime Movers                          | -10.5           | 25.0 years*               | *               |
| E344                     | Generators                            | -10.5           | 25.0 years*               | *               |
| E345                     | Accessory Electric Equipment          | -10.5           | 25.0 years*               | *               |
| E346                     | Miscellaneous Power Plant Equipment   | -10.5           | 25.0 years*               | *               |
| <b>Foxtail Wind</b>      |                                       |                 |                           |                 |
| E340.1                   | Wind Rights                           | 0.0             | 24.0 years                | Dec-44          |
| E341                     | Structures & Improvements             | -9.1            | 24.0 years                | Dec-44          |
| E342                     | Fuel Holders, Producers & Accessories | -9.1            | 24.0 years                | Dec-44          |
| E343                     | Prime Movers                          | -9.1            | 24.0 years                | Dec-44          |
| E344                     | Generators                            | -9.1            | 24.0 years                | Dec-44          |
| E345                     | Accessory Electric Equipment          | -9.1            | 24.0 years                | Dec-44          |
| E346                     | Miscellaneous Power Plant Equipment   | -9.1            | 24.0 years                | Dec-44          |
| <b>Freeborn Wind</b>     |                                       |                 |                           |                 |
| E340.1                   | Wind Rights                           | 0.0             | 25.0 years*               | *               |
| E341                     | Structures & Improvements             | -10.5           | 25.0 years*               | *               |
| E342                     | Fuel Holders, Producers & Accessories | -10.5           | 25.0 years*               | *               |
| E343                     | Prime Movers                          | -10.5           | 25.0 years*               | *               |
| E344                     | Generators                            | -10.5           | 25.0 years*               | *               |
| E345                     | Accessory Electric Equipment          | -10.5           | 25.0 years*               | *               |
| E346                     | Miscellaneous Power Plant Equipment   | -10.5           | 25.0 years*               | *               |
| <b>Grand Meadow Wind</b> |                                       |                 |                           |                 |
| E340.1                   | Wind Rights                           | 0.0             | 12.9 years                | Nov-33          |
| E341                     | Structures & Improvements             | -12.5           | 12.9 years                | Nov-33          |
| E342                     | Fuel Holders, Producers & Accessories | -12.5           | 12.9 years                | Nov-33          |
| E343                     | Prime Movers                          | -12.5           | 12.9 years                | Nov-33          |
| E344                     | Generators                            | -12.5           | 12.9 years                | Nov-33          |
| E345                     | Accessory Electric Equipment          | -12.5           | 12.9 years                | Nov-33          |
| E346                     | Miscellaneous Power Plant Equipment   | -12.5           | 12.9 years                | Nov-33          |
| <b>High Bridge</b>       |                                       |                 |                           |                 |
| E341                     | Structures & Improvements             | -4.3            | 27.4 years                | May-48          |
| E342                     | Fuel Holders, Producers & Accessories | -4.3            | 27.4 years                | May-48          |
| E343                     | Prime Movers                          | -4.3            | 27.4 years                | May-48          |
| E344                     | Generators                            | -4.3            | 27.4 years                | May-48          |
| E345                     | Accessory Electric Equipment          | -4.3            | 27.4 years                | May-48          |
| E346                     | Miscellaneous Power Plant Equipment   | -4.3            | 27.4 years                | May-48          |

Electric Utility  
Other Production

| Account                       | Description                           | Net Salvage (%) | Remaining Life 01/01/2021 | Retirement date |
|-------------------------------|---------------------------------------|-----------------|---------------------------|-----------------|
| <b>Inver Hills</b>            |                                       |                 |                           |                 |
| E341                          | Structures & Improvements             | -19.4           | 6.0 years                 | Dec-26          |
| E342                          | Fuel Holders, Producers & Accessories | -19.4           | 6.0 years                 | Dec-26          |
| E343                          | Prime Movers                          | -19.4           | 6.0 years                 | Dec-26          |
| E344                          | Generators                            | -19.4           | 6.0 years                 | Dec-26          |
| E345                          | Accessory Electric Equipment          | -19.4           | 6.0 years                 | Dec-26          |
| E346                          | Miscellaneous Power Plant Equipment   | -19.4           | 6.0 years                 | Dec-26          |
| <b>Lake Benton II Wind</b>    |                                       |                 |                           |                 |
| E340.1                        | Wind Rights                           | 0.0             | 23.9 years                | Nov-44          |
| E341                          | Structures & Improvements             | -10.8           | 23.9 years                | Nov-44          |
| E342                          | Fuel Holders, Producers & Accessories | -10.8           | 23.9 years                | Nov-44          |
| E343                          | Prime Movers                          | -10.8           | 23.9 years                | Nov-44          |
| E344                          | Generators                            | -10.8           | 23.9 years                | Nov-44          |
| E345                          | Accessory Electric Equipment          | -10.8           | 23.9 years                | Nov-44          |
| E346                          | Miscellaneous Power Plant Equipment   | -10.8           | 23.9 years                | Nov-44          |
| <b>Nobles Wind</b>            |                                       |                 |                           |                 |
| E340.1                        | Wind Rights                           | 0.0             | 14.9 years                | Nov-35          |
| E341                          | Structures & Improvements             | -8.5            | 14.9 years                | Nov-35          |
| E342                          | Fuel Holders, Producers & Accessories | -8.5            | 14.9 years                | Nov-35          |
| E343                          | Prime Movers                          | -8.5            | 14.9 years                | Nov-35          |
| E344                          | Generators                            | -8.5            | 14.9 years                | Nov-35          |
| E345                          | Accessory Electric Equipment          | -8.5            | 14.9 years                | Nov-35          |
| E346                          | Miscellaneous Power Plant Equipment   | -8.5            | 14.9 years                | Nov-35          |
| <b>Pleasant Valley Wind</b>   |                                       |                 |                           |                 |
| E340.1                        | Wind Rights                           | 0.0             | 20.0 years                | Dec-40          |
| E341                          | Structures & Improvements             | -11.7           | 20.0 years                | Dec-40          |
| E342                          | Fuel Holders, Producers & Accessories | -11.7           | 20.0 years                | Dec-40          |
| E343                          | Prime Movers                          | -11.7           | 20.0 years                | Dec-40          |
| E344                          | Generators                            | -11.7           | 20.0 years                | Dec-40          |
| E345                          | Accessory Electric Equipment          | -11.7           | 20.0 years                | Dec-40          |
| E346                          | Miscellaneous Power Plant Equipment   | -11.7           | 20.0 years                | Dec-40          |
| <b>Riverside</b>              |                                       |                 |                           |                 |
| E341                          | Structures & Improvements             | -13.2           | 28.2 years                | Mar-49          |
| E342                          | Fuel Holders, Producers & Accessories | -13.2           | 28.2 years                | Mar-49          |
| E343                          | Prime Movers                          | -13.2           | 28.2 years                | Mar-49          |
| E344                          | Generators                            | -13.2           | 28.2 years                | Mar-49          |
| E345                          | Accessory Electric Equipment          | -13.2           | 28.2 years                | Mar-49          |
| E346                          | Miscellaneous Power Plant Equipment   | -13.2           | 28.2 years                | Mar-49          |
| <b>Wind-to-Battery System</b> |                                       |                 |                           |                 |
| E348.1                        | Energy Storage Equipment              | -135.6          | 0.0 years                 | Jan-21          |

\*Note: Remaining Lives shown for Blazing Star I and II, Crowned Ridge, Freeborn, and Dakota Range are as of the facilities' in-service dates, expected in 2020 and 2021.

Electric Utility

Other Production (on acquisition dockets as approved by the Commission)

| Account                     | Description                           | Proposed Net Salvage (%) | Proposed Remaining Life as of Estimated Acquisition Date | Retirement date |
|-----------------------------|---------------------------------------|--------------------------|--|-----------------|
| <b>Community Wind North</b> |                                       |                          |  |                 |
| E340.1                      | Wind Rights                           | 0.0                      | 25.0 years**   | **              |
| E341                        | Structures & Improvements             | -10.5                    | 25.0 years**   | **              |
| E342                        | Fuel Holders, Producers & Accessories | -10.5                    | 25.0 years**   | **              |
| E343                        | Prime Movers                          | -10.5                    | 25.0 years**   | **              |
| E344                        | Generators                            | -10.5                    | 25.0 years**   | **              |
| E345                        | Accessory Electric Equipment          | -10.5                    | 25.0 years**   | **              |
| E346                        | Miscellaneous Power Plant Equipment   | -10.5                    | 25.0 years**   | **              |
| <b>Jeffers Wind</b>         |                                       |                          |  |                 |
| E340.1                      | Wind Rights                           | 0.0                      | 25.0 years**   | **              |
| E341                        | Structures & Improvements             | -10.5                    | 25.0 years**   | **              |
| E342                        | Fuel Holders, Producers & Accessories | -10.5                    | 25.0 years**   | **              |
| E343                        | Prime Movers                          | -10.5                    | 25.0 years**   | **              |
| E344                        | Generators                            | -10.5                    | 25.0 years**   | **              |
| E345                        | Accessory Electric Equipment          | -10.5                    | 25.0 years**   | **              |
| E346                        | Miscellaneous Power Plant Equipment   | -10.5                    | 25.0 years**   | **              |
| <b>Mower Wind</b>           |                                       |                          |  |                 |
| E340.1                      | Wind Rights                           | 0.0                      | 25.0 years**   | **              |
| E341                        | Structures & Improvements             | -10.5                    | 25.0 years**   | **              |
| E342                        | Fuel Holders, Producers & Accessories | -10.5                    | 25.0 years**   | **              |
| E343                        | Prime Movers                          | -10.5                    | 25.0 years**   | **              |
| E344                        | Generators                            | -10.5                    | 25.0 years**   | **              |
| E345                        | Accessory Electric Equipment          | -10.5                    | 25.0 years**   | **              |
| E346                        | Miscellaneous Power Plant Equipment   | -10.5                    | 25.0 years**   | **              |

\*\*Estimated acquisition dates are October 2020 for Community Wind North, August 2020 for Jeffers Wind, and December 2020 for Mower Wind.

Gas Utility  
Gas Production

| Account          | Description               | Net Salvage (%) | Remaining Life 01/01/2021 | Retirement date |
|------------------|---------------------------|-----------------|---------------------------|-----------------|
| <b>Maplewood</b> |                           |                 |                           |                 |
| G305             | Structures & Improvements | -87.7           | 9.0 years                 | Dec-29          |
| G311             | LP Gas Equipment          | -87.7           | 9.0 years                 | Dec-29          |
| G320             | Other Equipment           | -87.7           | 9.0 years                 | Dec-29          |
| <b>Sibley</b>    |                           |                 |                           |                 |
| G305             | Structures & Improvements | -41.1           | 9.0 years                 | Dec-29          |
| G311             | LP Gas Equipment          | -41.1           | 9.0 years                 | Dec-29          |
| G320             | Other Equipment           | -41.1           | 9.0 years                 | Dec-29          |

Gas Utility  
Gas Storage

| Account        | Description                      | Net Salvage (%) | Remaining Life 01/01/2021 | Retirement date |
|----------------|----------------------------------|-----------------|---------------------------|-----------------|
| <b>Wescott</b> |                                  |                 |                           |                 |
| G361           | Structures & Improvements        | -19.6           | 12.0 years                | Dec-32          |
| G362           | Gas Holders                      | -19.6           | 12.0 years                | Dec-32          |
| G363           | Purification Equipment           | -19.6           | 12.0 years                | Dec-32          |
| G363.1         | Liquefaction Equipment           | -19.6           | 12.0 years                | Dec-32          |
| G363.2         | Vaporizing Equipment             | -19.6           | 12.0 years                | Dec-32          |
| G363.3         | Compressor Equipment             | -19.6           | 12.0 years                | Dec-32          |
| G363.4         | Measuring & Regulating Equipment | -19.6           | 12.0 years                | Dec-32          |
| G363.5         | Other Equipment                  | -19.6           | 12.0 years                | Dec-32          |

Northern States Power Company  
Comparison of Present and Approved Lives  
Electric and Gas Utilities Summary - 2021 with Reserve Reallocation

Docket No. E,G002/D-19-723  
Attachment B  
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|  | Plant<br>Balance<br>1/1/2020<br>(1) | Reallocated<br>Reserve<br>Balance<br>1/1/2021 (est.)<br>(2) | Present                              |                              |                         |                                | Proposed                     |                         |                                | Proposed<br>Less<br>Present<br>Expense<br>(10) |
|--|-------------------------------------|---|--------------------------------------|------------------------------|-------------------------|--------------------------------|------------------------------|-------------------------|--------------------------------|--|
|  |                                     |   | Approved<br>Rem Life<br>(Yrs)<br>(3) | Rem.<br>Life<br>(Yrs)<br>(4) | Net<br>Salv<br>%<br>(5) | Depreciation<br>Expense<br>(6) | Rem.<br>Life<br>(Yrs)<br>(7) | Net<br>Salv<br>%<br>(8) | Depreciation<br>Expense<br>(9) |  |
| Total Steam Production<br>(after reserve reallocation) | \$ 2,317,595,273                    | \$ 1,682,683,326  | 10.0                                 | 9.0                          | -10.5                   | \$ 97,282,461                  | 9.2                          | -11.5                   | \$ 98,367,538                  | \$ 1,085,077                                   |
| Total Nuclear Production                               | 4,135,326,218                       | 2,197,287,476   | 12.6                                 | 11.6                         | 0.0                     | 167,658,014                    | 11.6                         | 0.0                     | 167,658,014                    | -  |
| Total Hydro Production                                 | 28,864,079                          | 16,410,907  | 13.7                                 | 12.7                         | -24.8                   | 1,539,499                      | 12.7                         | -25.7                   | 1,568,617                      | 29,118   |
| Total Other Production<br>(after reserve reallocation) | 3,671,555,796                       | 1,138,327,827   | 21.3                                 | 20.3                         | -8.6                    | 140,154,087                    | 20.3                         | -10.2                   | 143,378,806                    | 3,224,719                                      |
| Total Gas Production                                   | 16,985,424                          | 15,431,706  | 10.0                                 | 9.0                          | -84.4                   | 1,765,053                      | 9.0                          | -57.1                   | 1,250,678                      | (514,375)                                      |
| Total Gas Storage                                      | 57,472,081                          | 45,855,614  | 8.0                                  | 7.0                          | -19.2                   | 3,230,249                      | 12.0                         | -19.6                   | 1,904,907                      | (1,325,342)                                    |
| Total Company  | <u>\$ 10,227,798,870</u>            | <u>\$ 5,095,996,856</u>                                     |                                      |                              |                         | <u>\$ 411,629,362</u>          |                              |                         | <u>\$ 414,128,559</u>          | <u>\$ 2,499,198</u>                            |

|   |                     |
|---|---------------------|
| <b>Total Change to Depreciation Expense</b> | <b>\$ 2,499,198</b> |
|---|---------------------|

|  | Beginning<br>Regulatory<br>Balance<br>1/1/2020<br>(1) | Accumulated<br>Amortization<br>1/1/2021 (est.)<br>(2) | Present  |   | Present<br>Amortization<br>Expense<br>(5) | Proposed  |              | Proposed<br>Amortization<br>Expense<br>(7) | Proposed<br>Less<br>Present<br>Expense<br>(8) |
|--|---|---|--|---|---|---|--------------|--|---|
|  |   |   | Approved<br>Amortization<br>Period<br>(Yrs)<br>(3) | Remaining<br>Amortization<br>Period<br>(Yrs)<br>(4) |   | Remaining<br>Amortization<br>Period<br>(Yrs)<br>(6) |              |  |   |
| Total Steam Production - Regulatory Liability Amortization | \$ 47,308,519   | \$ 24,794,703   | 9.3  | 8.3   | \$ 2,713,130                              | 8.3   | \$ 2,713,130 | \$   | -   |

|   |             |
|---|-------------|
| <b>Total Change to Amortization Expense</b> | <b>\$ -</b> |
|---|-------------|

|  |                     |
|--|---------------------|
| <b>Total Change to Depreciation and Amortization Expense</b> | <b>\$ 2,499,198</b> |
|--|---------------------|

Note: All amounts shown in this schedule are represented as Northern States Power Company-Minnesota total company

|                                |    | Reallocated      | Present            |                      |              |             | Proposed      |              |             | Proposed      |                 |
|--------------------------------|----|------------------|--------------------|----------------------|--------------|-------------|---------------|--------------|-------------|---------------|-----------------|
|                                |    | Plant<br>Balance | Reserve<br>Balance | Approved<br>Rem Life | Rem.<br>Life | Net<br>Salv | Depreciation  | Rem.<br>Life | Net<br>Salv | Depreciation  | Less<br>Present |
|                                |    | 1/1/2020         | 1/1/2021 (est.)    | (Yrs)                | (Yrs) *      | %           | Expense       | (Yrs)        | %           | Expense       | Expense         |
|                                |    | (1)              | (2)                | (3)                  | (4)          | (5)         | (6)           | (7)          | (8)         | (9)           | (10)            |
| E311 Structures & Improvements |    |                  |                    |                      |              |             |               |              |             |               |                 |
| Black Dog                      | \$ | -                | \$ 3,502,438       | -                    | -            | N/A         | \$ -          | -            | N/A         | \$ -          | \$ -            |
| Allen S. King                  |    | 39,623,999       | 27,018,877         | 17.5                 | 16.5         | -8.2        | 960,866       | 16.5         | -9.2        | 985,426       | 24,560          |
| Minnesota Valley               |    | -                | 3,535,579          | -                    | -            | N/A         | -             | -            | N/A         | -             | -               |
| Red Wing                       |    | 12,459,336       | 12,992,107         | 8.0                  | 7.0          | -27.8       | 418,703       | 7.0          | -23.5       | 342,005       | (76,699)        |
| Sherco Unit 1 & 2              |    | 95,870,631       | 91,983,089         | 6.0                  | 5.0          | -15.2       | 3,691,976     | 5.0          | -15.1       | 3,674,735     | (17,240)        |
| Sherco Unit 3                  |    | 132,758,983      | 112,958,477        | 15.0                 | 14.0         | -5.4        | 1,926,392     | 14.0         | -7.9        | 2,159,913     | 233,520         |
| Wilmarth                       |    | 11,196,195       | 10,180,625         | 8.0                  | 7.0          | -26.8       | 573,736       | 7.0          | -25.8       | 557,698       | (16,038)        |
| Total/Composite                | \$ | 291,909,144      | \$ 262,171,191     | 9.1                  | 8.1          | -10.8       | \$ 7,571,673  | 8.3          | -11.8       | \$ 7,719,776  | \$ 148,103      |
| E312 Boiler Plant Equipment    |    |                  |                    |                      |              |             |               |              |             |               |                 |
| Black Dog                      | \$ | -                | \$ 4,232,235       | -                    | -            | N/A         | \$ -          | -            | N/A         | \$ -          | \$ -            |
| Allen S. King                  |    | 524,338,681      | 237,395,452        | 17.5                 | 16.5         | -8.2        | 19,996,303    | 16.5         | -9.2        | 20,321,301    | 324,998         |
| Minnesota Valley               |    | -                | 5,566,886          | -                    | -            | N/A         | -             | -            | N/A         | -             | -               |
| Red Wing                       |    | 47,058,942       | 44,599,007         | 8.0                  | 7.0          | -27.8       | 2,220,332     | 7.0          | -23.5       | 1,930,640     | (289,692)       |
| Sherco Unit 1                  |    | 270,883,955      | 227,288,161        | 6.0                  | 5.0          | -15.2       | 16,954,031    | 5.0          | -15.1       | 16,905,318    | (48,713)        |
| Sherco Unit 2                  |    | 161,373,264      | 160,266,133        | 3.0                  | 2.0          | -15.2       | 12,817,933    | 2.0          | -15.1       | 12,745,384    | (72,549)        |
| Sherco Unit 3                  |    | 419,348,026      | 301,337,465        | 15.0                 | 14.0         | -5.4        | 10,046,811    | 14.0         | -7.9        | 10,784,436    | 737,625         |
| Wilmarth                       |    | 41,907,289       | 43,194,943         | 8.0                  | 7.0          | -26.8       | 1,420,500     | 7.0          | -25.8       | 1,360,470     | (60,030)        |
| Total/Composite                | \$ | 1,464,910,157    | \$ 1,023,880,281   | 10.4                 | 9.4          | -10.6       | \$ 63,455,910 | 9.5          | -11.5       | \$ 64,047,549 | \$ 591,639      |
| E314 Turbogenerator Units      |    |                  |                    |                      |              |             |               |              |             |               |                 |
| Black Dog                      | \$ | -                | \$ 2,978,621       | -                    | -            | N/A         | \$ -          | -            | N/A         | \$ -          | \$ -            |
| Allen S. King                  |    | 94,114,439       | 46,512,118         | 17.5                 | 16.5         | -8.2        | 3,352,709     | 16.5         | -9.2        | 3,411,044     | 58,334          |
| Minnesota Valley               |    | -                | 1,881,280          | -                    | -            | N/A         | -             | -            | N/A         | -             | -               |
| Red Wing                       |    | 3,298,153        | 3,411,269          | 8.0                  | 7.0          | -27.8       | 114,824       | 7.0          | -23.5       | 94,521        | (20,303)        |
| Sherco Unit 1                  |    | 68,165,351       | 53,784,941         | 6.0                  | 5.0          | -15.2       | 4,948,309     | 5.0          | -15.1       | 4,936,051     | (12,258)        |
| Sherco Unit 2                  |    | 58,557,751       | 56,472,852         | 3.0                  | 2.0          | -15.2       | 5,492,839     | 2.0          | -15.1       | 5,466,513     | (26,326)        |
| Sherco Unit 3                  |    | 88,618,830       | 53,564,655         | 15.0                 | 14.0         | -5.4        | 2,845,685     | 14.0         | -7.9        | 3,001,564     | 155,879         |
| Wilmarth                       |    | 6,214,894        | 4,714,259          | 8.0                  | 7.0          | -26.8       | 452,318       | 7.0          | -25.8       | 443,416       | (8,903)         |
| Total/Composite                | \$ | 318,969,418      | \$ 223,319,995     | 8.6                  | 7.6          | -10.8       | \$ 17,206,685 | 7.7          | -11.7       | \$ 17,353,108 | \$ 146,423      |

|   | Plant<br>Balance<br>1/1/2020<br>(1)                   | Reallocated<br>Reserve<br>Balance<br>1/1/2021 (est.)<br>(2) | Approved<br>Rem Life<br>(Yrs)<br>(3)                 | Rem.<br>Life<br>(Yrs) *<br>(4)                        | Net<br>Salv<br>%<br>(5) | Depreciation<br>Expense<br>(6)            | Rem.<br>Life<br>(Yrs)<br>(7)                        | Net<br>Salv<br>%<br>(8) | Depreciation<br>Expense<br>(9)             | Proposed<br>Less<br>Present<br>Expense<br>(10) |
|---|---|---|--|---|-------------------------|---|---|-------------------------|--|--|
| <b>E315 Accessory Electric Equipment</b>        |   |   |  |   |                         |   |   |                         |  |  |
| Black Dog                                       | \$ -  | \$ 1,126,512  | -  | -   | N/A                     | \$ -                                      | -   | N/A                     | \$ -                                       | \$ -   |
| Allen S. King                                   | 46,992,609  | 20,265,870  | 17.5   | 16.5  | -8.2                    | 1,853,341                                 | 16.5  | -9.2                    | 1,882,469                                  | 29,127   |
| Minnesota Valley                                | -   | 521,324   | -  | -   | N/A                     | -   | -   | N/A                     | -  | -  |
| Red Wing  | 1,905,550   | 2,069,389   | 8.0  | 7.0   | -27.8                   | 52,272                                    | 7.0   | -23.5                   | 40,542                                     | (11,730)                                       |
| Sherco Unit 1                                   | 46,972,885  | 41,787,005  | 6.0  | 5.0   | -15.2                   | 2,465,152                                 | 5.0   | -15.1                   | 2,456,705                                  | (8,447)  |
| Sherco Unit 2                                   | 6,761,209   | 6,184,609   | 3.0  | 2.0   | -15.2                   | 802,152                                   | 2.0   | -15.1                   | 799,112                                    | (3,040)  |
| Sherco Unit 3                                   | 83,566,721  | 55,887,358  | 15.0   | 14.0  | -5.4                    | 2,299,426                                 | 14.0  | -7.9                    | 2,446,418                                  | 146,992  |
| Wilmarth  | 1,541,817   | 1,584,687   | 8.0  | 7.0   | -26.8                   | 52,905                                    | 7.0   | -25.8                   | 50,697                                     | (2,209)  |
| Total/Composite                                 | \$ 187,740,791  | \$ 129,426,754  | 11.1   | 10.1  | -9.3                    | \$ 7,525,249                              | 10.2  | -10.6                   | \$ 7,675,942                               | \$ 150,694                                     |
| <b>E316 Miscellaneous Power Plant Equipment</b> |   |   |  |   |                         |   |   |                         |  |  |
| Black Dog                                       | \$ -  | \$ 360,512  | -  | -   | N/A                     | \$ -                                      | -   | N/A                     | \$ -                                       | \$ -   |
| Allen S. King                                   | 7,894,024   | 6,278,513   | 17.5   | 16.5  | -8.2                    | 137,141                                   | 16.5  | -9.2                    | 142,034                                    | 4,893  |
| Minnesota Valley                                | -   | 266,137   | -  | -   | N/A                     | -   | -   | N/A                     | -  | -  |
| Red Wing  | 1,470,455   | 1,373,789   | 8.0  | 7.0   | -27.8                   | 72,207                                    | 7.0   | -23.5                   | 63,155                                     | (9,052)  |
| Sherco Unit 1                                   | 12,195,600  | 11,107,757  | 6.0  | 5.0   | -15.2                   | 588,315                                   | 5.0   | -15.1                   | 586,122                                    | (2,193)  |
| Sherco Unit 2                                   | 42,219  | 24,561  | 3.0  | 2.0   | -15.2                   | 12,037                                    | 2.0   | -15.1                   | 12,019                                     | (19)   |
| Sherco Unit 3                                   | 31,675,940  | 23,549,479  | 15.0   | 14.0  | -5.4                    | 702,640                                   | 14.0  | -7.9                    | 758,357                                    | 55,717   |
| Wilmarth  | 787,526   | 924,357   | 8.0  | 7.0   | -26.8                   | 10,604                                    | 7.0   | -25.8                   | 9,475                                      | (1,128)  |
| Total/Composite                                 | \$ 54,065,763   | \$ 43,885,105   | 10.9   | 9.9   | -8.9                    | \$ 1,522,944                              | 10.1  | -10.4                   | \$ 1,571,162                               | \$ 48,218                                      |
| Total Steam Production - Depreciation           | \$ 2,317,595,273                                      | \$ 1,682,683,326  | 10.0   | 9.0   | -10.5                   | \$ 97,282,461                             | 9.2   | -11.5                   | \$ 98,367,538                              | \$ 1,085,077                                   |
|   | Beginning<br>Regulatory<br>Balance<br>1/1/2020<br>(1) | Accumulated<br>Amortization<br>1/1/2021 (est.)<br>(2)       | Approved<br>Amortization<br>Period<br>(Yrs)**<br>(3) | Remaining<br>Amortization<br>Period<br>(Yrs) *<br>(4) |                         | Present<br>Amortization<br>Expense<br>(5) | Remaining<br>Amortization<br>Period<br>(Yrs)<br>(6) |                         | Proposed<br>Amortization<br>Expense<br>(7) | Proposed<br>Less<br>Present<br>Expense<br>(8)  |
| <b>Regulatory Liability Amortizations</b>       |   |   |  |   |                         |   |   |                         |  |  |
| Black Dog Remediation                           | \$ 33,150,000   | \$ 17,680,000   | 15.0   | 7.0   |                         | \$ 2,210,000                              | 7.0   |                         | \$ 2,210,000                               | \$ -   |
| Sherco Unit 3 Deferral                          | 14,158,519  | 7,114,703   | 21.0   | 14.0  |                         | 503,130                                   | 14.0  |                         | 503,130                                    | -  |
| Total Steam Production - Amortization           | \$ 47,308,519   | \$ 24,794,703   | 9.3  | 8.3   |                         | \$ 2,713,130                              | 8.3   |                         | \$ 2,713,130                               | \$ -   |
| Total Steam Production                          | \$ 2,364,903,792                                      | \$ 1,707,478,029  | 10.1   | 9.1   | -10.5                   | \$ 99,995,591                             | 9.2   | -11.5                   | \$ 101,080,668                             | \$ 1,085,077                                   |

\*Remaining life as of 1/1/2021 due to passage of time.

\*\*The Black Dog Remediation amortization period was set at 15 years beginning in 2013 per Docket No. E002/GR-12-961. The Sherco Unit 3 Deferral amortization period was set at 21 years beginning in 2014 per Docket No. E,G-002/D-14-181.



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|                            |                           | Present          |                    |                      |              |             | Proposed     |              |             | Proposed     |                 |    |            |    |   |
|----------------------------|---------------------------|------------------|--------------------|----------------------|--------------|-------------|--------------|--------------|-------------|--------------|-----------------|----|------------|----|---|
|                            |                           | Plant<br>Balance | Reserve<br>Balance | Approved<br>Rem Life | Rem.<br>Life | Net<br>Salv | Depreciation | Rem.<br>Life | Net<br>Salv | Depreciation | Less<br>Present |    |            |    |   |
|                            |                           | 1/1/2020         | 1/1/2021 (est.)    | (Yrs)                | (Yrs) *      | %           | Expense      | (Yrs)        | %           | Expense      | Expense         |    |            |    |   |
|                            |                           | (1)              | (2)                | (3)                  | (4)          | (5)         | (6)          | (7)          | (8)         | (9)          | (10)            |    |            |    |   |
| E302                       | Franchises & Consents     |                  |                    |                      |              |             |              |              |             |              |                 |    |            |    |   |
| Monticello                 | \$                        | 126,131,581      | \$                 | 58,402,746           | 10.8         | 9.8         | 0.0          | \$           | 6,911,106   | 9.8          | 0.0             | \$ | 6,911,106  | \$ | - |
| Prairie Island Unit 1 & 2  |                           | 125,101,238      |                    | 45,126,822           | 14.3         | 13.3        | 0.0          |              | 6,013,114   | 13.3         | 0.0             |    | 6,013,114  |    | - |
| Total/Composite            | \$                        | 251,232,819      | \$                 | 103,529,568          | 12.4         | 11.4        | 0.0          | \$           | 12,924,220  | 11.4         | 0.0             | \$ | 12,924,220 | \$ | - |
| E321                       | Structures & Improvements |                  |                    |                      |              |             |              |              |             |              |                 |    |            |    |   |
| Monticello                 | \$                        | 233,941,435      | \$                 | 145,720,929          | 10.8         | 9.8         | 0.0          | \$           | 9,002,092   | 9.8          | 0.0             | \$ | 9,002,092  | \$ | - |
| Monticello Interim Storage |                           | 31,313,964       |                    | 16,641,498           | 10.8         | 9.8         | 0.0          |              | 1,497,190   | 9.8          | 0.0             |    | 1,497,190  |    | - |
| Prairie Island Unit 1 & 2  |                           | 302,588,977      |                    | 195,198,883          | 14.3         | 13.3        | 0.0          |              | 8,074,443   | 13.3         | 0.0             |    | 8,074,443  |    | - |
| PI Interim Storage         |                           | 12,214,473       |                    | 11,434,621           | 14.3         | 13.3        | 0.0          |              | 58,636      | 13.3         | 0.0             |    | 58,636     |    | - |
| Total/Composite            | \$                        | 580,058,850      | \$                 | 368,995,931          | 12.3         | 11.3        | 0.0          | \$           | 18,632,362  | 11.3         | 0.0             | \$ | 18,632,362 | \$ | - |
| E322                       | Reactor Plant Equipment   |                  |                    |                      |              |             |              |              |             |              |                 |    |            |    |   |
| Monticello                 | \$                        | 669,117,932      | \$                 | 386,794,745          | 10.8         | 9.8         | 0.0          | \$           | 28,808,489  | 9.8          | 0.0             | \$ | 28,808,489 | \$ | - |
| Monticello Interim Storage |                           | 91,295,351       |                    | 26,274,717           | 10.8         | 9.8         | 0.0          |              | 6,634,759   | 9.8          | 0.0             |    | 6,634,759  |    | - |
| Prairie Island Unit 1 & 2  |                           | 962,633,955      |                    | 482,295,107          | 14.3         | 13.3        | 0.0          |              | 36,115,703  | 13.3         | 0.0             |    | 36,115,703 |    | - |
| PI Interim Storage         |                           | 185,608,265      |                    | 79,807,265           | 14.3         | 13.3        | 0.0          |              | 7,954,962   | 13.3         | 0.0             |    | 7,954,962  |    | - |
| Total/Composite            | \$                        | 1,908,655,504    | \$                 | 975,171,834          | 12.7         | 11.7        | 0.0          | \$           | 79,513,912  | 11.7         | 0.0             | \$ | 79,513,912 | \$ | - |
| E323                       | Turbogenerator Units      |                  |                    |                      |              |             |              |              |             |              |                 |    |            |    |   |
| Monticello                 | \$                        | 258,318,636      | \$                 | 128,872,589          | 10.8         | 9.8         | 0.0          | \$           | 13,208,780  | 9.8          | 0.0             | \$ | 13,208,780 | \$ | - |
| Prairie Island Unit 1 & 2  |                           | 375,496,854      |                    | 178,540,175          | 14.3         | 13.3        | 0.0          |              | 14,808,773  | 13.3         | 0.0             |    | 14,808,773 |    | - |
| Total/Composite            | \$                        | 633,815,490      | \$                 | 307,412,764          | 12.6         | 11.6        | 0.0          | \$           | 28,017,553  | 11.6         | 0.0             | \$ | 28,017,553 | \$ | - |

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|                           |                                     | Present                 |                      |              |             |                       | Proposed     |             |                       | Proposed        |
|---------------------------|-------------------------------------|-------------------------|----------------------|--------------|-------------|-----------------------|--------------|-------------|-----------------------|-----------------|
|                           | Plant<br>Balance                    | Reserve<br>Balance      | Approved<br>Rem Life | Rem.<br>Life | Net<br>Salv | Depreciation          | Rem.<br>Life | Net<br>Salv | Depreciation          | Less<br>Present |
|                           | 1/1/2020                            | 1/1/2021 (est.)         | (Yrs)                | (Yrs) *      | %           | Expense               | (Yrs)        | %           | Expense               | Expense         |
|                           | (1)                                 | (2)                     | (3)                  | (4)          | (5)         | (6)                   | (7)          | (8)         | (9)                   | (10)            |
| E324                      | Accessory Electric Equipment        |                         |                      |              |             |                       |              |             |                       |                 |
| Monticello                | \$ 257,323,276                      | \$ 118,052,500          | 10.8                 | 9.8          | 0.0         | \$ 14,211,304         | 9.8          | 0.0         | \$ 14,211,304         | \$ -            |
| Prairie Island Unit 1 & 2 | 296,606,398                         | 190,659,858             | 14.3                 | 13.3         | 0.0         | 7,965,905             | 13.3         | 0.0         | 7,965,905             | -               |
| Total/Composite           | <u>\$ 553,929,673</u>               | <u>\$ 308,712,358</u>   | <u>12.1</u>          | <u>11.1</u>  | <u>0.0</u>  | <u>\$ 22,177,209</u>  | <u>11.1</u>  | <u>0.0</u>  | <u>\$ 22,177,209</u>  | <u>\$ -</u>     |
| E325                      | Miscellaneous Power Plant Equipment |                         |                      |              |             |                       |              |             |                       |                 |
| Monticello                | \$ 89,482,568                       | \$ 59,089,064           | 10.8                 | 9.8          | 0.0         | \$ 3,101,378          | 9.8          | 0.0         | \$ 3,101,378          | \$ -            |
| Prairie Island Unit 1 & 2 | 118,151,314                         | 74,375,958              | 14.3                 | 13.3         | 0.0         | 3,291,380             | 13.3         | 0.0         | 3,291,380             | -               |
| Total/Composite           | <u>\$ 207,633,882</u>               | <u>\$ 133,465,022</u>   | <u>12.6</u>          | <u>11.6</u>  | <u>0.0</u>  | <u>\$ 6,392,758</u>   | <u>11.6</u>  | <u>0.0</u>  | <u>\$ 6,392,758</u>   | <u>\$ -</u>     |
| Total Nuclear Production  | <u>\$ 4,135,326,218</u>             | <u>\$ 2,197,287,476</u> | <u>12.6</u>          | <u>11.6</u>  | <u>0.0</u>  | <u>\$ 167,658,014</u> | <u>11.6</u>  | <u>0.0</u>  | <u>\$ 167,658,014</u> | <u>\$ -</u>     |

\*Remaining life as of 1/1/2021 due to passage of time.

|                        |                                     |            | Present  |            |      |              | Proposed |      |              | Proposed |       |      |           |    |        |
|------------------------|-------------------------------------|------------|----------|------------|------|--------------|----------|------|--------------|----------|-------|------|-----------|----|--------|
|                        |                                     |            | Approved | Rem.       | Net  |              | Rem.     | Net  |              | Less     |       |      |           |    |        |
|                        |                                     |            | Rem Life | Life       | Salv | Depreciation | Life     | Salv | Depreciation | Present  |       |      |           |    |        |
|                        |                                     |            | (Yrs)    | (Yrs) *    | %    | Expense      | (Yrs)    | %    | Expense      | Expense  |       |      |           |    |        |
|                        |                                     |            | (1)      | (2)        | (3)  | (4)          | (5)      | (6)  | (7)          | (8)      | (9)   | (10) |           |    |        |
| E302                   | Franchises & Consents               |            |          |            |      |              |          |      |              |          |       |      |           |    |        |
| Hennepin Island        | \$                                  | 2,857,039  | \$       | 1,450,225  | 14.2 | 13.2         | 0.0      | \$   | 106,577      | 13.2     | 0.0   | \$   | 106,577   | \$ | -      |
| Total/Composite        | \$                                  | 2,857,039  | \$       | 1,450,225  | 14.2 | 13.2         | 0.0      | \$   | 106,577      | 13.2     | 0.0   | \$   | 106,577   | \$ | -      |
| E331                   | Structures & Improvements           |            |          |            |      |              |          |      |              |          |       |      |           |    |        |
| Hennepin Island        | \$                                  | 1,407,680  | \$       | 855,119    | 14.2 | 13.2         | -26.4    | \$   | 70,014       | 13.2     | -26.7 | \$   | 70,333    | \$ | 319    |
| St Croix Falls         |                                     | 37,924     |          | 41,307     | 8.0  | 7.0          | -7.5     |      | (77)         | 7.0      | -15.0 |      | 329       |    | 406    |
| Total/Composite        | \$                                  | 1,445,604  | \$       | 896,425    | 14.2 | 13.2         | -25.9    | \$   | 69,937       | 13.2     | -26.4 | \$   | 70,663    | \$ | 725    |
| E332                   | Reservoirs, Dams & Waterways        |            |          |            |      |              |          |      |              |          |       |      |           |    |        |
| Hennepin Island        | \$                                  | 4,398,484  | \$       | 2,301,472  | 14.2 | 13.2         | -26.4    | \$   | 246,834      | 13.2     | -26.7 | \$   | 247,831   | \$ | 997    |
| St Croix Falls         |                                     | 2,176,614  |          | 735,079    | 8.0  | 7.0          | -7.5     |      | 229,254      | 7.0      | -15.0 |      | 252,575   |    | 23,321 |
| Upper Dam              |                                     | 4,491,476  |          | 4,272,263  | 14.2 | 13.2         | -26.4    |      | 106,437      | 13.2     | -26.7 |      | 107,454   |    | 1,018  |
| Total/Composite        | \$                                  | 11,066,573 | \$       | 7,308,813  | 11.8 | 10.8         | -22.7    | \$   | 582,525      | 10.6     | -24.4 | \$   | 607,860   | \$ | 25,335 |
| E333                   | Water Wheels, Turbines & Generators |            |          |            |      |              |          |      |              |          |       |      |           |    |        |
| Hennepin Island        | \$                                  | 10,177,067 | \$       | 4,990,221  | 14.2 | 13.2         | -26.4    | \$   | 596,484      | 13.2     | -26.7 | \$   | 598,790   | \$ | 2,306  |
| Total/Composite        | \$                                  | 10,177,067 | \$       | 4,990,221  | 14.2 | 13.2         | -26.4    | \$   | 596,484      | 13.2     | -26.7 | \$   | 598,790   | \$ | 2,306  |
| E334                   | Accessory Electric Equipment        |            |          |            |      |              |          |      |              |          |       |      |           |    |        |
| Hennepin Island        | \$                                  | 3,256,972  | \$       | 1,696,607  | 14.2 | 13.2         | -26.4    | \$   | 183,349      | 13.2     | -26.7 | \$   | 184,087   | \$ | 738    |
| Total/Composite        | \$                                  | 3,256,972  | \$       | 1,696,607  | 14.2 | 13.2         | -26.4    | \$   | 183,349      | 13.2     | -26.7 | \$   | 184,087   | \$ | 738    |
| E335                   | Miscellaneous Power Plant Equipment |            |          |            |      |              |          |      |              |          |       |      |           |    |        |
| Hennepin Island        | \$                                  | 37,779     | \$       | 42,527     | 14.2 | 13.2         | -26.4    | \$   | 396          | 13.2     | -26.7 | \$   | 404       | \$ | 9      |
| Upper Dam              |                                     | 23,046     |          | 26,089     | 14.2 | 13.2         | -26.4    |      | 230          | 13.2     | -26.7 |      | 236       |    | 5      |
| Total/Composite        | \$                                  | 60,824     | \$       | 68,616     | 14.2 | 13.2         | -26.4    | \$   | 626          | 13.2     | -26.7 | \$   | 640       | \$ | 14     |
| Total Hydro Production | \$                                  | 28,864,079 | \$       | 16,410,907 | 13.7 | 12.7         | -24.8    | \$   | 1,539,499    | 12.7     | -25.7 | \$   | 1,568,617 | \$ | 29,118 |

\*Remaining life as of 1/1/2021 due to passage of time.

|  |    | Reallocated                  | Present                               |                               |                         |                  | Proposed                |                       |                  | Proposed                |                            |
|--|----|------------------------------|---------------------------------------|-------------------------------|-------------------------|------------------|-------------------------|-----------------------|------------------|-------------------------|----------------------------|
|  |    | Plant<br>Balance<br>1/1/2020 | Reserve<br>Balance<br>1/1/2021 (est.) | Approved<br>Rem Life<br>(Yrs) | Rem.<br>Life<br>(Yrs) * | Net<br>Salv<br>% | Depreciation<br>Expense | Rem.<br>Life<br>(Yrs) | Net<br>Salv<br>% | Depreciation<br>Expense | Less<br>Present<br>Expense |
|  |    | (1)                          | (2)                                   | (3)                           | (4)                     | (5)              | (6)                     | (7)                   | (8)              | (9)                     | (10)                       |
| E340.1 Wind Rights                         |    |                              |                                       |                               |                         |                  |                         |                       |                  |                         |                            |
| Border Winds                               | \$ | -                            | \$ -                                  | 21.0                          | 20.0                    | 0.0              | \$ -                    | 20.0                  | 0.0              | \$ -                    | \$ -                       |
| Courtenay Wind                             |    | 2,085,661                    | 343,678                               | 21.9                          | 20.9                    | 0.0              | 83,348                  | 20.9                  | 0.0              | 83,348                  | -                          |
| Grand Meadow Wind                          |    | 10,672,452                   | 4,492,343                             | 13.9                          | 12.9                    | 0.0              | 479,078                 | 12.9                  | 0.0              | 479,078                 | -                          |
| Nobles Wind                                |    | 3,884,834                    | 1,550,618                             | 15.9                          | 14.9                    | 0.0              | 156,659                 | 14.9                  | 0.0              | 156,659                 | -                          |
| Pleasant Valley Wind                       |    | -                            | -                                     | 21.0                          | 20.0                    | 0.0              | -                       | 20.0                  | 0.0              | -                       | -                          |
| Foxtail Wind**                             |    | -                            | -                                     | 25.0                          | 24.0                    | 0.0              | -                       | 24.0                  | 0.0              | -                       | -                          |
| Lake Benton II Wind**                      |    | 146,853                      | 6,601                                 | 24.9                          | 23.9                    | 0.0              | 5,868                   | 23.9                  | 0.0              | 5,868                   | -                          |
| Total/Composite                            | \$ | 16,789,800                   | \$ 6,393,240                          | 15.3                          | 14.3                    | 0.0              | \$ 724,954              | 14.3                  | 0.0              | \$ 724,954              | \$ -                       |
| E341 Structures & Improvements             |    |                              |                                       |                               |                         |                  |                         |                       |                  |                         |                            |
| Angus C. Anson Units 2 thru 4              | \$ | 7,721,804                    | \$ 5,632,856                          | 25.4                          | 24.4                    | -6.5             | \$ 106,183              | 24.4                  | -6.5             | \$ 106,197              | \$ 15                      |
| Black Dog Unit 5                           |    | 42,792,538                   | 27,913,729                            | 38.3                          | 37.3                    | -11.4            | 529,683                 | 37.3                  | -10.3            | 517,339                 | (12,344)                   |
| Black Dog Unit 6                           |    | 13,806,954                   | 5,120,875                             | 38.3                          | 37.3                    | -5.0             | 251,379                 | 37.3                  | -10.3            | 271,086                 | 19,707                     |
| Blue Lake Units 1 thru 4, 7 & 8            |    | 1,703,454                    | 1,371,930                             | 25.4                          | 24.4                    | -11.7            | 21,755                  | 24.4                  | -12.7            | 22,460                  | 705                        |
| Border Winds                               |    | 22,226,432                   | 4,842,044                             | 21.0                          | 20.0                    | -8.5             | 963,682                 | 20.0                  | -9.5             | 974,391                 | 10,709                     |
| Courtenay Wind                             |    | 7,621,664                    | 1,339,623                             | 21.9                          | 20.9                    | -8.5             | 331,573                 | 20.9                  | -10.4            | 338,524                 | 6,950                      |
| Grand Meadow Wind                          |    | 5,589,546                    | 2,809,281                             | 13.9                          | 12.9                    | -11.1            | 263,621                 | 12.9                  | -12.5            | 269,646                 | 6,026                      |
| Granite City                               |    | 1,241,718                    | 1,867,544                             | -                             | -                       | -50.4            | -                       | -                     | -50.4            | -                       | -                          |
| High Bridge                                |    | 71,113,002                   | 20,213,421                            | 28.4                          | 27.4                    | -3.5             | 1,948,487               | 27.4                  | -4.3             | 1,968,575               | 20,089                     |
| Inver Hills                                |    | 1,618,514                    | 1,184,525                             | 7.0                           | 6.0                     | -18.3            | 121,696                 | 6.0                   | -19.4            | 124,751                 | 3,055                      |
| Key City                                   |    | 1,002,265                    | 1,479,342                             | -                             | -                       | N/A              | -                       | -                     | N/A              | -                       | -                          |
| Nobles Wind                                |    | 13,536,911                   | 6,063,374                             | 15.9                          | 14.9                    | -6.0             | 556,091                 | 14.9                  | -8.5             | 578,439                 | 22,348                     |
| Pleasant Valley Wind                       |    | 25,806,960                   | 5,734,463                             | 21.0                          | 20.0                    | -8.5             | 1,113,304               | 20.0                  | -11.7            | 1,154,071               | 40,766                     |
| Riverside                                  |    | 52,441,362                   | 28,204,982                            | 29.2                          | 28.2                    | -11.3            | 1,069,583               | 28.2                  | -13.2            | 1,104,948               | 35,364                     |
| Foxtail Wind**                             |    | 33,969,734                   | 1,533,062                             | 25.0                          | 24.0                    | -8.5             | 1,471,837               | 24.0                  | -9.1             | 1,479,866               | 8,028                      |
| Lake Benton II Wind**                      |    | 32,138,690                   | 1,569,582                             | 24.9                          | 23.9                    | -8.5             | 1,393,343               | 23.9                  | -10.8            | 1,423,820               | 30,477                     |
| Total/Composite                            | \$ | 334,331,548                  | \$ 116,880,634                        | 25.1                          | 24.1                    | -8.2             | \$ 10,142,217           | 24.1                  | -9.5             | \$ 10,334,113           | \$ 191,896                 |
| E342 Fuel Holders, Producers & Accessories |    |                              |                                       |                               |                         |                  |                         |                       |                  |                         |                            |
| Angus C. Anson Unit 2 & 3                  | \$ | 1,105,599                    | \$ 966,998                            | 21.0                          | 20.0                    | -9.6             | \$ 12,237               | 20.0                  | -11.2            | \$ 13,105               | \$ 868                     |
| Angus C. Anson Unit 4                      |    | 13,506                       | 423                                   | 25.4                          | 24.4                    | -6.5             | 572                     | 24.4                  | -6.5             | 572                     | 0                          |
| Black Dog Unit 5                           |    | 12,546,877                   | 9,965,010                             | 12.0                          | 11.0                    | -11.4            | 364,746                 | 11.0                  | -7.2             | 316,666                 | (48,081)                   |
| Black Dog Unit 6                           |    | 9,512,175                    | 697,114                               | 38.3                          | 37.3                    | -5.0             | 249,080                 | 37.3                  | -10.3            | 262,657                 | 13,577                     |
| Blue Lake Units 1 thru 4                   |    | 1,343,354                    | 1,618,329                             | 3.5                           | 2.5                     | -22.9            | 13,061                  | 2.5                   | -30.6            | 54,400                  | 41,339                     |
| Blue Lake Units 7 & 8                      |    | 47,986                       | (18,295)                              | 25.4                          | 24.4                    | -11.7            | 2,947                   | 24.4                  | -12.7            | 2,966                   | 20                         |
| Granite City                               |    | 416,373                      | 626,225                               | -                             | -                       | -50.4            | -                       | -                     | -50.4            | -                       | -                          |
| High Bridge                                |    | 232,410                      | 26,928                                | 28.4                          | 27.4                    | -3.5             | 7,796                   | 27.4                  | -4.3             | 7,862                   | 66                         |
| Inver Hills                                |    | 614,949                      | 556,144                               | 7.0                           | 6.0                     | -18.3            | 28,557                  | 6.0                   | -19.4            | 29,717                  | 1,161                      |
| Key City                                   |    | 242,384                      | 357,759                               | -                             | -                       | N/A              | -                       | -                     | N/A              | -                       | -                          |
| Riverside                                  |    | 1,033,460                    | 160,711                               | 29.2                          | 28.2                    | -11.3            | 35,090                  | 28.2                  | -13.2            | 35,787                  | 697                        |
| Total/Composite                            | \$ | 27,109,072                   | \$ 14,957,347                         | 21.9                          | 20.9                    | -10.2            | \$ 714,085              | 20.8                  | -10.7            | \$ 723,732              | \$ 9,646                   |

|                                   | Plant<br>Balance<br>1/1/2020<br>(1) | Reallocated<br>Reserve<br>Balance<br>1/1/2021 (est.)<br>(2) | Approved<br>Rem Life<br>(Yrs)<br>(3) | Rem.<br>Life<br>(Yrs) *<br>(4) | Net<br>Salv<br>%<br>(5) | Depreciation<br>Expense<br>(6) | Rem.<br>Life<br>(Yrs)<br>(7) | Net<br>Salv<br>%<br>(8) | Depreciation<br>Expense<br>(9) | Proposed<br>Less<br>Present<br>Expense<br>(10) |
|-----------------------------------|-------------------------------------|---|--------------------------------------|--------------------------------|-------------------------|--------------------------------|------------------------------|-------------------------|--------------------------------|--|
| E343 Prime Movers                 |                                     |   |                                      |                                |                         |                                |                              |                         |                                |  |
| Black Dog Unit 5                  | \$ 23,430,244                       | \$ 14,121,273   | 12.0                                 | 11.0                           | -11.4                   | \$ 1,089,093                   | 11.0                         | -7.2                    | \$ 999,306                     | \$ (89,786)                                    |
| High Bridge                       | 66,361,540                          | 19,394,701  | 28.4                                 | 27.4                           | -3.5                    | 1,798,887                      | 27.4                         | -4.3                    | 1,817,633                      | 18,746   |
| Riverside                         | 50,662,922                          | 14,292,677  | 29.2                                 | 28.2                           | -11.3                   | 1,492,736                      | 28.2                         | -13.2                   | 1,526,901                      | 34,165   |
| Total/Composite                   | \$ 140,454,706                      | \$ 47,808,651   | 24.6                                 | 23.6                           | -7.6                    | \$ 4,380,715                   | 23.9                         | -8.0                    | \$ 4,343,840                   | \$ (36,875)                                    |
| E344 Generators                   |                                     |   |                                      |                                |                         |                                |                              |                         |                                |  |
| Angus C. Anson Unit 2 & 3         | \$ 79,691,780                       | \$ 64,863,982   | 21.0                                 | 20.0                           | -9.6                    | \$ 1,123,910                   | 20.0                         | -11.2                   | \$ 1,186,478                   | \$ 62,567                                      |
| Angus C. Anson Unit 4             | 33,545,732                          | 15,964,280  | 25.4                                 | 24.4                           | -6.5                    | 809,915                        | 24.4                         | -6.5                    | 809,978                        | 63   |
| Black Dog Unit 5                  | 127,512,984                         | 59,451,972  | 12.0                                 | 11.0                           | -11.4                   | 7,508,863                      | 11.0                         | -7.2                    | 7,020,224                      | (488,639)                                      |
| Black Dog Unit 6                  | 62,269,695                          | 5,301,741   | 38.3                                 | 37.3                           | -5.0                    | 1,610,762                      | 37.3                         | -10.3                   | 1,699,644                      | 88,881   |
| Blue Lake Units 1 thru 4          | 21,207,661                          | 25,773,700  | 3.5                                  | 2.5                            | -22.9                   | 116,206                        | 2.5                          | -30.6                   | 768,822                        | 652,616  |
| Blue Lake Units 7 & 8             | 62,361,317                          | 31,007,389  | 25.4                                 | 24.4                           | -11.7                   | 1,584,025                      | 24.4                         | -12.7                   | 1,609,824                      | 25,800   |
| Border Winds                      | 207,402,451                         | 44,665,442  | 21.0                                 | 20.0                           | -8.5                    | 9,018,311                      | 20.0                         | -9.5                    | 9,118,239                      | 99,928   |
| Courtenay Wind                    | 262,278,975                         | 46,178,515  | 21.9                                 | 20.9                           | -8.5                    | 11,406,420                     | 20.9                         | -10.4                   | 11,645,593                     | 239,173  |
| Grand Meadow Wind                 | 182,577,054                         | 93,417,279  | 13.9                                 | 12.9                           | -11.1                   | 8,482,622                      | 12.9                         | -12.5                   | 8,679,451                      | 196,828  |
| Granite City                      | 6,465,968                           | 9,724,816   | -                                    | -                              | -50.4                   | -                              | -                            | -50.4                   | -                              | -  |
| High Bridge                       | 200,486,360                         | 50,051,923  | 28.4                                 | 27.4                           | -3.5                    | 5,746,404                      | 27.4                         | -4.3                    | 5,803,039                      | 56,635   |
| Inver Hills                       | 53,436,050                          | 53,353,609  | 7.0                                  | 6.0                            | -18.3                   | 1,643,540                      | 6.0                          | -19.4                   | 1,744,399                      | 100,859  |
| Key City                          | 5,374,748                           | 7,933,129   | -                                    | -                              | N/A                     | -                              | -                            | N/A                     | -                              | -  |
| Nobles Wind                       | 471,140,614                         | 195,363,725   | 15.9                                 | 14.9                           | -6.0                    | 20,405,727                     | 14.9                         | -8.5                    | 21,183,523                     | 777,796  |
| Pleasant Valley Wind              | 263,644,922                         | 57,703,070  | 21.0                                 | 20.0                           | -8.5                    | 11,417,584                     | 20.0                         | -11.7                   | 11,834,055                     | 416,471  |
| Riverside                         | 154,911,011                         | 40,995,559  | 29.2                                 | 28.2                           | -11.3                   | 4,660,298                      | 28.2                         | -13.2                   | 4,764,764                      | 104,466  |
| Foxtail Wind**                    | 211,841,413                         | 9,012,507   | 25.0                                 | 24.0                           | -8.5                    | 9,201,476                      | 24.0                         | -9.1                    | 9,251,543                      | 50,067   |
| Lake Benton II Wind**             | 113,291,566                         | 5,239,869   | 24.9                                 | 23.9                           | -8.5                    | 4,923,911                      | 23.9                         | -10.8                   | 5,031,347                      | 107,435  |
| Total/Composite                   | \$ 2,519,440,301                    | \$ 816,002,506  | 20.3                                 | 19.3                           | -8.6                    | \$ 99,659,973                  | 19.2                         | -10.1                   | \$ 102,150,921                 | \$ 2,490,948                                   |
| E345 Accessory Electric Equipment |                                     |   |                                      |                                |                         |                                |                              |                         |                                |  |
| Angus C. Anson Unit 2 & 3         | \$ 3,571,653                        | \$ 3,074,801  | 21.0                                 | 20.0                           | -9.6                    | \$ 41,987                      | 20.0                         | -11.2                   | \$ 44,791                      | \$ 2,804                                       |
| Angus C. Anson Unit 4             | 4,955,471                           | 1,864,072   | 25.4                                 | 24.4                           | -6.5                    | 139,898                        | 24.4                         | -6.5                    | 139,907                        | 9  |
| Black Dog Unit 5                  | 27,865,573                          | 19,761,890  | 12.0                                 | 11.0                           | -11.4                   | 1,025,487                      | 11.0                         | -7.2                    | 918,704                        | (106,783)                                      |
| Black Dog Unit 6                  | 10,978,424                          | 872,166   | 38.3                                 | 37.3                           | -5.0                    | 285,662                        | 37.3                         | -10.3                   | 301,332                        | 15,670   |
| Blue Lake Units 1 thru 4          | 1,508,868                           | 1,771,277   | 3.5                                  | 2.5                            | -22.9                   | 33,249                         | 2.5                          | -30.6                   | 79,680                         | 46,432   |
| Blue Lake Units 7 & 8             | 7,907,322                           | 4,164,381   | 25.4                                 | 24.4                           | -11.7                   | 191,315                        | 24.4                         | -12.7                   | 194,587                        | 3,271  |
| Border Winds                      | 34,794,649                          | 7,457,301   | 21.0                                 | 20.0                           | -8.5                    | 1,514,745                      | 20.0                         | -9.5                    | 1,531,509                      | 16,764   |
| Courtenay Wind                    | 9,591,089                           | 1,691,224   | 21.9                                 | 20.9                           | -8.5                    | 416,991                        | 20.9                         | -10.4                   | 425,737                        | 8,746  |
| Grand Meadow Wind                 | 12,064,305                          | 6,445,709   | 13.9                                 | 12.9                           | -11.1                   | 539,359                        | 12.9                         | -12.5                   | 552,365                        | 13,006   |
| Granite City                      | 646,486                             | 952,352   | -                                    | -                              | -50.4                   | -                              | -                            | -50.4                   | -                              | -  |
| High Bridge                       | 52,024,030                          | 14,812,600  | 28.4                                 | 27.4                           | -3.5                    | 1,424,535                      | 27.4                         | -4.3                    | 1,439,232                      | 14,696   |
| Inver Hills                       | 4,314,473                           | 3,341,698   | 7.0                                  | 6.0                            | -18.3                   | 293,721                        | 6.0                          | -19.4                   | 301,864                        | 8,143  |
| Key City                          | 1,702,722                           | 2,513,217   | -                                    | -                              | N/A                     | -                              | -                            | N/A                     | -                              | -  |
| Nobles Wind                       | 29,938,414                          | 12,795,882  | 15.9                                 | 14.9                           | -6.0                    | 1,271,063                      | 14.9                         | -8.5                    | 1,320,488                      | 49,425   |
| Pleasant Valley Wind              | 42,507,679                          | 9,305,474   | 21.0                                 | 20.0                           | -8.5                    | 1,840,768                      | 20.0                         | -11.7                   | 1,907,916                      | 67,148   |
| Riverside                         | 40,361,888                          | 12,755,766  | 29.2                                 | 28.2                           | -11.3                   | 1,140,674                      | 28.2                         | -13.2                   | 1,167,893                      | 27,218   |
| Foxtail Wind**                    | -                                   | -   | 25.0                                 | 24.0                           | -8.5                    | -                              | 24.0                         | -9.1                    | -                              | -  |
| Lake Benton II Wind**             | 10,883,094                          | 531,506   | 24.9                                 | 23.9                           | -8.5                    | 471,826                        | 23.9                         | -10.8                   | 482,147                        | 10,321   |
| Total/Composite                   | \$ 295,616,140                      | \$ 104,111,317  | 21.3                                 | 20.3                           | -8.3                    | \$ 10,631,279                  | 20.4                         | -9.6                    | \$ 10,808,151                  | \$ 176,872                                     |

|  |                  | Reallocated      | Present  |         |        |                | Proposed |        |                | Proposed     |
|--|------------------|------------------|----------|---------|--------|----------------|----------|--------|----------------|--------------|
| Plant                                    |                  | Reserve          | Approved | Rem.    | Net    | Depreciation   | Rem.     | Net    | Depreciation   | Less         |
| Balance                                  |                  | Balance          | Rem Life | Life    | Salv   | Expense        | Life     | Salv   | Expense        | Present      |
| 1/1/2020                                 |                  | 1/1/2021 (est.)  | (Yrs)    | (Yrs) * | %      |                | (Yrs)    | %      |                | Expense      |
| (1)                                      |                  | (2)              | (3)      | (4)     | (5)    | (6)            | (7)      | (8)    | (9)            | (10)         |
| E346 Miscellaneous Power Plant Equipment |                  |                  |          |         |        |                |          |        |                |              |
| Angus C. Anson Unit 2 & 3                | \$ 2,629,376     | \$ 2,166,702     | 21.0     | 20.0    | -9.6   | \$ 35,755      | 20.0     | -11.2  | \$ 37,819      | \$ 2,064     |
| Angus C. Anson Unit 4                    | 20,727           | 2,737            | 25.4     | 24.4    | -6.5   | 793            | 24.4     | -6.5   | 793            | 0            |
| Black Dog Unit 5                         | 5,536,330        | 5,619,039        | 12.0     | 11.0    | -11.4  | 49,858         | 11.0     | -7.2   | 28,642         | (21,216)     |
| Black Dog Unit 6                         | 5,662,089        | 3,835,951        | 38.3     | 37.3    | -5.0   | 56,548         | 37.3     | -10.3  | 64,630         | 8,082        |
| Blue Lake Units 1 thru 4                 | 498,898          | 592,907          | 3.5      | 2.5     | -22.9  | 8,096          | 2.5      | -30.6  | 23,448         | 15,352       |
| Blue Lake Units 7 & 8                    | 32,958           | 14,290           | 25.4     | 24.4    | -11.7  | 923            | 24.4     | -12.7  | 937            | 14           |
| Border Winds                             | 228,153          | 49,999           | 21.0     | 20.0    | -8.5   | 9,877          | 20.0     | -9.5   | 9,987          | 110          |
| Courtenay Wind                           | 36,482           | 6,583            | 21.9     | 20.9    | -8.5   | 1,579          | 20.9     | -10.4  | 1,612          | 33           |
| Grand Meadow Wind                        | 207,761          | 111,028          | 13.9     | 12.9    | -11.1  | 9,286          | 12.9     | -12.5  | 9,510          | 224          |
| Granite City                             | 13,279           | 19,972           | -        | -       | -50.4  | -              | -        | -50.4  | -              | -            |
| High Bridge                              | 7,144,763        | 2,396,283        | 28.4     | 27.4    | -3.5   | 182,429        | 27.4     | -4.3   | 184,447        | 2,018        |
| Inver Hills                              | 618,880          | 710,616          | 7.0      | 6.0     | -18.3  | 3,587          | 6.0      | -19.4  | 4,755          | 1,168        |
| Key City                                 | 277,794          | 410,024          | -        | -       | N/A    | -              | -        | N/A    | -              | -            |
| Nobles Wind                              | 627,971          | 241,895          | 15.9     | 14.9    | -6.0   | 28,440         | 14.9     | -8.5   | 29,477         | 1,037        |
| Pleasant Valley Wind                     | 292,092          | 64,827           | 21.0     | 20.0    | -8.5   | 12,605         | 20.0     | -11.7  | 13,066         | 461          |
| Riverside                                | 9,075,926        | 5,660,270        | 29.2     | 28.2    | -11.3  | 157,491        | 28.2     | -13.2  | 163,611        | 6,120        |
| Foxtail Wind**                           | -                | -                | 25.0     | 24.0    | -8.5   | -              | 24.0     | -9.1   | -              | -            |
| Lake Benton II Wind**                    | -                | -                | 24.9     | 23.9    | -8.5   | -              | 23.9     | -10.8  | -              | -            |
| Total/Composite                          | \$ 32,903,480    | \$ 21,903,123    | 25.7     | 24.7    | -8.5   | \$ 557,264     | 24.8     | -9.7   | \$ 572,733     | \$ 15,469    |
| E348.1 Energy Storage Equipment          |                  |                  |          |         |        |                |          |        |                |              |
| Wind-to-Battery System****               | \$ 4,128,902     | \$ 9,728,902     | 4.0      | 3.0     | -135.6 | \$ -           | -        | -135.6 | -              | \$ -         |
| Total/Composite                          | \$ 4,128,902     | \$ 9,728,902     | 4.0      | 3.0     | -135.6 | \$ -           | 0.0      | -135.6 | \$ -           | \$ -         |
| Facilities in-serviced during 2020       |                  |                  |          |         |        |                |          |        |                |              |
| Blazing Star I***                        |                  |                  |          |         |        |                |          |        |                |              |
| E340.1 Wind Rights                       | \$ -             | \$ -             | 25.0     | 24.4    | 0.0    | \$ -           | 24.4     | 0.0    | \$ -           | \$ -         |
| E341 Structures & Improvements           | 22,224,648       | 40,056           | 25.0     | 24.4    | -8.5   | 985,953        | 24.4     | -11.6  | 1,013,792      | 27,839       |
| E344 Generators                          | 268,420,378      | 483,781          | 25.0     | 24.4    | -8.5   | 11,907,945     | 24.4     | -11.6  | 12,244,172     | 336,227      |
| E345 Accessory Electric Equipment        | 10,136,822       | 18,270           | 25.0     | 24.4    | -8.5   | 449,700        | 24.4     | -11.6  | 462,398        | 12,698       |
| E346 Miscellaneous Power Plant Equipment | -                | -                | 25.0     | 24.4    | -8.5   | -              | 24.4     | -11.6  | -              | -            |
| Total Plant to be Retired                | \$ 300,781,847   | \$ 542,107       | 25.0     | 24.4    | -8.5   | \$ 13,343,599  | 24.4     | -11.6  | \$ 13,720,362  | \$ 376,763   |
| Total Other Production                   | \$ 3,671,555,796 | \$ 1,138,327,827 | 21.3     | 20.3    | -8.6   | \$ 140,154,087 | 20.3     | -10.2  | \$ 143,378,806 | \$ 3,224,719 |

\*Remaining life as of 1/1/2021 due to passage of time.

\*\*Approved remaining life of 25 years and remaining lives of 24.9 years for Lake Benton II and 25.0 years for Foxtail Wind are based on in-service dates of November and December 2019, respectively.

\*\*\*Blazing Star I went in-service in April 2020. In the 2019 Remaining Life Docket, this plant was initially planned to go in-service in late 2019 and therefore a 25 year life and -8.5% net salvage rate were approved in that docket. The facility was included in the TLG 2020 Dismantling Study so in order to capture the expense change from the approved to the proposed net salvage, the plant was added to this schedule.

\*\*\*\*The present net salvage percent for this category is zero but the proposed rate was used in order to properly compare the change in expense with the reserve reallocation as proposed.

Note: This schedule does not include any impacts of the purchase of the Community Wind North and Jeffers Wind projects (Docket No. E002/M-18-777) or the Mower wind farm (Docket No. E002/M-19-568).

|                                | Present              |                      |             |            |              |                     | Proposed   |              |                     | Proposed            |
|--------------------------------|----------------------|----------------------|-------------|------------|--------------|---------------------|------------|--------------|---------------------|---------------------|
|                                | Plant                | Reserve              | Approved    | Rem.       | Net          | Depreciation        | Rem.       | Net          | Depreciation        | Less                |
|                                | Balance              | Balance              | Rem Life    | Life       | Salv         |                     | Life       | Salv         |                     | Present             |
|                                | 1/1/2020             | 1/1/2021 (est.)      | (Yrs)       | (Yrs) *    | %            |                     | (Yrs)      | %            |                     | Expense             |
|                                | (1)                  | (2)                  | (3)         | (4)        | (5)          | (6)                 | (7)        | (8)          | (9)                 | (10)                |
| G305 Structures & Improvements |                      |                      |             |            |              |                     |            |              |                     |                     |
| Maplewood                      | \$ 1,611,046         | \$ 1,699,308         | 10.0        | 9.0        | -93.7        | \$ 157,921          | 9.0        | -87.7        | \$ 147,104          | \$ (10,817)         |
| Sibley                         | 1,166,477            | 827,623              | 10.0        | 9.0        | -79.5        | 140,689             | 9.0        | -41.1        | 90,984              | (49,706)            |
| Total/Composite                | <u>\$ 2,777,523</u>  | <u>\$ 2,526,931</u>  | <u>10.0</u> | <u>9.0</u> | <u>-87.7</u> | <u>\$ 298,610</u>   | <u>9.0</u> | <u>-68.1</u> | <u>\$ 238,087</u>   | <u>\$ (60,523)</u>  |
| G311 LP Gas Equipment          |                      |                      |             |            |              |                     |            |              |                     |                     |
| Maplewood                      | \$ 3,766,755         | \$ 4,542,011         | 10.0        | 9.0        | -93.7        | \$ 306,021          | 9.0        | -87.7        | \$ 280,730          | \$ (25,291)         |
| Sibley                         | 9,488,978            | 7,412,800            | 10.0        | 9.0        | -79.5        | 1,068,880           | 9.0        | -41.1        | 664,536             | (404,343)           |
| Total/Composite                | <u>\$ 13,255,733</u> | <u>\$ 11,954,811</u> | <u>10.0</u> | <u>9.0</u> | <u>-83.5</u> | <u>\$ 1,374,901</u> | <u>9.0</u> | <u>-54.4</u> | <u>\$ 945,266</u>   | <u>\$ (429,635)</u> |
| G320 Other Equipment           |                      |                      |             |            |              |                     |            |              |                     |                     |
| Maplewood                      | \$ 455,629           | \$ 386,230           | 10.0        | 9.0        | -93.7        | \$ 55,147           | 9.0        | -87.7        | \$ 52,088           | \$ (3,059)          |
| Sibley                         | 496,538              | 563,735              | 10.0        | 9.0        | -79.5        | 36,395              | 9.0        | -41.1        | 15,236              | (21,158)            |
| Total/Composite                | <u>\$ 952,168</u>    | <u>\$ 949,965</u>    | <u>10.0</u> | <u>9.0</u> | <u>-86.3</u> | <u>\$ 91,542</u>    | <u>9.0</u> | <u>-63.4</u> | <u>\$ 67,324</u>    | <u>\$ (24,218)</u>  |
| Total Gas Production           | <u>\$ 16,985,424</u> | <u>\$ 15,431,706</u> | <u>10.0</u> | <u>9.0</u> | <u>-84.4</u> | <u>\$ 1,765,053</u> | <u>9.0</u> | <u>-57.1</u> | <u>\$ 1,250,678</u> | <u>\$ (514,375)</u> |

\*Remaining life as of 1/1/2021 due to passage of time.

|                   |                                  | Present                      |                                       |                               |                         | Proposed         |                         |                       |                  | Proposed                |                            |
|-------------------|----------------------------------|------------------------------|---------------------------------------|-------------------------------|-------------------------|------------------|-------------------------|-----------------------|------------------|-------------------------|----------------------------|
|                   |                                  | Plant<br>Balance<br>1/1/2020 | Reserve<br>Balance<br>1/1/2021 (est.) | Approved<br>Rem Life<br>(Yrs) | Rem.<br>Life<br>(Yrs) * | Net<br>Salv<br>% | Depreciation<br>Expense | Rem.<br>Life<br>(Yrs) | Net<br>Salv<br>% | Depreciation<br>Expense | Less<br>Present<br>Expense |
|                   |                                  | (1)                          | (2)                                   | (3)                           | (4)                     | (5)              | (6)                     | (7)                   | (8)              | (9)                     | (10)                       |
| G361              | Structures & Improvements        |                              |                                       |                               |                         |                  |                         |                       |                  |                         |                            |
| Wescott           |                                  | \$ 6,735,066                 | \$ 6,566,324                          | 4.0                           | 3.0                     | -19.2            | \$ 487,291              | 12.0                  | -19.6            | \$ 123,852              | \$ (363,440)               |
| G362              | Gas Holders                      |                              |                                       |                               |                         |                  |                         |                       |                  |                         |                            |
| Wescott           |                                  | \$ 8,199,422                 | \$ 8,922,270                          | 4.0                           | 3.0                     | -19.2            | \$ 283,814              | 12.0                  | -19.6            | \$ 73,424               | \$ (210,390)               |
| G363              | Purification Equipment           |                              |                                       |                               |                         |                  |                         |                       |                  |                         |                            |
| Wescott           |                                  | \$ 985,962                   | \$ 1,099,517                          | 4.0                           | 3.0                     | -19.2            | \$ 25,250               | 12.0                  | -19.6            | \$ 6,610                | \$ (18,640)                |
| G363.1            | Liquefaction Equipment           |                              |                                       |                               |                         |                  |                         |                       |                  |                         |                            |
| Wescott           |                                  | \$ 3,564,676                 | \$ 3,310,479                          | 4.0                           | 3.0                     | -19.2            | \$ 312,872              | 12.0                  | -19.6            | \$ 79,292               | \$ (233,580)               |
| G363.2            | Vaporizing Equipment             |                              |                                       |                               |                         |                  |                         |                       |                  |                         |                            |
| Wescott           |                                  | \$ 9,336,198                 | \$ 7,864,129                          | 8.0                           | 7.0                     | -19.2            | \$ 466,374              | 12.0                  | -19.6            | \$ 274,864              | \$ (191,510)               |
| G363.3            | Compressor Equipment             |                              |                                       |                               |                         |                  |                         |                       |                  |                         |                            |
| Wescott           |                                  | \$ 23,733,503                | \$ 13,497,184                         | 13.0                          | 12.0                    | -19.2            | \$ 1,232,763            | 12.0                  | -19.6            | \$ 1,239,913            | \$ 7,150                   |
| G363.4            | Measuring & Regulating Equipment |                              |                                       |                               |                         |                  |                         |                       |                  |                         |                            |
| Wescott           |                                  | \$ 73,634                    | \$ 75,192                             | 4.0                           | 3.0                     | -19.2            | \$ 4,193                | 12.0                  | -19.6            | \$ 1,070                | \$ (3,123)                 |
| G363.5            | Other Equipment                  |                              |                                       |                               |                         |                  |                         |                       |                  |                         |                            |
| Wescott           |                                  | \$ 4,843,620                 | \$ 4,520,519                          | 4.0                           | 3.0                     | -19.2            | \$ 417,692              | 12.0                  | -19.6            | \$ 105,882              | \$ (311,810)               |
| Total Gas Storage |                                  | \$ 57,472,081                | \$ 45,855,614                         | 8.0                           | 7.0                     | -19.2            | \$ 3,230,249            | 12.0                  | -19.6            | \$ 1,904,907            | \$ (1,325,342)             |

\*Remaining life as of 1/1/2021 due to passage of time.



|  | Reserve<br>Balance<br>1/1/2020<br>(1) | 2020 estimated<br>Annual<br>Depreciation<br>Expense (1)<br>(2) | Reserve<br>Balance<br>1/1/2021 (est.)<br>(3) | Reserve<br>Reallocation<br>(4) | Reallocated<br>Reserve<br>Balance<br>1/1/2021 (est.)<br>(5) |
|--|---------------------------------------|--|--|--------------------------------|---|
| <b>STEAM PRODUCTION</b>                  |                                       |  |  |                                |   |
| E311 Structures & Improvements           |                                       |  |  |                                |   |
| Black Dog                                | \$ 984,055                            | \$ -   | \$ 984,055                                   | \$ 2,518,383                   | \$ 3,502,438  |
| Allen S. King                            | 25,975,185                            | 965,599  | 26,940,784                                   | 78,093                         | 27,018,877  |
| Minnesota Valley                         | 6,629,269                             | -  | 6,629,269                                    | (3,093,690)                    | 3,535,579   |
| Red Wing                                 | 12,545,341                            | 422,211  | 12,967,552                                   | 24,555                         | 12,992,107  |
| Sherco Unit 1 & 2                        | 88,064,378                            | 3,729,765  | 91,794,143                                   | 188,946                        | 91,983,089  |
| Sherco Unit 3                            | 110,751,748                           | 1,945,081  | 112,696,830                                  | 261,647                        | 112,958,477   |
| Wilmarth                                 | 9,581,671                             | 576,888  | 10,158,559                                   | 22,066                         | 10,180,625  |
| Total/Composite                          | \$ 254,531,646                        | \$ 7,639,545   | \$ 262,171,191                               | \$ (0)                         | \$ 262,171,191  |
| E312 Boiler Plant Equipment              |                                       |  |  |                                |   |
| Black Dog                                | \$ (24,887)                           | \$ -   | \$ (24,887)                                  | \$ 4,257,122                   | \$ 4,232,235  |
| Allen S. King                            | 217,166,060                           | 20,009,622   | 237,175,683                                  | 219,769                        | 237,395,452   |
| Minnesota Valley                         | 10,438,004                            | -  | 10,438,004                                   | (4,871,118)                    | 5,566,886   |
| Red Wing                                 | 42,356,134                            | 2,223,149  | 44,579,283                                   | 19,724                         | 44,599,007  |
| Sherco Unit 1                            | 210,197,885                           | 16,976,739   | 227,174,624                                  | 113,537                        | 227,288,161   |
| Sherco Unit 2                            | 147,346,744                           | 12,851,752   | 160,198,496                                  | 67,637                         | 160,266,133   |
| Sherco Unit 3                            | 291,102,335                           | 10,059,366   | 301,161,701                                  | 175,764                        | 301,337,465   |
| Wilmarth                                 | 41,754,368                            | 1,423,009  | 43,177,378                                   | 17,565                         | 43,194,943  |
| Total/Composite                          | \$ 960,336,644                        | \$ 63,543,637  | \$ 1,023,880,281                             | \$ 0                           | \$ 1,023,880,281  |
| E314 Turbogenerator Units                |                                       |  |  |                                |   |
| Black Dog                                | \$ -                                  | \$ -   | \$ -   | \$ 2,978,621                   | \$ 2,978,621  |
| Allen S. King                            | 43,576,392                            | 3,328,882  | 46,905,274                                   | (393,156)                      | 46,512,118  |
| Minnesota Valley                         | 3,527,431                             | -  | 3,527,431                                    | (1,646,151)                    | 1,881,280   |
| Red Wing                                 | 3,312,190                             | 112,856  | 3,425,047                                    | (13,778)                       | 3,411,269   |
| Sherco Unit 1                            | 49,178,338                            | 4,891,358  | 54,069,696                                   | (284,755)                      | 53,784,941  |
| Sherco Unit 2                            | 51,346,943                            | 5,370,529  | 56,717,472                                   | (244,620)                      | 56,472,852  |
| Sherco Unit 3                            | 51,115,611                            | 2,819,242  | 53,934,854                                   | (370,198)                      | 53,564,655  |
| Wilmarth                                 | 4,291,612                             | 448,609  | 4,740,221                                    | (25,962)                       | 4,714,259   |
| Total/Composite                          | \$ 206,348,519                        | \$ 16,971,476  | \$ 223,319,995                               | \$ 0                           | \$ 223,319,995  |
| E315 Accessory Electric Equipment        |                                       |  |  |                                |   |
| Black Dog                                | \$ -                                  | \$ -   | \$ -   | \$ 1,126,512                   | \$ 1,126,512  |
| Allen S. King                            | 18,590,489                            | 1,843,172  | 20,433,661                                   | (167,791)                      | 20,265,870  |
| Minnesota Valley                         | 977,491                               | -  | 977,491                                      | (456,167)                      | 521,324   |
| Red Wing                                 | 2,024,892                             | 51,300   | 2,076,193                                    | (6,804)                        | 2,069,389   |
| Sherco Unit 1                            | 39,523,118                            | 2,431,608  | 41,954,726                                   | (167,721)                      | 41,787,005  |
| Sherco Unit 2                            | 5,418,669                             | 790,081  | 6,208,750                                    | (24,141)                       | 6,184,609   |
| Sherco Unit 3                            | 53,907,628                            | 2,278,113  | 56,185,741                                   | (298,382)                      | 55,887,358  |
| Wilmarth                                 | 1,538,073                             | 52,119   | 1,590,192                                    | (5,505)                        | 1,584,687   |
| Total/Composite                          | \$ 121,980,361                        | \$ 7,446,393   | \$ 129,426,754                               | \$ (0)                         | \$ 129,426,754  |
| E316 Miscellaneous Power Plant Equipment |                                       |  |  |                                |   |
| Black Dog                                | \$ 121,150                            | \$ -   | \$ 121,150                                   | \$ 239,362                     | \$ 360,512  |
| Allen S. King                            | 6,142,377                             | 137,083  | 6,279,461                                    | (947)                          | 6,278,513   |
| Minnesota Valley                         | 499,011                               | -  | 499,011                                      | (232,874)                      | 266,137   |
| Red Wing                                 | 1,301,783                             | 72,182   | 1,373,966                                    | (176)                          | 1,373,789   |
| Sherco Unit 1                            | 10,521,198                            | 588,022  | 11,109,220                                   | (1,463)                        | 11,107,757  |
| Sherco Unit 2                            | 12,531                                | 12,035   | 24,566                                       | (5)                            | 24,561  |
| Sherco Unit 3                            | 22,850,911                            | 702,369  | 23,553,280                                   | (3,801)                        | 23,549,479  |
| Wilmarth                                 | 913,862                               | 10,590   | 924,452                                      | (95)                           | 924,357   |
| Total/Composite                          | \$ 42,362,824                         | \$ 1,522,281   | \$ 43,885,105                                | \$ (0)                         | \$ 43,885,105   |
| <b>Total Steam Production</b>            | <b>\$ 1,585,559,994</b>               | <b>\$ 97,123,332</b>   | <b>\$ 1,682,683,326</b>                      | <b>\$ 0</b>                    | <b>\$ 1,682,683,326</b>                                     |

|  | Reserve<br>Balance<br>1/1/2020<br>(1) | 2020 estimated<br>Annual<br>Depreciation<br>Expense (1)<br>(2) | Reserve<br>Balance<br>1/1/2021 (est.)<br>(3) | Reserve<br>Reallocation<br>(4) | Reallocated<br>Reserve<br>Balance<br>1/1/2021 (est.)<br>(5) |
|--|---------------------------------------|--|--|--------------------------------|---|
| <b>HYDRO PRODUCTION</b>                  |                                       |  |  |                                |   |
| E302 Franchises & Consents               |                                       |  |  |                                |   |
| Monticello                               | \$ 51,491,640                         | \$ 6,911,106   | \$ 58,402,746                                | \$ -                           | \$ 58,402,746   |
| Prairie Island Unit 1 & 2                | 39,113,709                            | 6,013,114  | 45,126,822                                   | -                              | 45,126,822  |
| Total/Composite                          | <u>\$ 90,605,349</u>                  | <u>\$ 12,924,220</u>   | <u>\$ 103,529,568</u>                        | <u>\$ -</u>                    | <u>\$ 103,529,568</u>                                       |
| E321 Structures & Improvements           |                                       |  |  |                                |   |
| Monticello                               | \$ 136,718,836                        | \$ 9,002,092   | \$ 145,720,929                               | \$ -                           | \$ 145,720,929  |
| Monticello Interim Storage               | 15,144,308                            | 1,497,190  | 16,641,498                                   | -                              | 16,641,498  |
| Prairie Island Unit 1 & 2                | 187,124,440                           | 8,074,443  | 195,198,883                                  | -                              | 195,198,883   |
| PI Interim Storage                       | 11,375,985                            | 58,636   | 11,434,621                                   | -                              | 11,434,621  |
| Total/Composite                          | <u>\$ 350,363,569</u>                 | <u>\$ 18,632,362</u>   | <u>\$ 368,995,931</u>                        | <u>\$ -</u>                    | <u>\$ 368,995,931</u>                                       |
| E322 Reactor Plant Equipment             |                                       |  |  |                                |   |
| Monticello                               | \$ 357,986,256                        | \$ 28,808,489  | \$ 386,794,745                               | \$ -                           | \$ 386,794,745  |
| Monticello Interim Storage               | 19,639,958                            | 6,634,759  | 26,274,717                                   | -                              | 26,274,717  |
| Prairie Island Unit 1 & 2                | 446,179,404                           | 36,115,703   | 482,295,107                                  | -                              | 482,295,107   |
| PI Interim Storage                       | 71,852,302                            | 7,954,962  | 79,807,265                                   | -                              | 79,807,265  |
| Total/Composite                          | <u>\$ 895,657,921</u>                 | <u>\$ 79,513,912</u>   | <u>\$ 975,171,834</u>                        | <u>\$ -</u>                    | <u>\$ 975,171,834</u>                                       |
| E323 Turbogenerator Units                |                                       |  |  |                                |   |
| Monticello                               | \$ 115,663,809                        | \$ 13,208,780  | \$ 128,872,589                               | \$ -                           | \$ 128,872,589  |
| Prairie Island Unit 1 & 2                | 163,731,402                           | 14,808,773   | 178,540,175                                  | -                              | 178,540,175   |
| Total/Composite                          | <u>\$ 279,395,210</u>                 | <u>\$ 28,017,553</u>   | <u>\$ 307,412,764</u>                        | <u>\$ -</u>                    | <u>\$ 307,412,764</u>                                       |
| E324 Accessory Electric Equipment        |                                       |  |  |                                |   |
| Monticello                               | \$ 103,841,197                        | \$ 14,211,304  | \$ 118,052,500                               | \$ -                           | \$ 118,052,500  |
| Prairie Island Unit 1 & 2                | 182,693,952                           | 7,965,905  | 190,659,858                                  | -                              | 190,659,858   |
| Total/Composite                          | <u>\$ 286,535,149</u>                 | <u>\$ 22,177,209</u>   | <u>\$ 308,712,358</u>                        | <u>\$ -</u>                    | <u>\$ 308,712,358</u>                                       |
| E325 Miscellaneous Power Plant Equipment |                                       |  |  |                                |   |
| Monticello                               | \$ 55,987,686                         | \$ 3,101,378   | \$ 59,089,064                                | \$ -                           | \$ 59,089,064   |
| Prairie Island Unit 1 & 2                | 71,084,578                            | 3,291,380  | 74,375,958                                   | -                              | 74,375,958  |
| Total/Composite                          | <u>\$ 127,072,264</u>                 | <u>\$ 6,392,758</u>  | <u>\$ 133,465,022</u>                        | <u>\$ -</u>                    | <u>\$ 133,465,022</u>                                       |
| <b>Total Nuclear Production</b>          | <u><b>\$ 2,029,629,462</b></u>        | <u><b>\$ 167,658,014</b></u>                                   | <u><b>\$ 2,197,287,476</b></u>               | <u><b>\$ -</b></u>             | <u><b>\$ 2,197,287,476</b></u>                              |

|  | Reserve<br>Balance<br>1/1/2020<br>(1) | 2020 estimated<br>Annual<br>Depreciation<br>Expense (1)<br>(2) | Reserve<br>Balance<br>1/1/2021 (est.)<br>(3) | Reserve<br>Reallocation<br>(4) | Reallocated<br>Reserve<br>Balance<br>1/1/2021 (est.)<br>(5) |
|--|---------------------------------------|--|--|--------------------------------|---|
| <b>NUCLEAR PRODUCTION</b>                |                                       |  |  |                                |   |
| E302 Franchises & Consents               |                                       |  |  |                                |   |
| Hennepin Island                          | \$ 1,343,648                          | \$ 106,577   | \$ 1,450,225                                 | \$ -                           | \$ 1,450,225  |
| Total/Composite                          | \$ 1,343,648                          | \$ 106,577   | \$ 1,450,225                                 | \$ -                           | \$ 1,450,225  |
| E331 Structures & Improvements           |                                       |  |  |                                |   |
| Hennepin Island                          | \$ 785,104                            | \$ 70,014  | \$ 855,119                                   | \$ -                           | \$ 855,119  |
| St Croix Falls                           | 41,383                                | (77)   | 41,307                                       | -                              | 41,307  |
| Total/Composite                          | \$ 826,488                            | \$ 69,937  | \$ 896,425                                   | \$ -                           | \$ 896,425  |
| E332 Reservoirs, Dams & Waterways        |                                       |  |  |                                |   |
| Hennepin Island                          | \$ 2,054,637                          | \$ 246,834   | \$ 2,301,472                                 | \$ -                           | \$ 2,301,472  |
| St Croix Falls                           | 505,824                               | 229,254  | 735,079                                      | -                              | 735,079   |
| Upper Dam                                | 4,165,826                             | 106,437  | 4,272,263                                    | -                              | 4,272,263   |
| Total/Composite                          | \$ 6,726,288                          | \$ 582,525   | \$ 7,308,813                                 | \$ -                           | \$ 7,308,813  |
| E333 Water Wheels, Turbines & Generators |                                       |  |  |                                |   |
| Hennepin Island                          | \$ 4,393,736                          | \$ 596,484   | \$ 4,990,221                                 | \$ -                           | \$ 4,990,221  |
| Total/Composite                          | \$ 4,393,736                          | \$ 596,484   | \$ 4,990,221                                 | \$ -                           | \$ 4,990,221  |
| E334 Accessory Electric Equipment        |                                       |  |  |                                |   |
| Hennepin Island                          | \$ 1,513,258                          | \$ 183,349   | \$ 1,696,607                                 | \$ -                           | \$ 1,696,607  |
| Total/Composite                          | \$ 1,513,258                          | \$ 183,349   | \$ 1,696,607                                 | \$ -                           | \$ 1,696,607  |
| E335 Miscellaneous Power Plant Equipment |                                       |  |  |                                |   |
| Hennepin Island                          | \$ 42,131                             | \$ 396   | \$ 42,527                                    | \$ -                           | \$ 42,527   |
| Upper Dam                                | 25,859                                | 230  | 26,089                                       | -                              | 26,089  |
| Total/Composite                          | \$ 67,990                             | \$ 626   | \$ 68,616                                    | \$ -                           | \$ 68,616   |
| <b>Total Hydro Production</b>            | <b>\$ 14,871,408</b>                  | <b>\$ 1,539,499</b>  | <b>\$ 16,410,907</b>                         | <b>\$ -</b>                    | <b>\$ 16,410,907</b>  |

|   | Reserve<br>Balance<br>1/1/2020<br>(1) | 2020 estimated<br>Annual<br>Depreciation<br>Expense (1)<br>(2) | Reserve<br>Balance<br>1/1/2021 (est.)<br>(3) | Reserve<br>Reallocation<br>(4) | Reallocated<br>Reserve<br>Balance<br>1/1/2021 (est.)<br>(5) |
|---|---------------------------------------|--|--|--------------------------------|---|
| <b>OTHER PRODUCTION</b>                               |                                       |  |  |                                |   |
| <b>E340.1 Wind Rights</b>                             |                                       |  |  |                                |   |
| Border Winds  | \$ -                                  | \$ -   | \$ -   | \$ -                           | \$ -  |
| Courtenay Wind  | 260,329                               | 83,348   | 343,678                                      | -                              | 343,678   |
| Grand Meadow Wind                                     | 4,013,265                             | 479,078  | 4,492,343                                    | -                              | 4,492,343   |
| Nobles Wind   | 1,393,959                             | 156,659  | 1,550,618                                    | -                              | 1,550,618   |
| Pleasant Valley Wind                                  | -                                     | -  | -  | -                              | -   |
| Foxtail Wind**  | -                                     | -  | -  | -                              | -   |
| Lake Benton II Wind**                                 | 733                                   | 5,868  | 6,601  | -                              | 6,601   |
| Total/Composite                                       | \$ 5,668,286                          | \$ 724,954   | \$ 6,393,240                                 | \$ -                           | \$ 6,393,240  |
| <b>E341 Structures &amp; Improvements</b>             |                                       |  |  |                                |   |
| Angus C. Anson Units 2 thru 4                         | \$ 5,526,673                          | \$ 106,183   | \$ 5,632,856                                 | \$ -                           | \$ 5,632,856  |
| Black Dog Unit 5                                      | 27,384,046                            | 529,683  | 27,913,729                                   | -                              | 27,913,729  |
| Black Dog Unit 6                                      | 4,869,496                             | 251,379  | 5,120,875                                    | -                              | 5,120,875   |
| Blue Lake Units 1 thru 4, 7 & 8                       | 1,350,174                             | 21,755   | 1,371,930                                    | -                              | 1,371,930   |
| Border Winds  | 3,878,363                             | 963,682  | 4,842,044                                    | -                              | 4,842,044   |
| Courtenay Wind  | 1,008,049                             | 331,573  | 1,339,623                                    | -                              | 1,339,623   |
| Grand Meadow Wind                                     | 2,545,661                             | 263,621  | 2,809,281                                    | -                              | 2,809,281   |
| Granite City  | 1,867,544                             | -  | 1,867,544                                    | -                              | 1,867,544   |
| High Bridge   | 18,264,935                            | 1,948,487  | 20,213,421                                   | -                              | 20,213,421  |
| Inver Hills   | 1,062,829                             | 121,696  | 1,184,525                                    | -                              | 1,184,525   |
| Key City  | 1,479,342                             | -  | 1,479,342                                    | -                              | 1,479,342   |
| Nobles Wind   | 5,507,284                             | 556,091  | 6,063,374                                    | -                              | 6,063,374   |
| Pleasant Valley Wind                                  | 4,621,159                             | 1,113,304  | 5,734,463                                    | -                              | 5,734,463   |
| Riverside   | 27,135,398                            | 1,069,583  | 28,204,982                                   | -                              | 28,204,982  |
| Foxtail Wind**  | 61,225                                | 1,471,837  | 1,533,062                                    | -                              | 1,533,062   |
| Lake Benton II Wind**                                 | 176,239                               | 1,393,343  | 1,569,582                                    | -                              | 1,569,582   |
| Total/Composite                                       | \$ 106,738,417                        | \$ 10,142,217  | \$ 116,880,634                               | \$ -                           | \$ 116,880,634  |
| <b>E342 Fuel Holders, Producers &amp; Accessories</b> |                                       |  |  |                                |   |
| Angus C. Anson Unit 2 & 3                             | \$ 954,761                            | \$ 12,237  | \$ 966,998                                   | \$ -                           | \$ 966,998  |
| Angus C. Anson Unit 4                                 | (149)                                 | 572  | 423  | -                              | 423   |
| Black Dog Unit 5                                      | 9,600,264                             | 364,746  | 9,965,010                                    | -                              | 9,965,010   |
| Black Dog Unit 6                                      | 448,034                               | 249,080  | 697,114                                      | -                              | 697,114   |
| Blue Lake Units 1 thru 4                              | 1,605,268                             | 13,061   | 1,618,329                                    | -                              | 1,618,329   |
| Blue Lake Units 7 & 8                                 | (21,242)                              | 2,947  | (18,295)                                     | -                              | (18,295)  |
| Granite City  | 626,225                               | -  | 626,225                                      | -                              | 626,225   |
| High Bridge   | 19,132                                | 7,796  | 26,928                                       | -                              | 26,928  |
| Inver Hills   | 527,587                               | 28,557   | 556,144                                      | -                              | 556,144   |
| Key City  | 357,759                               | -  | 357,759                                      | -                              | 357,759   |
| Riverside   | 125,621                               | 35,090   | 160,711                                      | -                              | 160,711   |
| Total/Composite                                       | \$ 14,243,261                         | \$ 714,085   | \$ 14,957,347                                | \$ -                           | \$ 14,957,347   |
| <b>E343 Prime Movers</b>                              |                                       |  |  |                                |   |
| Black Dog Unit 5                                      | \$ 13,032,181                         | \$ 1,089,093   | \$ 14,121,273                                | \$ -                           | \$ 14,121,273   |
| High Bridge   | 17,595,815                            | 1,798,887  | 19,394,701                                   | -                              | 19,394,701  |
| Riverside   | 12,799,941                            | 1,492,736  | 14,292,677                                   | -                              | 14,292,677  |
| Total/Composite                                       | \$ 43,427,936                         | \$ 4,380,715   | \$ 47,808,651                                | \$ -                           | \$ 47,808,651   |
| <b>E344 Generators</b>                                |                                       |  |  |                                |   |
| Angus C. Anson Unit 2 & 3                             | \$ 63,956,507                         | \$ 1,113,604   | \$ 65,070,111                                | \$ (206,129)                   | \$ 64,863,982   |
| Angus C. Anson Unit 4                                 | 15,244,690                            | 806,359  | 16,051,049                                   | (86,769)                       | 15,964,280  |
| Black Dog Unit 5                                      | 52,302,915                            | 7,478,879  | 59,781,794                                   | (329,823)                      | 59,451,972  |
| Black Dog Unit 6                                      | 3,856,362                             | 1,606,444  | 5,462,807                                    | (161,066)                      | 5,301,741   |
| Blue Lake Units 1 thru 4                              | 25,734,291                            | 94,264   | 25,828,556                                   | (54,855)                       | 25,773,700  |
| Blue Lake Units 7 & 8                                 | 29,591,278                            | 1,577,414  | 31,168,692                                   | (161,303)                      | 31,007,389  |
| Border Winds  | 36,210,418                            | 8,991,488  | 45,201,905                                   | (536,463)                      | 44,665,442  |
| Courtenay Wind  | 35,482,960                            | 11,373,960   | 46,856,920                                   | (678,406)                      | 46,178,515  |
| Grand Meadow Wind                                     | 85,443,515                            | 8,446,014  | 93,889,529                                   | (472,250)                      | 93,417,279  |
| Granite City  | 9,724,816                             | -  | 9,724,816                                    | -                              | 9,724,816   |
| High Bridge   | 44,843,019                            | 5,727,478  | 50,570,497                                   | (518,574)                      | 50,051,923  |
| Inver Hills   | 51,871,322                            | 1,620,504  | 53,491,826                                   | (138,217)                      | 53,353,609  |
| Key City  | 7,933,129                             | -  | 7,933,129                                    | -                              | 7,933,129   |
| Nobles Wind   | 176,258,429                           | 20,323,938   | 196,582,367                                  | (1,218,643)                    | 195,363,725   |
| Pleasant Valley Wind                                  | 47,001,522                            | 11,383,487   | 58,385,009                                   | (681,939)                      | 57,703,070  |
| Riverside   | 36,750,160                            | 4,646,089  | 41,396,248                                   | (400,690)                      | 40,995,559  |
| Foxtail Wind**  | 381,807                               | 9,178,645  | 9,560,452                                    | (547,945)                      | 9,012,507   |
| Lake Benton II Wind**                                 | 621,257                               | 4,911,650  | 5,532,907                                    | (293,038)                      | 5,239,869   |
| Total/Composite                                       | \$ 723,208,396                        | \$ 99,280,216  | \$ 822,488,612                               | \$ (6,486,106)                 | \$ 816,002,506  |

|  | Reserve<br>Balance<br>1/1/2020 | 2020 estimated<br>Annual<br>Depreciation<br>Expense (1) | Reserve<br>Balance<br>1/1/2021 (est.) | Reserve<br>Reallocation | Reallocated<br>Reserve<br>Balance<br>1/1/2021 (est.) |
|--|--------------------------------|---|---------------------------------------|-------------------------|--|
|  | (1)                            | (2)   | (3)                                   | (4)                     | (5)  |
| <b>OTHER PRODUCTION</b>                  |                                |   |                                       |                         |  |
| E345 Accessory Electric Equipment        |                                |   |                                       |                         |  |
| Angus C. Anson Unit 2 & 3                | \$ 3,032,815                   | \$ 41,987   | \$ 3,074,801                          | \$ -                    | \$ 3,074,801   |
| Angus C. Anson Unit 4                    | 1,724,174                      | 139,898   | 1,864,072                             | -                       | 1,864,072  |
| Black Dog Unit 5                         | 18,736,403                     | 1,025,487   | 19,761,890                            | -                       | 19,761,890   |
| Black Dog Unit 6                         | 586,504                        | 285,662   | 872,166                               | -                       | 872,166  |
| Blue Lake Units 1 thru 4                 | 1,738,029                      | 33,249  | 1,771,277                             | -                       | 1,771,277  |
| Blue Lake Units 7 & 8                    | 3,973,066                      | 191,315   | 4,164,381                             | -                       | 4,164,381  |
| Border Winds                             | 5,942,556                      | 1,514,745   | 7,457,301                             | -                       | 7,457,301  |
| Courtenay Wind                           | 1,274,233                      | 416,991   | 1,691,224                             | -                       | 1,691,224  |
| Grand Meadow Wind                        | 5,906,350                      | 539,359   | 6,445,709                             | -                       | 6,445,709  |
| Granite City                             | 952,352                        | -   | 952,352                               | -                       | 952,352  |
| High Bridge                              | 13,388,065                     | 1,424,535   | 14,812,600                            | -                       | 14,812,600   |
| Inver Hills                              | 3,047,977                      | 293,721   | 3,341,698                             | -                       | 3,341,698  |
| Key City                                 | 2,513,217                      | -   | 2,513,217                             | -                       | 2,513,217  |
| Nobles Wind                              | 11,524,819                     | 1,271,063   | 12,795,882                            | -                       | 12,795,882   |
| Pleasant Valley Wind                     | 7,464,706                      | 1,840,768   | 9,305,474                             | -                       | 9,305,474  |
| Riverside                                | 11,615,092                     | 1,140,674   | 12,755,766                            | -                       | 12,755,766   |
| Foxtail Wind**                           | -                              | -   | -                                     | -                       | -  |
| Lake Benton II Wind**                    | 59,680                         | 471,826   | 531,506                               | -                       | 531,506  |
| Total/Composite                          | \$ 93,480,037                  | \$ 10,631,279   | \$ 104,111,317                        | \$ -                    | \$ 104,111,317                                       |
| E346 Miscellaneous Power Plant Equipment |                                |   |                                       |                         |  |
| Angus C. Anson Unit 2 & 3                | \$ 2,130,947                   | \$ 35,755   | \$ 2,166,702                          | \$ -                    | \$ 2,166,702   |
| Angus C. Anson Unit 4                    | 1,945                          | 793   | 2,737                                 | -                       | 2,737  |
| Black Dog Unit 5                         | 5,569,182                      | 49,858  | 5,619,039                             | -                       | 5,619,039  |
| Black Dog Unit 6                         | 3,779,403                      | 56,548  | 3,835,951                             | -                       | 3,835,951  |
| Blue Lake Units 1 thru 4                 | 584,811                        | 8,096   | 592,907                               | -                       | 592,907  |
| Blue Lake Units 7 & 8                    | 13,367                         | 923   | 14,290                                | -                       | 14,290   |
| Border Winds                             | 40,122                         | 9,877   | 49,999                                | -                       | 49,999   |
| Courtenay Wind                           | 5,004                          | 1,579   | 6,583                                 | -                       | 6,583  |
| Grand Meadow Wind                        | 101,742                        | 9,286   | 111,028                               | -                       | 111,028  |
| Granite City                             | 19,972                         | -   | 19,972                                | -                       | 19,972   |
| High Bridge                              | 2,213,854                      | 182,429   | 2,396,283                             | -                       | 2,396,283  |
| Inver Hills                              | 707,029                        | 3,587   | 710,616                               | -                       | 710,616  |
| Key City                                 | 410,024                        | -   | 410,024                               | -                       | 410,024  |
| Nobles Wind                              | 213,455                        | 28,440  | 241,895                               | -                       | 241,895  |
| Pleasant Valley Wind                     | 52,223                         | 12,605  | 64,827                                | -                       | 64,827   |
| Riverside                                | 5,502,780                      | 157,491   | 5,660,270                             | -                       | 5,660,270  |
| Foxtail Wind**                           | -                              | -   | -                                     | -                       | -  |
| Lake Benton II Wind**                    | -                              | -   | -                                     | -                       | -  |
| Total/Composite                          | \$ 21,345,859                  | \$ 557,264  | \$ 21,903,123                         | \$ -                    | \$ 21,903,123  |
| E348.1 Energy Storage Equipment          |                                |   |                                       |                         |  |
| Wind-to-Battery System                   | \$ 2,947,427                   | \$ 295,369  | \$ 3,242,796                          | \$ 6,486,106            | \$ 9,728,902   |
| Total/Composite                          | \$ 2,947,427                   | \$ 295,369  | \$ 3,242,796                          | \$ 6,486,106            | \$ 9,728,902   |
| <b>Total Other Production</b>            | <b>\$ 1,011,059,620</b>        | <b>\$ 126,726,100</b>                                   | <b>\$ 1,137,785,720</b>               | <b>\$ (0)</b>           | <b>\$ 1,137,785,720</b>                              |

|                                | Reserve<br>Balance<br>1/1/2020<br>(1) | 2020 estimated<br>Annual<br>Depreciation<br>Expense (1)<br>(2) | Reserve<br>Balance<br>1/1/2021 (est.)<br>(3) | Reserve<br>Reallocation<br>(4) | Reallocated<br>Reserve<br>Balance<br>1/1/2021 (est.)<br>(5) |
|--------------------------------|---------------------------------------|--|--|--------------------------------|---|
| <b>GAS PRODUCTION</b>          |                                       |  |  |                                |   |
| G305 Structures & Improvements |                                       |  |  |                                |   |
| Maplewood                      | \$ 1,541,387                          | \$ 157,921   | \$ 1,699,308                                 | \$ -                           | \$ 1,699,308  |
| Sibley                         | 686,934                               | 140,689  | 827,623                                      | -                              | 827,623   |
| Total/Composite                | \$ 2,228,320                          | \$ 298,610   | \$ 2,526,931                                 | \$ -                           | \$ 2,526,931  |
| G311 LP Gas Equipment          |                                       |  |  |                                |   |
| Maplewood                      | \$ 4,235,990                          | \$ 306,021   | \$ 4,542,011                                 | \$ -                           | \$ 4,542,011  |
| Sibley                         | 6,343,920                             | 1,068,880  | 7,412,800                                    | -                              | 7,412,800   |
| Total/Composite                | \$ 10,579,910                         | \$ 1,374,901   | \$ 11,954,811                                | \$ -                           | \$ 11,954,811   |
| G320 Other Equipment           |                                       |  |  |                                |   |
| Maplewood                      | \$ 331,083                            | \$ 55,147  | \$ 386,230                                   | \$ -                           | \$ 386,230  |
| Sibley                         | 527,340                               | 36,395   | 563,735                                      | -                              | 563,735   |
| Total/Composite                | \$ 858,423                            | \$ 91,542  | \$ 949,965                                   | \$ -                           | \$ 949,965  |
| <b>Total Gas Production</b>    | <b>\$ 13,666,653</b>                  | <b>\$ 1,765,053</b>  | <b>\$ 15,431,706</b>                         | <b>\$ -</b>                    | <b>\$ 15,431,706</b>  |

**GAS STORAGE - Wescott Plant**

|   |                      |                     |                      |             |                      |
|---|----------------------|---------------------|----------------------|-------------|----------------------|
| G361 Structures & Improvements          | \$ 6,079,032         | \$ 487,291          | \$ 6,566,324         | \$ -        | \$ 6,566,324         |
| G362 Gas Holders                        | 8,638,456            | 283,814             | 8,922,270            | -           | 8,922,270            |
| G363 Purification Equipment             | 1,074,267            | 25,250              | 1,099,517            | -           | 1,099,517            |
| G363.1 Liquefaction Equipment           | 2,997,607            | 312,872             | 3,310,479            | -           | 3,310,479            |
| G363.2 Vaporizing Equipment             | 7,397,755            | 466,374             | 7,864,129            | -           | 7,864,129            |
| G363.3 Compressor Equipment             | 12,264,421           | 1,232,763           | 13,497,184           | -           | 13,497,184           |
| G363.4 Measuring & Regulating Equipment | 70,999               | 4,193               | 75,192               | -           | 75,192               |
| G363.5 Other Equipment                  | 4,102,827            | 417,692             | 4,520,519            | -           | 4,520,519            |
| <b>Total Gas Storage</b>                | <b>\$ 42,625,365</b> | <b>\$ 3,230,249</b> | <b>\$ 45,855,614</b> | <b>\$ -</b> | <b>\$ 45,855,614</b> |

(1) Depreciation Expense was calculated using the remaining life and net salvage currently approved and plant and reserve balances as of 1/1/2020.

Electric Utility

| FERC<br>Account               | Account Description                   | Beginning<br>Balance<br>1/1/2019 | Additions             | Retirements            | Transfers           | Adjustments | Ending<br>Balance<br>12/31/2019 |
|-------------------------------|---------------------------------------|----------------------------------|-----------------------|------------------------|---------------------|-------------|---------------------------------|
| <b>Steam</b>                  |                                       |                                  |                       |                        |                     |             |                                 |
| 310                           | Land & Land Rights - Fee              | \$ 8,554,373                     | \$ -                  | \$ (35,179)            | \$ -                | \$ -        | \$ 8,519,194                    |
| 310                           | Land & Land Rights - Other            | 8,024                            | -                     | -                      | -                   | -           | 8,024                           |
| 311                           | Structures & Improvements             | 291,941,494                      | 1,317,811             | (566,545)              | (783,616)           | -           | 291,909,144                     |
| 312                           | Boiler Plant Equipment                | 1,460,729,294                    | 14,496,630            | (10,197,440)           | (118,327)           | -           | 1,464,910,157                   |
| 314                           | Turbogenerator Units                  | 324,461,502                      | (3,951,899)           | (1,472,027)            | (68,159)            | -           | 318,969,418                     |
| 315                           | Accessory Electric Equipment          | 187,064,696                      | 1,588,314             | (912,219)              | -                   | -           | 187,740,791                     |
| 316                           | Miscellaneous Power Plant Equipment   | 53,887,695                       | 186,592               | (8,525)                | -                   | -           | 54,065,763                      |
|                               |                                       | <b>\$ 2,326,647,079</b>          | <b>\$ 13,637,448</b>  | <b>\$ (13,191,935)</b> | <b>\$ (970,101)</b> | <b>\$ -</b> | <b>\$ 2,326,122,491</b>         |
| <b>Nuclear</b>                |                                       |                                  |                       |                        |                     |             |                                 |
| 302                           | Franchises & Consents                 | \$ 247,161,045                   | \$ 4,071,774          | \$ -                   | \$ -                | \$ -        | \$ 251,232,819                  |
| 320                           | Land & Land Rights - Fee              | 1,760,634                        | -                     | -                      | -                   | -           | 1,760,634                       |
| 320                           | Land and Land Rights - Other          | 1,729                            | -                     | -                      | -                   | -           | 1,729                           |
| 321                           | Structures & Improvements             | 588,287,575                      | 3,289,706             | (11,876,346)           | 357,914             | -           | 580,058,850                     |
| 322                           | Reactor Plant Equipment               | 1,863,174,292                    | 50,576,606            | (5,095,394)            | -                   | -           | 1,908,655,504                   |
| 323                           | Turbogenerator Units                  | 621,418,893                      | 13,709,657            | (1,313,060)            | -                   | -           | 633,815,490                     |
| 324                           | Accessory Electric Equipment          | 539,132,640                      | 15,928,597            | (1,131,564)            | -                   | -           | 553,929,673                     |
| 325                           | Miscellaneous Power Plant Equipment   | 206,624,850                      | 2,446,280             | (1,584,192)            | 146,945             | -           | 207,633,882                     |
|                               |                                       | <b>\$ 4,067,561,658</b>          | <b>\$ 90,022,621</b>  | <b>\$ (21,000,557)</b> | <b>\$ 504,859</b>   | <b>\$ -</b> | <b>\$ 4,137,088,581</b>         |
| <b>Hydro</b>                  |                                       |                                  |                       |                        |                     |             |                                 |
| 302                           | Franchises & Consents                 | \$ 2,857,039                     | \$ -                  | \$ -                   | \$ -                | \$ -        | \$ 2,857,039                    |
| 330                           | Land & Land Rights - Fee              | 292,863                          | -                     | -                      | -                   | -           | 292,863                         |
| 330                           | Land & Land Rights - Other            | 1,400,213                        | -                     | -                      | -                   | -           | 1,400,213                       |
| 331                           | Structures & Improvements             | 1,388,480                        | -                     | -                      | 57,124              | -           | 1,445,604                       |
| 332                           | Reservoirs, Dams & Waterways          | 11,066,280                       | 293                   | -                      | -                   | -           | 11,066,573                      |
| 333                           | Water Wheels, Turbines & Generators   | 10,155,741                       | 21,326                | -                      | -                   | -           | 10,177,067                      |
| 334                           | Accessory Electric Equipment          | 3,256,972                        | -                     | -                      | -                   | -           | 3,256,972                       |
| 335                           | Miscellaneous Power Plant Equipment   | 60,824                           | -                     | -                      | -                   | -           | 60,824                          |
|                               |                                       | <b>\$ 30,478,412</b>             | <b>\$ 21,619</b>      | <b>\$ -</b>            | <b>\$ 57,124</b>    | <b>\$ -</b> | <b>\$ 30,557,156</b>            |
| <b>Other</b>                  |                                       |                                  |                       |                        |                     |             |                                 |
| 340                           | Land & Land Rights - Fee              | \$ 3,510,677                     | \$ 1,105,334          | \$ -                   | \$ -                | \$ -        | \$ 4,616,011                    |
| 340                           | Land & Land Rights - Other            | 10,367,652                       | -                     | -                      | -                   | -           | 10,367,652                      |
| 340                           | Wind Rights                           | 16,642,947                       | 146,853               | -                      | -                   | -           | 16,789,800                      |
| 341                           | Structures & Improvements             | 266,641,117                      | 66,938,771            | (65,969)               | 817,630             | -           | 334,331,548                     |
| 342                           | Fuel Holders, Producers & Accessories | 27,432,076                       | 361,734               | (684,738)              | -                   | -           | 27,109,072                      |
| 343                           | Prime Movers                          | 139,802,454                      | 652,252               | -                      | -                   | -           | 140,454,706                     |
| 344                           | Generators                            | 2,184,525,708                    | 346,157,659           | (11,429,551)           | 186,485             | -           | 2,519,440,301                   |
| 345                           | Accessory Electric Equipment          | 286,326,327                      | 11,916,587            | (2,626,774)            | -                   | -           | 295,616,140                     |
| 346                           | Miscellaneous Power Plant Equipment   | 32,879,561                       | 23,919                | -                      | -                   | -           | 32,903,480                      |
| 348.1                         | Energy Storage Equipment              | 4,128,902                        | -                     | -                      | -                   | -           | 4,128,902                       |
|                               |                                       | <b>\$ 2,972,257,420</b>          | <b>\$ 427,303,109</b> | <b>\$ (14,807,032)</b> | <b>\$ 1,004,115</b> | <b>\$ -</b> | <b>\$ 3,385,757,612</b>         |
| <b>Electric Utility Total</b> |                                       | <b>\$ 9,396,944,569</b>          | <b>\$ 530,984,797</b> | <b>\$ (48,999,524)</b> | <b>\$ 595,997</b>   | <b>\$ -</b> | <b>\$ 9,879,525,840</b>         |

Gas Utility

| FERC<br>Account          | Account Description              | Beginning<br>Balance<br>1/1/2019 | Additions         | Retirements           | Transfers             | Adjustments | Ending<br>Balance<br>12/31/2019 |
|--------------------------|----------------------------------|----------------------------------|-------------------|-----------------------|-----------------------|-------------|---------------------------------|
| <b>Production</b>        |                                  |                                  |                   |                       |                       |             |                                 |
| 304                      | Land & Land Rights - Fee         | \$ 755,528                       | \$ -              | \$ (49,939)           | \$ (349,574)          | \$ -        | \$ 356,015                      |
| 304                      | Land & Land Rights - Other       | 34,536                           | -                 | -                     | -                     | -           | 34,536                          |
| 305                      | Structures & Improvements        | 3,250,033                        | -                 | (964,878)             | 492,367               | -           | 2,777,523                       |
| 311                      | LP Gas Equipment                 | 19,384,538                       | 34,182            | (4,629,110)           | (1,533,877)           | -           | 13,255,733                      |
| 320                      | Other Equipment                  | 1,394,775                        | 51,765            | (350,472)             | (143,900)             | -           | 952,168                         |
|                          |                                  | <b>\$ 24,819,411</b>             | <b>\$ 85,947</b>  | <b>\$ (5,994,399)</b> | <b>\$ (1,534,984)</b> | <b>\$ -</b> | <b>\$ 17,375,975</b>            |
| <b>Storage</b>           |                                  |                                  |                   |                       |                       |             |                                 |
| 360                      | Land & Land Rights - Fee         | \$ -                             | \$ -              | \$ -                  | \$ 349,574            | \$ -        | \$ 349,574                      |
| 360                      | Land & Land Rights - Other       | 11,264                           | -                 | -                     | -                     | -           | 11,264                          |
| 361                      | Structures & Improvements        | 5,072,297                        | 289,623           | (3,258)               | 1,376,404             | -           | 6,735,066                       |
| 362                      | Gas Holders                      | 8,232,610                        | 117,242           | (4,586)               | (145,844)             | -           | 8,199,422                       |
| 363                      | Purification Equipment           | 1,020,951                        | -                 | (34,989)              | -                     | -           | 985,962                         |
| 363.1                    | Liquefaction Equipment           | 2,852,841                        | 14                | -                     | 711,821               | -           | 3,564,676                       |
| 363.2                    | Vaporizing Equipment             | 9,363,381                        | (27,183)          | -                     | -                     | -           | 9,336,198                       |
| 363.3                    | Compressor Equipment             | 23,514,851                       | 72,694            | (9,177)               | 155,135               | -           | 23,733,503                      |
| 363.4                    | Measuring & Regulating Equipment | 44,503                           | -                 | -                     | 29,131                | -           | 73,634                          |
| 363.5                    | Other Equipment                  | 4,530,516                        | 216,603           | (2,823)               | 99,323                | -           | 4,843,620                       |
|                          |                                  | <b>\$ 54,643,215</b>             | <b>\$ 668,993</b> | <b>\$ (54,834)</b>    | <b>\$ 2,575,544</b>   | <b>\$ -</b> | <b>\$ 57,832,919</b>            |
| <b>Gas Utility Total</b> |                                  |                                  |                   |                       |                       |             |                                 |
|                          |                                  | <b>\$ 79,462,626</b>             | <b>\$ 754,940</b> | <b>\$ (6,049,232)</b> | <b>\$ 1,040,561</b>   | <b>\$ -</b> | <b>\$ 75,208,894</b>            |



Electric Utility

| FERC<br>Account        | Account Description                   | Beginning<br>Balance<br>1/1/2019 | Credits        |                  | Debits        |                    | Transfers,<br>Adjustments,<br>and Other<br>Credits<br>(Debits) | Ending<br>Balance<br>12/31/2019 |
|------------------------|---------------------------------------|----------------------------------|----------------|------------------|---------------|--------------------|--|---------------------------------|
|                        |                                       |                                  | Accruals       | Gross<br>Salvage | Retirements*  | Cost of<br>Removal |  |                                 |
| Steam                  |                                       |                                  |                |                  |               |                    |  |                                 |
| 311                    | Structures & Improvements             | \$ 247,661,479                   | \$ 7,605,223   | \$ -             | \$ 566,545    | \$ 172,790         | \$ 4,279   | \$ 254,531,646                  |
| 312                    | Boiler Plant Equipment                | 910,037,134                      | 62,771,219     | 440,488          | 10,197,440    | 2,714,756          | -  | 960,336,644                     |
| 314                    | Turbogenerator Units                  | 191,161,033                      | 16,966,019     | -                | 1,472,027     | 306,507            | -  | 206,348,519                     |
| 315                    | Accessory Electric Equipment          | 115,716,338                      | 7,237,164      | 4,686            | 912,219       | 65,608             | -  | 121,980,361                     |
| 316                    | Miscellaneous Power Plant Equipment   | 40,868,620                       | 1,502,729      | -                | 8,525         | -                  | -  | 42,362,824                      |
|                        |                                       | \$ 1,505,444,604                 | \$ 96,082,354  | \$ 445,174       | \$ 13,156,756 | \$ 3,259,661       | \$ 4,279   | \$ 1,585,559,994                |
| Nuclear                |                                       |                                  |                |                  |               |                    |  |                                 |
| 302                    | Franchises & Consents                 | \$ 77,854,760                    | \$ 12,750,589  | \$ -             | \$ -          | \$ -               | \$ -   | \$ 90,605,349                   |
| 321                    | Structures & Improvements             | 343,786,777                      | 18,522,236     | -                | 11,876,346    | 131,940            | 62,841   | 350,363,569                     |
| 322                    | Reactor Plant Equipment               | 824,669,858                      | 76,890,713     | (216)            | 5,095,394     | 807,038            | -  | 895,657,921                     |
| 323                    | Turbogenerator Units                  | 256,013,228                      | 27,578,135     | 3,654            | 1,313,060     | 2,886,747          | -  | 279,395,210                     |
| 324                    | Accessory Electric Equipment          | 265,976,472                      | 21,800,496     | -                | 1,131,564     | 110,255            | -  | 286,535,149                     |
| 325                    | Miscellaneous Power Plant Equipment   | 122,276,737                      | 6,368,086      | -                | 1,584,192     | 14,713             | 26,345   | 127,072,264                     |
|                        |                                       | \$ 1,890,577,832                 | \$ 163,910,255 | \$ 3,438         | \$ 21,000,557 | \$ 3,950,693       | \$ 89,187  | \$ 2,029,629,462                |
| Hydro                  |                                       |                                  |                |                  |               |                    |  |                                 |
| 302                    | Franchises & Consents                 | \$ 1,236,821                     | \$ 106,828     | \$ -             | \$ -          | \$ -               | \$ -   | \$ 1,343,648                    |
| 331                    | Structures & Improvements             | 742,628                          | 68,175         | -                | -             | -                  | 15,684   | 826,488                         |
| 332                    | Reservoirs, Dams & Waterways          | 6,142,071                        | 583,391        | -                | -             | (826)              | -  | 6,726,288                       |
| 333                    | Water Wheels, Turbines & Generators   | 3,796,003                        | 597,734        | -                | -             | -                  | -  | 4,393,736                       |
| 334                    | Accessory Electric Equipment          | 1,329,477                        | 183,780        | -                | -             | -                  | -  | 1,513,258                       |
| 335                    | Miscellaneous Power Plant Equipment   | 67,362                           | 628            | -                | -             | -                  | -  | 67,990                          |
|                        |                                       | \$ 13,314,362                    | \$ 1,540,536   | \$ -             | \$ -          | \$ (826)           | \$ 15,684  | \$ 14,871,408                   |
| Other                  |                                       |                                  |                |                  |               |                    |  |                                 |
| 340                    | Wind Rights                           | \$ 4,949,269                     | \$ 719,017     | \$ -             | \$ -          | \$ -               | \$ -   | \$ 5,668,286                    |
| 341                    | Structures & Improvements             | 99,254,457                       | 7,506,855      | -                | 65,969        | 10,673             | 53,747   | 106,738,417                     |
| 342                    | Fuel Holders, Producers & Accessories | 15,979,087                       | 671,742        | -                | 684,738       | 29,851             | (1,692,979)  | 14,243,261                      |
| 343                    | Prime Movers                          | 39,097,944                       | 4,329,992      | -                | -             | -                  | -  | 43,427,936                      |
| 344                    | Generators                            | 649,505,381                      | 85,706,588     | 39,071           | 11,429,551    | 2,122,127          | 1,509,033  | 723,208,396                     |
| 345                    | Accessory Electric Equipment          | 86,281,401                       | 10,190,780     | 4,534            | 2,626,774     | 487,631            | 117,727  | 93,480,037                      |
| 346                    | Miscellaneous Power Plant Equipment   | 20,771,047                       | 556,478        | -                | -             | -                  | 18,334   | 21,345,859                      |
| 348.1                  | Energy Storage Equipment              | 2,652,058                        | 295,369        | -                | -             | -                  | -  | 2,947,427                       |
|                        |                                       | \$ 918,490,646                   | \$ 109,976,821 | \$ 43,605        | \$ 14,807,032 | \$ 2,650,281       | \$ 5,862   | \$ 1,011,059,620                |
| Electric Utility Total |                                       | \$ 4,327,827,444                 | \$ 371,509,966 | \$ 492,218       | \$ 48,964,345 | \$ 9,859,809       | \$ 115,011   | \$ 4,641,120,484                |

Gas Utility

| FERC<br>Account          | Account Description              | Beginning<br>Balance<br>1/1/2019 | Credits             |                     | Debits              |                     | Transfers,<br>Adjustments,<br>and Other<br>Credits<br>(Debits) | Ending<br>Balance<br>12/31/2019 |
|--------------------------|----------------------------------|----------------------------------|---------------------|---------------------|---------------------|---------------------|--|---------------------------------|
|                          |                                  |                                  | Accruals            | Gross<br>Salvage    | Retirements*        | Cost of<br>Removal  |  |                                 |
| <b>Production</b>        |                                  |                                  |                     |                     |                     |                     |  |                                 |
| 305                      | Structures & Improvements        | \$ 2,764,151                     | \$ 382,709          | \$ -                | \$ 964,878          | \$ -                | \$ 46,339  | \$ 2,228,320                    |
| 311                      | LP Gas Equipment                 | 13,695,813                       | 1,284,629           | 1,967,214           | 4,629,110           | 1,495,229           | (243,409)  | 10,579,910                      |
| 320                      | Other Equipment                  | 913,819                          | 193,472             | -                   | 350,472             | 12,424              | 114,028  | 858,423                         |
|                          |                                  | <b>\$ 17,373,783</b>             | <b>\$ 1,860,810</b> | <b>\$ 1,967,214</b> | <b>\$ 5,944,460</b> | <b>\$ 1,507,653</b> | <b>\$ (83,042)</b>   | <b>\$ 13,666,653</b>            |
| <b>Storage</b>           |                                  |                                  |                     |                     |                     |                     |  |                                 |
| 361                      | Structures & Improvements        | \$ 5,419,550                     | \$ 408,378          | \$ -                | \$ 3,258            | \$ 500              | \$ 254,863   | \$ 6,079,032                    |
| 362                      | Gas Holders                      | 8,401,168                        | 281,470             | -                   | 4,586               | 3,288               | (36,308)   | 8,638,456                       |
| 363                      | Purification Equipment           | 1,092,458                        | 25,004              | -                   | 34,989              | 8,206               | -  | 1,074,267                       |
| 363.1                    | Liquefaction Equipment           | 2,507,622                        | 313,886             | -                   | -                   | -                   | 176,099  | 2,997,607                       |
| 363.2                    | Vaporizing Equipment             | 6,927,890                        | 469,865             | -                   | -                   | -                   | -  | 7,397,755                       |
| 363.3                    | Compressor Equipment             | 10,999,728                       | 1,231,514           | -                   | 9,177               | 2,190               | 44,546   | 12,264,421                      |
| 363.4                    | Measuring & Regulating Equipment | 45,702                           | 4,193               | -                   | -                   | -                   | 21,105   | 70,999                          |
| 363.5                    | Other Equipment                  | 3,744,417                        | 411,697             | -                   | 2,823               | 14,185              | (36,279)   | 4,102,827                       |
|                          |                                  | <b>\$ 39,138,536</b>             | <b>\$ 3,146,007</b> | <b>\$ -</b>         | <b>\$ 54,834</b>    | <b>\$ 28,370</b>    | <b>\$ 424,026</b>  | <b>\$ 42,625,365</b>            |
|                          |                                  |                                  |                     |                     |                     |                     |  |                                 |
| <b>Gas Utility Total</b> |                                  | <b>\$ 56,512,319</b>             | <b>\$ 5,006,817</b> | <b>\$ 1,967,214</b> | <b>\$ 5,999,293</b> | <b>\$ 1,536,023</b> | <b>\$ 340,984</b>  | <b>\$ 56,292,018</b>            |

Note: All amounts shown in this schedule are represented as Northern States Power Company-Minnesota total company

\* Retirement Reconciliation:

Retirements in E311 are primarily related to King (\$0.3 million) and Sherco Units 1&2 (\$0.2 million)  
Retirements in E312 are primarily related to King (\$2.8 million), Red Wing (\$2.5 million), Sherco Unit 1 (\$2.0 million) and Sherco Unit 3 (\$1.6 million)  
Retirements in E314 are related to Sherco Unit 1 (\$1.5 million)  
Retirements in E315 are primarily related to King (\$0.7 million)  
Retirements in E321 are related to Prairie Island (\$11.5 million) and Monticello (\$0.4 million)  
Retirements in E322 are related to Prairie Island (\$4.1 million) and Monticello (\$1.0 million)  
Retirements in E323 are primarily related to Prairie Island (\$1.0 million)  
Retirements in E324 are related to Prairie Island (\$0.9 million) and Monticello (\$0.3 million)  
Retirements in E325 are primarily related to Prairie Island (\$1.5 million)  
Retirements in E342 are primarily due to Black Dog Unit 5 (\$0.6 million)  
Retirements in E344 are primarily related to Black Dog Unit 5 (\$5.0 million), High Bridge (\$3.0 million), United Hospital (\$2.0 million), and Nobles (\$1.2 million)  
Retirements in E345 are primarily related to High Bridge (\$1.2 million), Black Dog Unit 5 (\$0.7 million), Riverside (\$0.3 million) and Black Dog Unit 6 (\$0.2 million)  
Retirement in G305 is related to Wescott (\$1.0 million)  
Retirement in G311 is related to Wescott (\$4.6 million)  
Retirement in G320 is related to Wescott (\$0.4 million)

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Electric Utility

| FERC<br>Account        | Account Description                   | 1/1/2019                      |                            |                 | 1/1/2019                             |                |      | Depr<br>Life<br>(Yrs) | Annual<br>Accrual | Reserve<br>Ratio |
|------------------------|---------------------------------------|-------------------------------|----------------------------|-----------------|--------------------------------------|----------------|------|-----------------------|-------------------|------------------|
|                        |                                       | Beginning<br>Plant<br>Balance | Est. Future<br>Net Salvage |                 | Beginning<br>Depreciation<br>Reserve | Net<br>Balance |      |                       |                   |                  |
|                        |                                       |                               | %                          | Amount          |                                      |                |      |                       |                   |                  |
| Steam                  |                                       |                               |                            |                 |                                      |                |      |                       |                   |                  |
| 311                    | Structures & Improvements             | \$ 291,941,494                | -10.8%                     | \$ (31,458,250) | \$ 247,661,479                       | \$ 75,738,265  | 10.0 | \$ 7,566,264          | 76.58%            |                  |
| 312                    | Boiler Plant Equipment                | 1,460,729,294                 | -10.6%                     | (155,212,955)   | 910,037,134                          | 705,905,116    | 11.4 | 61,974,811            | 56.32%            |                  |
| 314                    | Turbogenerator Units                  | 324,461,502                   | -10.8%                     | (34,938,588)    | 191,161,033                          | 168,239,056    | 9.7  | 17,416,571            | 53.19%            |                  |
| 315                    | Accessory Electric Equipment          | 187,064,696                   | -9.3%                      | (17,413,592)    | 115,716,338                          | 88,761,951     | 12.2 | 7,288,619             | 56.59%            |                  |
| 316                    | Miscellaneous Power Plant Equipment   | 53,887,695                    | -8.9%                      | (4,821,869)     | 40,868,620                           | 17,840,944     | 11.9 | 1,503,565             | 69.61%            |                  |
|                        |                                       |                               |                            |                 |                                      |                |      | \$ 95,749,829         |                   |                  |
| Nuclear                |                                       |                               |                            |                 |                                      |                |      |                       |                   |                  |
| 302                    | Franchises & Consents                 | \$ 247,161,045                | 0.0%                       | \$ -            | \$ 77,854,760                        | \$ 169,306,285 | 13.4 | \$ 12,608,069         | 31.50%            |                  |
| 321                    | Structures & Improvements             | 588,287,575                   | 0.0%                       | -               | 343,786,777                          | 244,500,798    | 13.3 | 18,345,228            | 58.44%            |                  |
| 322                    | Reactor Plant Equipment               | 1,863,174,292                 | 0.0%                       | -               | 824,669,858                          | 1,038,504,435  | 13.7 | 75,583,233            | 44.26%            |                  |
| 323                    | Turbogenerator Units                  | 621,418,893                   | 0.0%                       | -               | 256,013,228                          | 365,405,665    | 13.6 | 26,769,770            | 41.20%            |                  |
| 324                    | Accessory Electric Equipment          | 539,132,640                   | 0.0%                       | -               | 265,976,472                          | 273,156,168    | 13.1 | 20,920,003            | 49.33%            |                  |
| 325                    | Miscellaneous Power Plant Equipment   | 206,624,850                   | 0.0%                       | -               | 122,276,737                          | 84,348,112     | 13.6 | 6,201,149             | 59.18%            |                  |
|                        |                                       |                               |                            |                 |                                      |                |      | \$ 160,427,451        |                   |                  |
| Hydro                  |                                       |                               |                            |                 |                                      |                |      |                       |                   |                  |
| 302                    | Franchises & Consents                 | \$ 2,857,039                  | 0.0%                       | \$ -            | \$ 1,236,821                         | \$ 1,620,218   | 15.2 | \$ 106,593            | 43.29%            |                  |
| 331                    | Structures & Improvements             | 1,388,480                     | -25.9%                     | (359,674)       | 742,628                              | 1,005,526      | 15.2 | 66,123                | 42.48%            |                  |
| 332                    | Reservoirs, Dams & Waterways          | 11,066,280                    | -22.7%                     | (2,510,129)     | 6,142,071                            | 7,434,339      | 12.8 | 582,630               | 45.24%            |                  |
| 333                    | Water Wheels, Turbines & Generators   | 10,155,741                    | -26.4%                     | (2,681,116)     | 3,796,003                            | 9,040,854      | 15.2 | 594,793               | 29.57%            |                  |
| 334                    | Accessory Electric Equipment          | 3,256,972                     | -26.4%                     | (859,841)       | 1,329,477                            | 2,787,336      | 15.2 | 183,377               | 32.29%            |                  |
| 335                    | Miscellaneous Power Plant Equipment   | 60,824                        | -26.4%                     | (16,058)        | 67,362                               | 9,520          | 15.2 | 626                   | 87.62%            |                  |
|                        |                                       |                               |                            |                 |                                      |                |      | \$ 1,534,143          |                   |                  |
| Other                  |                                       |                               |                            |                 |                                      |                |      |                       |                   |                  |
| 340                    | Wind Rights                           | \$ 16,642,947                 | 0.0%                       | \$ -            | \$ 4,949,269                         | \$ 11,693,678  | 16.3 | \$ 715,604            | 29.74%            |                  |
| 341                    | Structures & Improvements             | 266,641,117                   | -8.2%                      | (21,843,935)    | 99,254,457                           | 189,230,594    | 26.1 | 7,238,926             | 34.41%            |                  |
| 342                    | Fuel Holders, Producers & Accessories | 27,432,076                    | -10.2%                     | (2,806,560)     | 15,979,087                           | 14,259,548     | 22.9 | 622,655               | 52.84%            |                  |
| 343                    | Prime Movers                          | 139,802,454                   | -7.6%                      | (10,668,836)    | 39,097,944                           | 111,373,346    | 25.6 | 4,351,306             | 25.98%            |                  |
| 344                    | Generators                            | 2,184,525,708                 | -8.6%                      | (187,023,781)   | 649,505,381                          | 1,722,044,107  | 21.3 | 80,979,626            | 27.39%            |                  |
| 345                    | Accessory Electric Equipment          | 286,326,327                   | -8.3%                      | (23,831,614)    | 86,281,401                           | 223,876,540    | 22.3 | 10,026,844            | 27.82%            |                  |
| 346                    | Miscellaneous Power Plant Equipment   | 32,879,561                    | -8.5%                      | (2,787,745)     | 20,771,047                           | 14,896,258     | 26.7 | 556,950               | 58.24%            |                  |
| 348.1                  | Energy Storage Equipment              | 4,128,902                     | 0.0%                       | -               | 2,652,058                            | 1,476,844      | 5.0  | 295,369               | 64.23%            |                  |
|                        |                                       |                               |                            |                 |                                      |                |      | \$ 104,787,280        |                   |                  |
| Electric Utility Total |                                       |                               |                            |                 |                                      |                |      | \$ 362,498,703        |                   |                  |

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| FERC<br>Account          | Account Description              | 1/1/2019                      |                            |                | 1/1/2019                             |                |      | Depr<br>Life<br>(Yrs) | Annual<br>Accrual | Reserve<br>Ratio |
|--------------------------|----------------------------------|-------------------------------|----------------------------|----------------|--------------------------------------|----------------|------|-----------------------|-------------------|------------------|
|                          |                                  | Beginning<br>Plant<br>Balance | Est. Future<br>Net Salvage |                | Beginning<br>Depreciation<br>Reserve | Net<br>Balance |      |                       |                   |                  |
|                          |                                  |                               | %                          | Amount         |                                      |                |      |                       |                   |                  |
| <b>Production</b>        |                                  |                               |                            |                |                                      |                |      |                       |                   |                  |
| 305                      | Structures & Improvements        | \$ 3,250,033                  | -87.7%                     | \$ (2,851,463) | \$ 2,764,151                         | \$ 3,337,346   | 11.0 | \$ 303,395            | 45.30%            |                  |
| 311                      | LP Gas Equipment                 | 19,384,538                    | -83.5%                     | (16,192,889)   | 13,695,813                           | 21,881,614     | 11.0 | 1,989,238             | 38.50%            |                  |
| 320                      | Other Equipment                  | 1,394,775                     | -86.3%                     | (1,203,620)    | 913,819                              | 1,684,576      | 11.0 | 153,143               | 35.17%            |                  |
|                          |                                  |                               |                            |                |                                      |                |      | \$ 2,445,776          |                   |                  |
| <b>Storage</b>           |                                  |                               |                            |                |                                      |                |      |                       |                   |                  |
| 361                      | Structures & Improvements        | \$ 5,072,297                  | -19.2%                     | \$ (973,881)   | \$ 5,419,550                         | \$ 626,628     | 5.0  | \$ 125,326            | 89.64%            |                  |
| 362                      | Gas Holders                      | 8,232,610                     | -19.2%                     | (1,580,661)    | 8,401,168                            | 1,412,103      | 5.0  | 282,421               | 85.61%            |                  |
| 363                      | Purification Equipment           | 1,020,951                     | -19.2%                     | (196,023)      | 1,092,458                            | 124,516        | 5.0  | 24,903                | 89.77%            |                  |
| 363                      | Liquefaction Equipment           | 2,852,841                     | -19.2%                     | (547,745)      | 2,507,622                            | 892,964        | 5.0  | 178,593               | 73.74%            |                  |
| 363                      | Vaporizing Equipment             | 9,363,381                     | -19.2%                     | (1,797,769)    | 6,927,890                            | 4,233,260      | 9.0  | 470,362               | 62.07%            |                  |
| 363                      | Compressor Equipment             | 23,514,851                    | -19.2%                     | (4,514,851)    | 10,999,728                           | 17,029,974     | 14.0 | 1,216,427             | 39.24%            |                  |
| 363                      | Measuring & Regulating Equipment | 44,503                        | -19.2%                     | (8,545)        | 45,702                               | 7,346          | 5.0  | 1,469                 | 86.15%            |                  |
| 363                      | Other Equipment                  | 4,530,516                     | -19.2%                     | (869,859)      | 3,744,417                            | 1,655,958      | 5.0  | 331,192               | 69.34%            |                  |
|                          |                                  |                               |                            |                |                                      |                |      | \$ 2,630,692          |                   |                  |
| <b>Gas Utility Total</b> |                                  |                               |                            |                |                                      |                |      | \$ 5,076,468          |                   |                  |

Electric Utility

| Electric Production Plant Facility | Proposed Retirement Date per Remaining Life Petition | Resource Planning/Modeling End of Life Docket No. E002/RP-19-368 Reference Plan | Rationale for Difference Between Depreciation Life and Resource Planning Period   |
|------------------------------------|--|---|---|
| St. Croix Falls                    | 2027   | Through the end of the resource planning period (2034)                          | The depreciation period is tied to the FERC operating license. The resource plan life looks at capacity needs and can assume things like license extensions when doing so, but because the general practice for other Hydro facilities has been to keep them in line with their FERC licenses the Company believes the depreciable end of life should be maintained at 2027 until the FERC extension has been obtained. |
| Inver Hills                        | 2026   | Through the end of the resource planning period (2034)                          | These units are part of the restoration plan. Until replacement restoration units are in service, these units are modeled for capacity.   |
| Wind-To-Battery (FERC 348.1)       | 2021   | N/A   | The Wind-to-Battery asset is not part of the Resource Planning scope.   |
|                                    |  |   |   |
|                                    |  |   |   |
|                                    |  |   |   |
|                                    |  |   |   |

Note: Unlisted plants either run beyond the resource planning period or are aligned with the resource planning end of life. Additionally, the accounting life of the plant often coincides with the calendar year end whereas the Resource Plan models typically use the MISO year which ends on May 31. Therefore, plants with less than a year difference were also not included.

| Account                              | Description                           | Current Approved<br>Remaining Life<br>01/01/19 (Yrs) | Proposed<br>Remaining Life<br>01/01/21 (Yrs) | Current<br>Approved Net<br>Salvage<br>01/01/19 (%) | Proposed Net<br>Salvage<br>01/01/21 (%) | Latest Life<br>Change<br>(Docket #) | Life Change<br>(Yrs) | Latest Net Salvage<br>Change (Docket<br>#) | Net Salvage<br>Change (%) | Number of Life<br>Changes in the<br>Last Five Years | Number of Net<br>Salvage Changes in<br>the Last Five Years |
|--------------------------------------|---------------------------------------|--|--|--|---|-------------------------------------|----------------------|--|---------------------------|---|--|
| <b>Angus C. Anson Unit 2 &amp; 3</b> |                                       |  |  |  |   |                                     |                      |  |                           |   |  |
| E341                                 | Structures & Improvements             | 26.4   | 24.4   | -6.5   | -6.5                                    | EG002-D-19-161                      | 15.0                 | EG002-D-15-46                              | -2.0                      | 1   | 1  |
| E342                                 | Fuel Holders, Producers & Accessories | 22.0   | 20.0   | -9.6   | -11.2                                   | EG002-D-19-161                      | 15.0                 | EG002-D-15-46                              | -5.2                      | 2   | 1  |
| E343                                 | Prime Movers                          | 22.0   | 20.0   | -9.6   | -11.2                                   | EG002-D-19-161                      | 15.0                 | EG002-D-18-162                             | -9.6                      | 2   | 1  |
| E344                                 | Generators                            | 22.0   | 20.0   | -9.6   | -11.2                                   | EG002-D-19-161                      | 15.0                 | EG002-D-15-46                              | -5.2                      | 2   | 1  |
| E345                                 | Accessory Electric Equipment          | 22.0   | 20.0   | -9.6   | -11.2                                   | EG002-D-19-161                      | 15.0                 | EG002-D-15-46                              | -5.2                      | 2   | 1  |
| E346                                 | Miscellaneous Power Plant Equipment   | 22.0   | 20.0   | -9.6   | -11.2                                   | EG002-D-19-161                      | 15.0                 | EG002-D-15-46                              | -5.2                      | 2   | 1  |
| <b>Angus C. Anson Unit 4</b>         |                                       |  |  |  |   |                                     |                      |  |                           |   |  |
| E341                                 | Structures & Improvements             | 26.4   | 24.4   | -6.5   | -6.5                                    | EG002-D-19-161                      | 10.0                 | EG002-D-15-46                              | -2.0                      | 1   | 1  |
| E342                                 | Fuel Holders, Producers & Accessories | 26.4   | 24.4   | -6.5   | -6.5                                    | EG002-D-19-161                      | 10.0                 | EG002-D-15-46                              | -2.0                      | 1   | 1  |
| E343                                 | Prime Movers                          | 26.4   | 24.4   | -6.5   | -6.5                                    | EG002-D-19-161                      | 10.0                 | EG002-D-18-162                             | -6.5                      | 2   | 1  |
| E344                                 | Generators                            | 26.4   | 24.4   | -6.5   | -6.5                                    | EG002-D-19-161                      | 10.0                 | EG002-D-15-46                              | -2.0                      | 1   | 1  |
| E345                                 | Accessory Electric Equipment          | 26.4   | 24.4   | -6.5   | -6.5                                    | EG002-D-19-161                      | 10.0                 | EG002-D-15-46                              | -2.0                      | 1   | 1  |
| E346                                 | Miscellaneous Power Plant Equipment   | 26.4   | 24.4   | -6.5   | -6.5                                    | EG002-D-19-161                      | 10.0                 | EG002-D-15-46                              | -2.0                      | 1   | 1  |
| <b>Black Dog Unit 5</b>              |                                       |  |  |  |   |                                     |                      |  |                           |   |  |
| E341                                 | Structures & Improvements             | 39.3   | 37.3   | -11.4  | -10.3                                   | EG002-D-19-161                      | 26.3                 | EG002-D-15-46                              | -9.7                      | 1   | 1  |
| E342                                 | Fuel Holders, Producers & Accessories | 13.0   | 11.0   | -11.4  | -7.2                                    | EG002-D-02-214                      | 30.0                 | EG002-D-15-46                              | -9.7                      | 0   | 1  |
| E343                                 | Prime Movers                          | 13.0   | 11.0   | -11.4  | -7.2                                    | EG002-D-18-162                      | 14.0                 | EG002-D-18-162                             | -11.4                     | 1   | 1  |
| E344                                 | Generators                            | 13.0   | 11.0   | -11.4  | -7.2                                    | EG002-D-02-214                      | 30.0                 | EG002-D-15-46                              | -9.7                      | 0   | 1  |
| E345                                 | Accessory Electric Equipment          | 13.0   | 11.0   | -11.4  | -7.2                                    | EG002-D-02-214                      | 30.0                 | EG002-D-15-46                              | -9.7                      | 0   | 1  |
| E346                                 | Miscellaneous Power Plant Equipment   | 13.0   | 11.0   | -11.4  | -7.2                                    | EG002-D-02-214                      | 30.0                 | EG002-D-15-46                              | -9.7                      | 0   | 1  |
| <b>Black Dog Unit 6</b>              |                                       |  |  |  |   |                                     |                      |  |                           |   |  |
| E341                                 | Structures & Improvements             | 39.3   | 37.3   | -5.0   | -10.3                                   | EG002-D-18-162                      | 40.0                 | EG002-D-18-162                             | -5.0                      | 1   | 1  |
| E342                                 | Fuel Holders, Producers & Accessories | 39.3   | 37.3   | -5.0   | -10.3                                   | EG002-D-18-162                      | 40.0                 | EG002-D-18-162                             | -5.0                      | 1   | 1  |
| E343                                 | Prime Movers                          | 39.3   | 37.3   | -5.0   | -10.3                                   | EG002-D-18-162                      | 40.0                 | EG002-D-18-162                             | -5.0                      | 1   | 1  |
| E344                                 | Generators                            | 39.3   | 37.3   | -5.0   | -10.3                                   | EG002-D-18-162                      | 40.0                 | EG002-D-18-162                             | -5.0                      | 1   | 1  |
| E345                                 | Accessory Electric Equipment          | 39.3   | 37.3   | -5.0   | -10.3                                   | EG002-D-18-162                      | 40.0                 | EG002-D-18-162                             | -5.0                      | 1   | 1  |
| E346                                 | Miscellaneous Power Plant Equipment   | 39.3   | 37.3   | -5.0   | -10.3                                   | EG002-D-18-162                      | 40.0                 | EG002-D-18-162                             | -5.0                      | 1   | 1  |
| <b>Blazing Star I Wind (1)</b>       |                                       |  |  |  |   |                                     |                      |  |                           |   |  |
| E340.1                               | Wind Rights                           | 25.0   | 25.0   | 0.0  | 0.0                                     | EG002-D-19-161                      | 25.0                 | EG002-D-19-161                             | 0.0                       | 1   | 1  |
| E341                                 | Structures & Improvements             | 25.0   | 25.0   | -8.5   | -11.6                                   | EG002-D-19-161                      | 25.0                 | EG002-D-19-161                             | -8.5                      | 1   | 1  |
| E342                                 | Fuel Holders, Producers & Accessories | 25.0   | 25.0   | -8.5   | -11.6                                   | EG002-D-19-161                      | 25.0                 | EG002-D-19-161                             | -8.5                      | 1   | 1  |
| E343                                 | Prime Movers                          | 25.0   | 25.0   | -8.5   | -11.6                                   | EG002-D-19-161                      | 25.0                 | EG002-D-19-161                             | -8.5                      | 1   | 1  |
| E344                                 | Generators                            | 25.0   | 25.0   | -8.5   | -11.6                                   | EG002-D-19-161                      | 25.0                 | EG002-D-19-161                             | -8.5                      | 1   | 1  |
| E345                                 | Accessory Electric Equipment          | 25.0   | 25.0   | -8.5   | -11.6                                   | EG002-D-19-161                      | 25.0                 | EG002-D-19-161                             | -8.5                      | 1   | 1  |
| E346                                 | Miscellaneous Power Plant Equipment   | 25.0   | 25.0   | -8.5   | -11.6                                   | EG002-D-19-161                      | 25.0                 | EG002-D-19-161                             | -8.5                      | 1   | 1  |

| Account                          | Description                           | Current Approved<br>Remaining Life<br>01/01/19 (Yrs) | Proposed<br>Remaining Life<br>01/01/21 (Yrs) | Current<br>Approved Net<br>Salvage<br>01/01/19 (%) | Proposed Net<br>Salvage<br>01/01/21 (%) | Latest Life<br>Change<br>(Docket #) | Life Change<br>(Yrs) | Latest Net Salvage<br>Change (Docket<br>#) | Net Salvage<br>Change (%) | Number of Life<br>Changes in the<br>Last Five Years | Number of Net<br>Salvage Changes in<br>the Last Five Years |
|----------------------------------|---------------------------------------|--|--|--|---|-------------------------------------|----------------------|--|---------------------------|---|--|
| <b>Blazing Star II Wind (2)</b>  |                                       |  |  |  |   |                                     |                      |  |                           |   |  |
| E340.1                           | Wind Rights                           | N/A  | 25.0   | N/A  | 0.0                                     | N/A                                 | N/A                  | N/A  | N/A                       | 0   | 0  |
| E341                             | Structures & Improvements             | N/A  | 25.0   | N/A  | -10.5                                   | N/A                                 | N/A                  | N/A  | N/A                       | 0   | 0  |
| E342                             | Fuel Holders, Producers & Accessories | N/A  | 25.0   | N/A  | -10.5                                   | N/A                                 | N/A                  | N/A  | N/A                       | 0   | 0  |
| E343                             | Prime Movers                          | N/A  | 25.0   | N/A  | -10.5                                   | N/A                                 | N/A                  | N/A  | N/A                       | 0   | 0  |
| E344                             | Generators                            | N/A  | 25.0   | N/A  | -10.5                                   | N/A                                 | N/A                  | N/A  | N/A                       | 0   | 0  |
| E345                             | Accessory Electric Equipment          | N/A  | 25.0   | N/A  | -10.5                                   | N/A                                 | N/A                  | N/A  | N/A                       | 0   | 0  |
| E346                             | Miscellaneous Power Plant Equipment   | N/A  | 25.0   | N/A  | -10.5                                   | N/A                                 | N/A                  | N/A  | N/A                       | 0   | 0  |
| <b>Blue Lake Units 1 thru 4</b>  |                                       |  |  |  |   |                                     |                      |  |                           |   |  |
| E341                             | Structures & Improvements             | 26.4   | 24.4   | -11.7  | -12.7                                   | EG002-D-19-161                      | 4.0                  | EG002-D-15-46                              | -6.5                      | 1   | 1  |
| E342                             | Fuel Holders, Producers & Accessories | 4.5  | 2.5  | -22.9  | -30.6                                   | EG002-D-19-161                      | 4.0                  | EG002-D-15-46                              | -11.0                     | 2   | 1  |
| E343                             | Prime Movers                          | 4.5  | 2.5  | -22.9  | -30.6                                   | EG002-D-19-161                      | 4.0                  | EG002-D-18-162                             | -22.9                     | 2   | 1  |
| E344                             | Generators                            | 4.5  | 2.5  | -22.9  | -30.6                                   | EG002-D-19-161                      | 4.0                  | EG002-D-15-46                              | -11.0                     | 2   | 1  |
| E345                             | Accessory Electric Equipment          | 4.5  | 2.5  | -22.9  | -30.6                                   | EG002-D-19-161                      | 4.0                  | EG002-D-15-46                              | -11.0                     | 2   | 1  |
| E346                             | Miscellaneous Power Plant Equipment   | 4.5  | 2.5  | -22.9  | -30.6                                   | EG002-D-19-161                      | 4.0                  | EG002-D-15-46                              | -11.0                     | 2   | 1  |
| <b>Blue Lake Units 7 &amp; 8</b> |                                       |  |  |  |   |                                     |                      |  |                           |   |  |
| E341                             | Structures & Improvements             | 26.4   | 24.4   | -11.7  | -12.7                                   | EG002-D-19-161                      | 10.0                 | EG002-D-15-46                              | -6.5                      | 1   | 1  |
| E342                             | Fuel Holders, Producers & Accessories | 26.4   | 24.4   | -11.7  | -12.7                                   | EG002-D-19-161                      | 10.0                 | EG002-D-15-46                              | -6.5                      | 1   | 1  |
| E343                             | Prime Movers                          | 26.4   | 24.4   | -11.7  | -12.7                                   | EG002-D-19-161                      | 10.0                 | EG002-D-18-162                             | -11.7                     | 2   | 1  |
| E344                             | Generators                            | 26.4   | 24.4   | -11.7  | -12.7                                   | EG002-D-19-161                      | 10.0                 | EG002-D-15-46                              | -6.5                      | 1   | 1  |
| E345                             | Accessory Electric Equipment          | 26.4   | 24.4   | -11.7  | -12.7                                   | EG002-D-19-161                      | 10.0                 | EG002-D-15-46                              | -6.5                      | 1   | 1  |
| E346                             | Miscellaneous Power Plant Equipment   | 26.4   | 24.4   | -11.7  | -12.7                                   | EG002-D-19-161                      | 10.0                 | EG002-D-15-46                              | -6.5                      | 1   | 1  |
| <b>Border Winds</b>              |                                       |  |  |  |   |                                     |                      |  |                           |   |  |
| E340.1                           | Wind Rights                           | 22.0   | 20.0   | 0.0  | 0.0                                     | EG002-D-15-46                       | 25.0                 | EG002-D-15-46                              | 0.0                       | 1   | 1  |
| E341                             | Structures & Improvements             | 22.0   | 20.0   | -8.5   | -9.5                                    | EG002-D-15-46                       | 25.0                 | EG002-D-15-46                              | -8.5                      | 1   | 1  |
| E342                             | Fuel Holders, Producers & Accessories | 22.0   | 20.0   | -8.5   | -9.5                                    | EG002-D-15-46                       | 25.0                 | EG002-D-15-46                              | -8.5                      | 1   | 1  |
| E343                             | Prime Movers                          | 22.0   | 20.0   | -8.5   | -9.5                                    | EG002-D-18-162                      | 23.0                 | EG002-D-18-162                             | -8.5                      | 1   | 1  |
| E344                             | Generators                            | 22.0   | 20.0   | -8.5   | -9.5                                    | EG002-D-15-46                       | 25.0                 | EG002-D-15-46                              | -8.5                      | 1   | 1  |
| E345                             | Accessory Electric Equipment          | 22.0   | 20.0   | -8.5   | -9.5                                    | EG002-D-15-46                       | 25.0                 | EG002-D-15-46                              | -8.5                      | 1   | 1  |
| E346                             | Miscellaneous Power Plant Equipment   | 22.0   | 20.0   | -8.5   | -9.5                                    | EG002-D-15-46                       | 25.0                 | EG002-D-15-46                              | -8.5                      | 1   | 1  |
| <b>Community Wind North (2)</b>  |                                       |  |  |  |   |                                     |                      |  |                           |   |  |
| E340.1                           | Wind Rights                           | N/A  | 25.0   | N/A  | 0.0                                     | N/A                                 | N/A                  | N/A  | N/A                       | 0   | 0  |
| E341                             | Structures & Improvements             | N/A  | 25.0   | N/A  | -10.5                                   | N/A                                 | N/A                  | N/A  | N/A                       | 0   | 0  |
| E342                             | Fuel Holders, Producers & Accessories | N/A  | 25.0   | N/A  | -10.5                                   | N/A                                 | N/A                  | N/A  | N/A                       | 0   | 0  |
| E343                             | Prime Movers                          | N/A  | 25.0   | N/A  | -10.5                                   | N/A                                 | N/A                  | N/A  | N/A                       | 0   | 0  |
| E344                             | Generators                            | N/A  | 25.0   | N/A  | -10.5                                   | N/A                                 | N/A                  | N/A  | N/A                       | 0   | 0  |
| E345                             | Accessory Electric Equipment          | N/A  | 25.0   | N/A  | -10.5                                   | N/A                                 | N/A                  | N/A  | N/A                       | 0   | 0  |
| E346                             | Miscellaneous Power Plant Equipment   | N/A  | 25.0   | N/A  | -10.5                                   | N/A                                 | N/A                  | N/A  | N/A                       | 0   | 0  |

| Account                       | Description                           | Current Approved<br>Remaining Life<br>01/01/19 (Yrs) | Proposed<br>Remaining Life<br>01/01/21 (Yrs) | Current<br>Approved Net<br>Salvage<br>01/01/19 (%) | Proposed Net<br>Salvage<br>01/01/21 (%) | Latest Life<br>Change<br>(Docket #) | Life Change<br>(Yrs) | Latest Net Salvage<br>Change (Docket<br>#) | Net Salvage<br>Change (%) | Number of Life<br>Changes in the<br>Last Five Years | Number of Net<br>Salvage Changes in<br>the Last Five Years |
|-------------------------------|---------------------------------------|--|--|--|---|-------------------------------------|----------------------|--|---------------------------|---|--|
| <b>Courtenay Wind</b>         |                                       |  |  |  |   |                                     |                      |  |                           |   |  |
| E340.1                        | Wind Rights                           | 22.9   | 20.9   | 0.0  | 0.0                                     | EG002-D-17-147                      | 25.0                 | EG002-D-17-147                             | 0.0                       | 1   | 1  |
| E341                          | Structures & Improvements             | 22.9   | 20.9   | -8.5   | -10.4                                   | EG002-D-17-147                      | 25.0                 | EG002-D-17-147                             | -8.5                      | 1   | 1  |
| E342                          | Fuel Holders, Producers & Accessories | 22.9   | 20.9   | -8.5   | -10.4                                   | EG002-D-17-147                      | 25.0                 | EG002-D-17-147                             | -8.5                      | 1   | 1  |
| E343                          | Prime Movers                          | 22.9   | 20.9   | -8.5   | -10.4                                   | EG002-D-18-162                      | 22.9                 | EG002-D-18-162                             | -8.5                      | 1   | 1  |
| E344                          | Generators                            | 22.9   | 20.9   | -8.5   | -10.4                                   | EG002-D-17-147                      | 25.0                 | EG002-D-17-147                             | -8.5                      | 1   | 1  |
| E345                          | Accessory Electric Equipment          | 22.9   | 20.9   | -8.5   | -10.4                                   | EG002-D-17-147                      | 25.0                 | EG002-D-17-147                             | -8.5                      | 1   | 1  |
| E346                          | Miscellaneous Power Plant Equipment   | 22.9   | 20.9   | -8.5   | -10.4                                   | EG002-D-17-147                      | 25.0                 | EG002-D-17-147                             | -8.5                      | 1   | 1  |
| <b>Crowned Ridge Wind (2)</b> |                                       |  |  |  |   |                                     |                      |  |                           |   |  |
| E340.1                        | Wind Rights                           | N/A  | 25.0   | N/A  | 0.0                                     | N/A                                 | N/A                  | N/A  | N/A                       | 0   | 0  |
| E341                          | Structures & Improvements             | N/A  | 25.0   | N/A  | -10.5                                   | N/A                                 | N/A                  | N/A  | N/A                       | 0   | 0  |
| E342                          | Fuel Holders, Producers & Accessories | N/A  | 25.0   | N/A  | -10.5                                   | N/A                                 | N/A                  | N/A  | N/A                       | 0   | 0  |
| E343                          | Prime Movers                          | N/A  | 25.0   | N/A  | -10.5                                   | N/A                                 | N/A                  | N/A  | N/A                       | 0   | 0  |
| E344                          | Generators                            | N/A  | 25.0   | N/A  | -10.5                                   | N/A                                 | N/A                  | N/A  | N/A                       | 0   | 0  |
| E345                          | Accessory Electric Equipment          | N/A  | 25.0   | N/A  | -10.5                                   | N/A                                 | N/A                  | N/A  | N/A                       | 0   | 0  |
| E346                          | Miscellaneous Power Plant Equipment   | N/A  | 25.0   | N/A  | -10.5                                   | N/A                                 | N/A                  | N/A  | N/A                       | 0   | 0  |
| <b>Dakota Range Wind (2)</b>  |                                       |  |  |  |   |                                     |                      |  |                           |   |  |
| E340.1                        | Wind Rights                           | N/A  | 25.0   | N/A  | 0.0                                     | N/A                                 | N/A                  | N/A  | N/A                       | 0   | 0  |
| E341                          | Structures & Improvements             | N/A  | 25.0   | N/A  | -10.5                                   | N/A                                 | N/A                  | N/A  | N/A                       | 0   | 0  |
| E342                          | Fuel Holders, Producers & Accessories | N/A  | 25.0   | N/A  | -10.5                                   | N/A                                 | N/A                  | N/A  | N/A                       | 0   | 0  |
| E343                          | Prime Movers                          | N/A  | 25.0   | N/A  | -10.5                                   | N/A                                 | N/A                  | N/A  | N/A                       | 0   | 0  |
| E344                          | Generators                            | N/A  | 25.0   | N/A  | -10.5                                   | N/A                                 | N/A                  | N/A  | N/A                       | 0   | 0  |
| E345                          | Accessory Electric Equipment          | N/A  | 25.0   | N/A  | -10.5                                   | N/A                                 | N/A                  | N/A  | N/A                       | 0   | 0  |
| E346                          | Miscellaneous Power Plant Equipment   | N/A  | 25.0   | N/A  | -10.5                                   | N/A                                 | N/A                  | N/A  | N/A                       | 0   | 0  |
| <b>Foxtail Wind (3)</b>       |                                       |  |  |  |   |                                     |                      |  |                           |   |  |
| E340.1                        | Wind Rights                           | 25.0   | 24.0   | 0.0  | 0.0                                     | EG002-D-19-161                      | 25.0                 | EG002-D-19-161                             | 0.0                       | 1   | 1  |
| E341                          | Structures & Improvements             | 25.0   | 24.0   | -8.5   | -9.1                                    | EG002-D-19-161                      | 25.0                 | EG002-D-19-161                             | -8.5                      | 1   | 1  |
| E342                          | Fuel Holders, Producers & Accessories | 25.0   | 24.0   | -8.5   | -9.1                                    | EG002-D-19-161                      | 25.0                 | EG002-D-19-161                             | -8.5                      | 1   | 1  |
| E343                          | Prime Movers                          | 25.0   | 24.0   | -8.5   | -9.1                                    | EG002-D-19-161                      | 25.0                 | EG002-D-19-161                             | -8.5                      | 1   | 1  |
| E344                          | Generators                            | 25.0   | 24.0   | -8.5   | -9.1                                    | EG002-D-19-161                      | 25.0                 | EG002-D-19-161                             | -8.5                      | 1   | 1  |
| E345                          | Accessory Electric Equipment          | 25.0   | 24.0   | -8.5   | -9.1                                    | EG002-D-19-161                      | 25.0                 | EG002-D-19-161                             | -8.5                      | 1   | 1  |
| E346                          | Miscellaneous Power Plant Equipment   | 25.0   | 24.0   | -8.5   | -9.1                                    | EG002-D-19-161                      | 25.0                 | EG002-D-19-161                             | -8.5                      | 1   | 1  |
| <b>Freeborn Wind (2)</b>      |                                       |  |  |  |   |                                     |                      |  |                           |   |  |
| E340.1                        | Wind Rights                           | N/A  | 25.0   | N/A  | 0.0                                     | N/A                                 | N/A                  | N/A  | N/A                       | 0   | 0  |
| E341                          | Structures & Improvements             | N/A  | 25.0   | N/A  | -10.5                                   | N/A                                 | N/A                  | N/A  | N/A                       | 0   | 0  |
| E342                          | Fuel Holders, Producers & Accessories | N/A  | 25.0   | N/A  | -10.5                                   | N/A                                 | N/A                  | N/A  | N/A                       | 0   | 0  |
| E343                          | Prime Movers                          | N/A  | 25.0   | N/A  | -10.5                                   | N/A                                 | N/A                  | N/A  | N/A                       | 0   | 0  |
| E344                          | Generators                            | N/A  | 25.0   | N/A  | -10.5                                   | N/A                                 | N/A                  | N/A  | N/A                       | 0   | 0  |
| E345                          | Accessory Electric Equipment          | N/A  | 25.0   | N/A  | -10.5                                   | N/A                                 | N/A                  | N/A  | N/A                       | 0   | 0  |
| E346                          | Miscellaneous Power Plant Equipment   | N/A  | 25.0   | N/A  | -10.5                                   | N/A                                 | N/A                  | N/A  | N/A                       | 0   | 0  |



| Account                        | Description                           | Current Approved<br>Remaining Life<br>01/01/19 (Yrs) | Proposed<br>Remaining Life<br>01/01/21 (Yrs) | Current<br>Approved Net<br>Salvage<br>01/01/19 (%) | Proposed Net<br>Salvage<br>01/01/21 (%) | Latest Life<br>Change<br>(Docket #) | Life Change<br>(Yrs) | Latest Net Salvage<br>Change (Docket<br>#) | Net Salvage<br>Change (%) | Number of Life<br>Changes in the<br>Last Five Years | Number of Net<br>Salvage Changes in<br>the Last Five Years |
|--------------------------------|---------------------------------------|--|--|--|---|-------------------------------------|----------------------|--|---------------------------|---|--|
| <b>Grand Meadow Wind</b>       |                                       |  |  |  |   |                                     |                      |  |                           |   |  |
| E340.1                         | Wind Rights                           | 14.9   | 12.9   | 0.0  | 0.0                                     | EG002-D-08-189                      | 25.0                 | EG002-D-09-160                             | 0.0                       | 0   | 0  |
| E341                           | Structures & Improvements             | 14.9   | 12.9   | -11.1  | -12.5                                   | EG002-D-08-189                      | 25.0                 | EG002-D-15-46                              | -2.4                      | 0   | 1  |
| E342                           | Fuel Holders, Producers & Accessories | 14.9   | 12.9   | -11.1  | -12.5                                   | EG002-D-08-189                      | 25.0                 | EG002-D-15-46                              | -2.4                      | 0   | 1  |
| E343                           | Prime Movers                          | 14.9   | 12.9   | -11.1  | -12.5                                   | EG002-D-18-162                      | 15.9                 | EG002-D-18-162                             | -11.1                     | 1   | 1  |
| E344                           | Generators                            | 14.9   | 12.9   | -11.1  | -12.5                                   | EG002-D-08-189                      | 25.0                 | EG002-D-15-46                              | -2.4                      | 0   | 1  |
| E345                           | Accessory Electric Equipment          | 14.9   | 12.9   | -11.1  | -12.5                                   | EG002-D-08-189                      | 25.0                 | EG002-D-15-46                              | -2.4                      | 0   | 1  |
| E346                           | Miscellaneous Power Plant Equipment   | 14.9   | 12.9   | -11.1  | -12.5                                   | EG002-D-08-189                      | 25.0                 | EG002-D-15-46                              | -2.4                      | 0   | 1  |
| <b>High Bridge</b>             |                                       |  |  |  |   |                                     |                      |  |                           |   |  |
| E341                           | Structures & Improvements             | 29.4   | 27.4   | -3.5   | -4.3                                    | E002-GR-10-971                      | 10.0                 | EG002-D-15-46                              | -0.4                      | 0   | 1  |
| E342                           | Fuel Holders, Producers & Accessories | 29.4   | 27.4   | -3.5   | -4.3                                    | E002-GR-10-971                      | 10.0                 | EG002-D-15-46                              | -0.4                      | 0   | 1  |
| E343                           | Prime Movers                          | 29.4   | 27.4   | -3.5   | -4.3                                    | EG002-D-18-162                      | 30.4                 | EG002-D-18-162                             | -3.5                      | 1   | 1  |
| E344                           | Generators                            | 29.4   | 27.4   | -3.5   | -4.3                                    | E002-GR-10-971                      | 10.0                 | EG002-D-15-46                              | -0.4                      | 0   | 1  |
| E345                           | Accessory Electric Equipment          | 29.4   | 27.4   | -3.5   | -4.3                                    | E002-GR-10-971                      | 10.0                 | EG002-D-15-46                              | -0.4                      | 0   | 1  |
| E346                           | Miscellaneous Power Plant Equipment   | 29.4   | 27.4   | -3.5   | -4.3                                    | E002-GR-10-971                      | 10.0                 | EG002-D-15-46                              | -0.4                      | 0   | 1  |
| <b>Inver Hills</b>             |                                       |  |  |  |   |                                     |                      |  |                           |   |  |
| E341                           | Structures & Improvements             | 8.0  | 6.0  | -18.3  | -19.4                                   | EG002-D-10-173                      | 10.0                 | EG002-D-15-46                              | -7.3                      | 0   | 1  |
| E342                           | Fuel Holders, Producers & Accessories | 8.0  | 6.0  | -18.3  | -19.4                                   | EG002-D-10-173                      | 10.0                 | EG002-D-15-46                              | -7.3                      | 0   | 1  |
| E343                           | Prime Movers                          | 8.0  | 6.0  | -18.3  | -19.4                                   | EG002-D-18-162                      | 9.0                  | EG002-D-18-162                             | -18.3                     | 1   | 1  |
| E344                           | Generators                            | 8.0  | 6.0  | -18.3  | -19.4                                   | EG002-D-10-173                      | 10.0                 | EG002-D-15-46                              | -7.3                      | 0   | 1  |
| E345                           | Accessory Electric Equipment          | 8.0  | 6.0  | -18.3  | -19.4                                   | EG002-D-10-173                      | 10.0                 | EG002-D-15-46                              | -7.3                      | 0   | 1  |
| E346                           | Miscellaneous Power Plant Equipment   | 8.0  | 6.0  | -18.3  | -19.4                                   | EG002-D-10-173                      | 10.0                 | EG002-D-15-46                              | -7.3                      | 0   | 1  |
| <b>Jeffers Wind (2)</b>        |                                       |  |  |  |   |                                     |                      |  |                           |   |  |
| E340.1                         | Wind Rights                           | N/A  | 25.0   | N/A  | 0.0                                     | N/A                                 | N/A                  | N/A  | N/A                       | 0   | 0  |
| E341                           | Structures & Improvements             | N/A  | 25.0   | N/A  | -10.5                                   | N/A                                 | N/A                  | N/A  | N/A                       | 0   | 0  |
| E342                           | Fuel Holders, Producers & Accessories | N/A  | 25.0   | N/A  | -10.5                                   | N/A                                 | N/A                  | N/A  | N/A                       | 0   | 0  |
| E343                           | Prime Movers                          | N/A  | 25.0   | N/A  | -10.5                                   | N/A                                 | N/A                  | N/A  | N/A                       | 0   | 0  |
| E344                           | Generators                            | N/A  | 25.0   | N/A  | -10.5                                   | N/A                                 | N/A                  | N/A  | N/A                       | 0   | 0  |
| E345                           | Accessory Electric Equipment          | N/A  | 25.0   | N/A  | -10.5                                   | N/A                                 | N/A                  | N/A  | N/A                       | 0   | 0  |
| E346                           | Miscellaneous Power Plant Equipment   | N/A  | 25.0   | N/A  | -10.5                                   | N/A                                 | N/A                  | N/A  | N/A                       | 0   | 0  |
| <b>Lake Benton II Wind (3)</b> |                                       |  |  |  |   |                                     |                      |  |                           |   |  |
| E340.1                         | Wind Rights                           | 25.0   | 23.9   | 0.0  | 0.0                                     | EG002-D-19-161                      | 25.0                 | EG002-D-19-161                             | 0.0                       | 1   | 1  |
| E341                           | Structures & Improvements             | 25.0   | 23.9   | -8.5   | -10.8                                   | EG002-D-19-161                      | 25.0                 | EG002-D-19-161                             | -8.5                      | 1   | 1  |
| E342                           | Fuel Holders, Producers & Accessories | 25.0   | 23.9   | -8.5   | -10.8                                   | EG002-D-19-161                      | 25.0                 | EG002-D-19-161                             | -8.5                      | 1   | 1  |
| E343                           | Prime Movers                          | 25.0   | 23.9   | -8.5   | -10.8                                   | EG002-D-19-161                      | 25.0                 | EG002-D-19-161                             | -8.5                      | 1   | 1  |
| E344                           | Generators                            | 25.0   | 23.9   | -8.5   | -10.8                                   | EG002-D-19-161                      | 25.0                 | EG002-D-19-161                             | -8.5                      | 1   | 1  |
| E345                           | Accessory Electric Equipment          | 25.0   | 23.9   | -8.5   | -10.8                                   | EG002-D-19-161                      | 25.0                 | EG002-D-19-161                             | -8.5                      | 1   | 1  |
| E346                           | Miscellaneous Power Plant Equipment   | 25.0   | 23.9   | -8.5   | -10.8                                   | EG002-D-19-161                      | 25.0                 | EG002-D-19-161                             | -8.5                      | 1   | 1  |

| Account                       | Description                           | Current Approved<br>Remaining Life<br>01/01/19 (Yrs) | Proposed<br>Remaining Life<br>01/01/21 (Yrs) | Current<br>Approved Net<br>Salvage<br>01/01/19 (%) | Proposed Net<br>Salvage<br>01/01/21 (%) | Latest Life<br>Change<br>(Docket #) | Life Change<br>(Yrs) | Latest Net Salvage<br>Change (Docket<br>#) | Net Salvage<br>Change (%) | Number of Life<br>Changes in the<br>Last Five Years | Number of Net<br>Salvage Changes in<br>the Last Five Years |
|-------------------------------|---------------------------------------|--|--|--|---|-------------------------------------|----------------------|--|---------------------------|---|--|
| <b>Mower Wind (2)</b>         |                                       |  |  |  |   |                                     |                      |  |                           |   |  |
| E340.1                        | Wind Rights                           | N/A  | 25.0   | N/A  | 0.0                                     | N/A                                 | N/A                  | N/A  | N/A                       | 0   | 0  |
| E341                          | Structures & Improvements             | N/A  | 25.0   | N/A  | -10.5                                   | N/A                                 | N/A                  | N/A  | N/A                       | 0   | 0  |
| E342                          | Fuel Holders, Producers & Accessories | N/A  | 25.0   | N/A  | -10.5                                   | N/A                                 | N/A                  | N/A  | N/A                       | 0   | 0  |
| E343                          | Prime Movers                          | N/A  | 25.0   | N/A  | -10.5                                   | N/A                                 | N/A                  | N/A  | N/A                       | 0   | 0  |
| E344                          | Generators                            | N/A  | 25.0   | N/A  | -10.5                                   | N/A                                 | N/A                  | N/A  | N/A                       | 0   | 0  |
| E345                          | Accessory Electric Equipment          | N/A  | 25.0   | N/A  | -10.5                                   | N/A                                 | N/A                  | N/A  | N/A                       | 0   | 0  |
| E346                          | Miscellaneous Power Plant Equipment   | N/A  | 25.0   | N/A  | -10.5                                   | N/A                                 | N/A                  | N/A  | N/A                       | 0   | 0  |
| <b>Nobles Wind</b>            |                                       |  |  |  |   |                                     |                      |  |                           |   |  |
| E340.1                        | Wind Rights                           | 16.9   | 14.9   | 0.0  | 0.0                                     | EG002-D-10-173                      | 25.0                 | EG002-D-11-144                             | 0.0                       | 0   | 0  |
| E341                          | Structures & Improvements             | 16.9   | 14.9   | -6.0   | -8.5                                    | EG002-D-10-173                      | 25.0                 | EG002-D-15-46                              | 2.7                       | 0   | 1  |
| E342                          | Fuel Holders, Producers & Accessories | 16.9   | 14.9   | -6.0   | -8.5                                    | EG002-D-10-173                      | 25.0                 | EG002-D-15-46                              | 2.7                       | 0   | 1  |
| E343                          | Prime Movers                          | 16.9   | 14.9   | -6.0   | -8.5                                    | EG002-D-18-162                      | 17.9                 | EG002-D-18-162                             | -6.0                      | 1   | 1  |
| E344                          | Generators                            | 16.9   | 14.9   | -6.0   | -8.5                                    | EG002-D-10-173                      | 25.0                 | EG002-D-15-46                              | 2.7                       | 0   | 1  |
| E345                          | Accessory Electric Equipment          | 16.9   | 14.9   | -6.0   | -8.5                                    | EG002-D-10-173                      | 25.0                 | EG002-D-15-46                              | 2.7                       | 0   | 1  |
| E346                          | Miscellaneous Power Plant Equipment   | 16.9   | 14.9   | -6.0   | -8.5                                    | EG002-D-10-173                      | 25.0                 | EG002-D-15-46                              | 2.7                       | 0   | 1  |
| <b>Pleasant Valley Wind</b>   |                                       |  |  |  |   |                                     |                      |  |                           |   |  |
| E340.1                        | Wind Rights                           | 22.0   | 20.0   | 0.0  | 0.0                                     | EG002-D-15-46                       | 25.0                 | EG002-D-15-46                              | 0.0                       | 1   | 1  |
| E341                          | Structures & Improvements             | 22.0   | 20.0   | -8.5   | -11.7                                   | EG002-D-15-46                       | 25.0                 | EG002-D-15-46                              | -8.5                      | 1   | 1  |
| E342                          | Fuel Holders, Producers & Accessories | 22.0   | 20.0   | -8.5   | -11.7                                   | EG002-D-15-46                       | 25.0                 | EG002-D-15-46                              | -8.5                      | 1   | 1  |
| E343                          | Prime Movers                          | 22.0   | 20.0   | -8.5   | -11.7                                   | EG002-D-18-162                      | 23.0                 | EG002-D-18-162                             | -8.5                      | 1   | 1  |
| E344                          | Generators                            | 22.0   | 20.0   | -8.5   | -11.7                                   | EG002-D-15-46                       | 25.0                 | EG002-D-15-46                              | -8.5                      | 1   | 1  |
| E345                          | Accessory Electric Equipment          | 22.0   | 20.0   | -8.5   | -11.7                                   | EG002-D-15-46                       | 25.0                 | EG002-D-15-46                              | -8.5                      | 1   | 1  |
| E346                          | Miscellaneous Power Plant Equipment   | 22.0   | 20.0   | -8.5   | -11.7                                   | EG002-D-15-46                       | 25.0                 | EG002-D-15-46                              | -8.5                      | 1   | 1  |
| <b>Riverside</b>              |                                       |  |  |  |   |                                     |                      |  |                           |   |  |
| E341                          | Structures & Improvements             | 30.2   | 28.2   | -11.3  | -13.2                                   | E002-GR-10-971                      | 10.0                 | EG002-D-15-46                              | -6.3                      | 0   | 1  |
| E342                          | Fuel Holders, Producers & Accessories | 30.2   | 28.2   | -11.3  | -13.2                                   | E002-GR-10-971                      | 10.0                 | EG002-D-15-46                              | -6.3                      | 0   | 1  |
| E343                          | Prime Movers                          | 30.2   | 28.2   | -11.3  | -13.2                                   | EG002-D-18-162                      | 31.2                 | EG002-D-18-162                             | -11.3                     | 1   | 1  |
| E344                          | Generators                            | 30.2   | 28.2   | -11.3  | -13.2                                   | E002-GR-10-971                      | 10.0                 | EG002-D-15-46                              | -6.3                      | 0   | 1  |
| E345                          | Accessory Electric Equipment          | 30.2   | 28.2   | -11.3  | -13.2                                   | E002-GR-10-971                      | 10.0                 | EG002-D-15-46                              | -6.3                      | 0   | 1  |
| E346                          | Miscellaneous Power Plant Equipment   | 30.2   | 28.2   | -11.3  | -13.2                                   | E002-GR-10-971                      | 10.0                 | EG002-D-15-46                              | -6.3                      | 0   | 1  |
| <b>Wind-to-Battery System</b> |                                       |  |  |  |   |                                     |                      |  |                           |   |  |
| E348.1                        | Fuel Holders, Producers & Accessories | 5.0  | 0.0  | 0.0  | -135.6                                  | EG002-D-09-160                      | 15.0                 | EG002-D-09-160                             | 0.0                       | 0   | 0  |

(1) Blazing Star I went in-service in April 2020. In the 2019 Remaining Life Docket, this plant was initially planned to go in-service in late 2019 and therefore a 25 year life and -8.5% net salvage rate were approved in that docket. Thus, the 25 year life is as of the in-service date of April 2020.

(2) Blazing Star II, Community Wind North, Crowned Ridge, Jeffers, and Mower are all anticipated to go into service or be acquired in 2020. Freeborn and Dakota Range are anticipated in 2021. The 2021 Proposed Remaining Life is based on actual in-service/acquisition date.

(3) Approved remaining life of 25 years and remaining lives of 24.0 years for Foxtail Wind and 23.9 years for Lake Benton II are based on in-service dates of December and November 2019, respectively.

| Account              | Description                         | Current Approved<br>Remaining Life<br>01/01/19 (Yrs) | Proposed<br>Remaining Life<br>01/01/21 (Yrs) | Current<br>Approved Net<br>Salvage<br>01/01/19 (%) | Proposed Net<br>Salvage<br>01/01/21 (%) | Latest Life<br>Change<br>(Docket #) | Life Change<br>(Yrs) | Latest Net Salvage<br>Change (Docket<br>#) | Net Salvage<br>Change (%) | Number of Life<br>Changes in the<br>Last Five Years | Number of Net<br>Salvage Changes in<br>the Last Five Years |
|----------------------|-------------------------------------|--|--|--|---|-------------------------------------|----------------------|--|---------------------------|---|--|
| <b>Allen S. King</b> |                                     |  |  |  |   |                                     |                      |  |                           |   |  |
| E311                 | Structures & Improvements           | 18.5   | 16.5   | -8.2   | -9.2                                    | EG002-D-07-251                      | 23.5                 | EG002-D-15-46                              | -2.7                      | 0   | 1  |
| E312                 | Boiler Plant Equipment              | 18.5   | 16.5   | -8.2   | -9.2                                    | EG002-D-07-251                      | 23.5                 | EG002-D-15-46                              | -2.7                      | 0   | 1  |
| E314                 | Turbogenerator Units                | 18.5   | 16.5   | -8.2   | -9.2                                    | EG002-D-07-251                      | 23.5                 | EG002-D-15-46                              | -2.7                      | 0   | 1  |
| E315                 | Accessory Electric Equipment        | 18.5   | 16.5   | -8.2   | -9.2                                    | EG002-D-07-251                      | 23.5                 | EG002-D-15-46                              | -2.7                      | 0   | 1  |
| E316                 | Miscellaneous Power Plant Equipment | 18.5   | 16.5   | -8.2   | -9.2                                    | EG002-D-07-251                      | 23.5                 | EG002-D-15-46                              | -2.7                      | 0   | 1  |
| <b>Red Wing</b>      |                                     |  |  |  |   |                                     |                      |  |                           |   |  |
| E311                 | Structures & Improvements           | 9.0  | 7.0  | -27.8  | -23.5                                   | EG002-D-15-46                       | 10.0                 | EG002-D-15-46                              | -4.5                      | 1   | 1  |
| E312                 | Boiler Plant Equipment              | 9.0  | 7.0  | -27.8  | -23.5                                   | EG002-D-15-46                       | 10.0                 | EG002-D-15-46                              | -4.5                      | 1   | 1  |
| E314                 | Turbogenerator Units                | 9.0  | 7.0  | -27.8  | -23.5                                   | EG002-D-15-46                       | 10.0                 | EG002-D-15-46                              | -4.5                      | 1   | 1  |
| E315                 | Accessory Electric Equipment        | 9.0  | 7.0  | -27.8  | -23.5                                   | EG002-D-15-46                       | 10.0                 | EG002-D-15-46                              | -4.5                      | 1   | 1  |
| E316                 | Miscellaneous Power Plant Equipment | 9.0  | 7.0  | -27.8  | -23.5                                   | EG002-D-15-46                       | 10.0                 | EG002-D-15-46                              | -4.5                      | 1   | 1  |
| <b>Sherco Unit 1</b> |                                     |  |  |  |   |                                     |                      |  |                           |   |  |
| E311                 | Structures & Improvements           | 7.0  | 5.0  | -15.2  | -15.1                                   | EG002-D-15-46                       | 3.0                  | EG002-D-15-46                              | -10.1                     | 1   | 1  |
| E312                 | Boiler Plant Equipment              | 7.0  | 5.0  | -15.2  | -15.1                                   | EG002-D-15-46                       | 3.0                  | EG002-D-15-46                              | -10.1                     | 1   | 1  |
| E314                 | Turbogenerator Units                | 7.0  | 5.0  | -15.2  | -15.1                                   | EG002-D-15-46                       | 3.0                  | EG002-D-15-46                              | -10.1                     | 1   | 1  |
| E315                 | Accessory Electric Equipment        | 7.0  | 5.0  | -15.2  | -15.1                                   | EG002-D-15-46                       | 3.0                  | EG002-D-15-46                              | -10.1                     | 1   | 1  |
| E316                 | Miscellaneous Power Plant Equipment | 7.0  | 5.0  | -15.2  | -15.1                                   | EG002-D-15-46                       | 3.0                  | EG002-D-15-46                              | -10.1                     | 1   | 1  |
| <b>Sherco Unit 2</b> |                                     |  |  |  |   |                                     |                      |  |                           |   |  |
| E311                 | Structures & Improvements           | 7.0  | 5.0  | -15.2  | -15.1                                   | EG002-D-15-46                       | 3.0                  | EG002-D-15-46                              | -10.1                     | 1   | 1  |
| E312                 | Boiler Plant Equipment              | 4.0  | 2.0  | -15.2  | -15.1                                   | EG002-D-08-189                      | 3.0                  | EG002-D-15-46                              | -10.1                     | 0   | 1  |
| E314                 | Turbogenerator Units                | 4.0  | 2.0  | -15.2  | -15.1                                   | EG002-D-08-189                      | 3.0                  | EG002-D-15-46                              | -10.1                     | 0   | 1  |
| E315                 | Accessory Electric Equipment        | 4.0  | 2.0  | -15.2  | -15.1                                   | EG002-D-08-189                      | 3.0                  | EG002-D-15-46                              | -10.1                     | 0   | 1  |
| E316                 | Miscellaneous Power Plant Equipment | 4.0  | 2.0  | -15.2  | -15.1                                   | EG002-D-08-189                      | 3.0                  | EG002-D-15-46                              | -10.1                     | 0   | 1  |
| <b>Sherco Unit 3</b> |                                     |  |  |  |   |                                     |                      |  |                           |   |  |
| E311                 | Structures & Improvements           | 16.0   | 14.0   | -5.4   | -7.9                                    | EG002-D-14-181                      | 2.0                  | EG002-D-15-46                              | -1.1                      | 0   | 1  |
| E312                 | Boiler Plant Equipment              | 16.0   | 14.0   | -5.4   | -7.9                                    | EG002-D-14-181                      | 2.0                  | EG002-D-15-46                              | -1.1                      | 0   | 1  |
| E314                 | Turbogenerator Units                | 16.0   | 14.0   | -5.4   | -7.9                                    | EG002-D-14-181                      | 2.0                  | EG002-D-15-46                              | -1.1                      | 0   | 1  |
| E315                 | Accessory Electric Equipment        | 16.0   | 14.0   | -5.4   | -7.9                                    | EG002-D-14-181                      | 2.0                  | EG002-D-15-46                              | -1.1                      | 0   | 1  |
| E316                 | Miscellaneous Power Plant Equipment | 16.0   | 14.0   | -5.4   | -7.9                                    | EG002-D-14-181                      | 2.0                  | EG002-D-15-46                              | -1.1                      | 0   | 1  |
| <b>Wilmarth</b>      |                                     |  |  |  |   |                                     |                      |  |                           |   |  |
| E311                 | Structures & Improvements           | 9.0  | 7.0  | -26.8  | -25.8                                   | EG002-D-15-46                       | 10.0                 | EG002-D-15-46                              | -3.8                      | 1   | 1  |
| E312                 | Boiler Plant Equipment              | 9.0  | 7.0  | -26.8  | -25.8                                   | EG002-D-15-46                       | 10.0                 | EG002-D-15-46                              | -3.8                      | 1   | 1  |
| E314                 | Turbogenerator Units                | 9.0  | 7.0  | -26.8  | -25.8                                   | EG002-D-15-46                       | 10.0                 | EG002-D-15-46                              | -3.8                      | 1   | 1  |
| E315                 | Accessory Electric Equipment        | 9.0  | 7.0  | -26.8  | -25.8                                   | EG002-D-15-46                       | 10.0                 | EG002-D-15-46                              | -3.8                      | 1   | 1  |
| E316                 | Miscellaneous Power Plant Equipment | 9.0  | 7.0  | -26.8  | -25.8                                   | EG002-D-15-46                       | 10.0                 | EG002-D-15-46                              | -3.8                      | 1   | 1  |

| Account  | Description                         | Current Approved<br>Remaining Life<br>01/01/19 (Yrs) | Proposed<br>Remaining Life<br>01/01/21 (Yrs) | Current<br>Approved Net<br>Salvage<br>01/01/19 (%) | Proposed Net<br>Salvage<br>01/01/21 (%) | Latest Life<br>Change<br>(Docket #) | Life Change<br>(Yrs) | Latest Net Salvage<br>Change (Docket<br>#) | Net Salvage<br>Change (%) | Number of Life<br>Changes in the<br>Last Five Years | Number of Net<br>Salvage Changes in<br>the Last Five Years |
|--|-------------------------------------|--|--|--|---|-------------------------------------|----------------------|--|---------------------------|---|--|
| <b>Monticello</b>                                |                                     |  |  |  |   |                                     |                      |  |                           |   |  |
| E302   | Franchises & Consents               | 11.8   | 9.8  | 0.0  | 0.0                                     | EG002-D-07-251                      | 20.0                 | N/A  | N/A                       | 0   | N/A  |
| E321   | Structures & Improvements           | 11.8   | 9.8  | 0.0  | 0.0                                     | EG002-D-07-251                      | 20.0                 | N/A  | N/A                       | 0   | N/A  |
| E322   | Reactor Plant Equipment             | 11.8   | 9.8  | 0.0  | 0.0                                     | EG002-D-07-251                      | 20.0                 | N/A  | N/A                       | 0   | N/A  |
| E323   | Turbogenerator Units                | 11.8   | 9.8  | 0.0  | 0.0                                     | EG002-D-07-251                      | 20.0                 | N/A  | N/A                       | 0   | N/A  |
| E324   | Accessory Electric Equipment        | 11.8   | 9.8  | 0.0  | 0.0                                     | EG002-D-07-251                      | 20.0                 | N/A  | N/A                       | 0   | N/A  |
| E325   | Miscellaneous Power Plant Equipment | 11.8   | 9.8  | 0.0  | 0.0                                     | EG002-D-07-251                      | 20.0                 | N/A  | N/A                       | 0   | N/A  |
| <b>Monticello - Interim Storage Facility</b>     |                                     |  |  |  |   |                                     |                      |  |                           |   |  |
| E321   | Structures and Improvements         | 11.8   | 9.8  | 0.0  | 0.0                                     | EG002-D-07-251                      | 20.0                 | N/A  | N/A                       | 0   | N/A  |
| E322   | Reactor Plant Equipment             | 11.8   | 9.8  | 0.0  | 0.0                                     | EG002-D-07-251                      | 20.0                 | N/A  | N/A                       | 0   | N/A  |
| <b>Prairie Island</b>                            |                                     |  |  |  |   |                                     |                      |  |                           |   |  |
| E302   | Franchises & Consents               | 15.3   | 13.3   | 0.0  | 0.0                                     | EG002-D-11-144                      | 10.0                 | N/A  | N/A                       | 0   | N/A  |
| E321   | Structures & Improvements           | 15.3   | 13.3   | 0.0  | 0.0                                     | EG002-D-11-144                      | 10.0                 | N/A  | N/A                       | 0   | N/A  |
| E322   | Reactor Plant Equipment             | 15.3   | 13.3   | 0.0  | 0.0                                     | EG002-D-11-144                      | 10.0                 | N/A  | N/A                       | 0   | N/A  |
| E323   | Turbogenerator Units                | 15.3   | 13.3   | 0.0  | 0.0                                     | EG002-D-11-144                      | 10.0                 | N/A  | N/A                       | 0   | N/A  |
| E324   | Accessory Electric Equipment        | 15.3   | 13.3   | 0.0  | 0.0                                     | EG002-D-11-144                      | 10.0                 | N/A  | N/A                       | 0   | N/A  |
| E325   | Miscellaneous Power Plant Equipment | 15.3   | 13.3   | 0.0  | 0.0                                     | EG002-D-11-144                      | 10.0                 | N/A  | N/A                       | 0   | N/A  |
| <b>Prairie Island - Interim Storage Facility</b> |                                     |  |  |  |   |                                     |                      |  |                           |   |  |
| E321   | Structures and Improvements         | 15.3   | 13.3   | 0.0  | 0.0                                     | EG002-D-11-144                      | 10.0                 | N/A  | N/A                       | 0   | N/A  |
| E322   | Reactor Plant Equipment             | 15.3   | 13.3   | 0.0  | 0.0                                     | EG002-D-11-144                      | 10.0                 | N/A  | N/A                       | 0   | N/A  |

| Account                | Description                         | Current Approved<br>Remaining Life<br>01/01/19 (Yrs) | Proposed<br>Remaining Life<br>01/01/21 (Yrs) | Current<br>Approved Net<br>Salvage<br>01/01/19 (%) | Proposed Net<br>Salvage<br>01/01/21 (%) | Latest Life<br>Change<br>(Docket #) | Life Change<br>(Yrs) | Latest Net Salvage<br>Change (Docket<br>#) | Net Salvage<br>Change (%) | Number of Life<br>Changes in the<br>Last Five Years | Number of Net<br>Salvage Changes in<br>the Last Five Years |
|------------------------|-------------------------------------|--|--|--|---|-------------------------------------|----------------------|--|---------------------------|---|--|
| <b>Hennepin Island</b> |                                     |  |  |  |   |                                     |                      |  |                           |   |  |
| E302                   | Franchises & Consents               | 15.2   | 13.2   | 0.0  | 0.0                                     | EG002-D-05-288                      | 2.2                  | EG002-D-05-288                             | N/A                       | 0   | 0  |
| E331                   | Structures & Improvements           | 15.2   | 13.2   | -26.4  | -26.7                                   | EG002-D-05-288                      | 2.2                  | EG002-D-15-46                              | 3.6                       | 0   | 1  |
| E332                   | Reservoirs, Dams & Waterways        | 15.2   | 13.2   | -26.4  | -26.7                                   | EG002-D-05-288                      | 2.2                  | EG002-D-15-46                              | 3.6                       | 0   | 1  |
| E333                   | Water Wheels, Turbines & Generators | 15.2   | 13.2   | -26.4  | -26.7                                   | EG002-D-05-288                      | 2.2                  | EG002-D-15-46                              | 3.6                       | 0   | 1  |
| E334                   | Accessory Electric Equipment        | 15.2   | 13.2   | -26.4  | -26.7                                   | EG002-D-05-288                      | 2.2                  | EG002-D-15-46                              | 3.6                       | 0   | 1  |
| E335                   | Miscellaneous Power Plant Equipment | 15.2   | 13.2   | -26.4  | -26.7                                   | EG002-D-05-288                      | 2.2                  | EG002-D-15-46                              | 3.6                       | 0   | 1  |
| <b>St. Croix Falls</b> |                                     |  |  |  |   |                                     |                      |  |                           |   |  |
| E331                   | Structures & Improvements           | 9.0  | 7.0  | -7.5   | -15.0                                   | E002/GR-15-826                      | 12.0                 | E002/GR-15-826                             | 7.5                       | 1   | 1  |
| E332                   | Reservoirs, Dams & Waterways        | 9.0  | 7.0  | -7.5   | -15.0                                   | E002/GR-15-826                      | 12.0                 | E002/GR-15-826                             | 7.5                       | 1   | 1  |
| <b>Upper Dam</b>       |                                     |  |  |  |   |                                     |                      |  |                           |   |  |
| E332                   | Reservoirs, Dams & Waterways        | 15.2   | 13.2   | -26.4  | -26.7                                   | EG002-D-05-288                      | 2.2                  | EG002-D-15-46                              | 3.6                       | 0   | 1  |
| E335                   | Miscellaneous Power Plant Equipment | 15.2   | 13.2   | -26.4  | -26.7                                   | EG002-D-05-288                      | 2.2                  | EG002-D-15-46                              | 3.6                       | 0   | 1  |

| Account          | Description               | Current Approved<br>Remaining Life<br>01/01/19 (Yrs) | Proposed<br>Remaining Life<br>01/01/21 (Yrs) | Current<br>Approved Net<br>Salvage<br>01/01/19 (%) | Proposed Net<br>Salvage<br>01/01/21 (%) | Latest Life<br>Change<br>(Docket #) | Life Change<br>(Yrs) | Latest Net Salvage<br>Change (Docket<br>#) | Net Salvage<br>Change (%) | Number of Life<br>Changes in the<br>Last Five Years | Number of Net<br>Salvage Changes in<br>the Last Five Years |
|------------------|---------------------------|--|--|--|---|-------------------------------------|----------------------|--|---------------------------|---|--|
| <b>Maplewood</b> |                           |  |  |  |   |                                     |                      |  |                           |   |  |
| G305             | Structures & Improvements | 11.0   | 9.0  | -93.7  | -87.7                                   | EG002-D-15-46                       | 10.0                 | EG002-D-15-46                              | -76.7                     | 1   | 1  |
| G311             | LP Gas Equipment          | 11.0   | 9.0  | -93.7  | -87.7                                   | EG002-D-15-46                       | 10.0                 | EG002-D-15-46                              | -101.7                    | 1   | 1  |
| G320             | Other Equipment           | 11.0   | 9.0  | -93.7  | -87.7                                   | EG002-D-15-46                       | 10.0                 | EG002-D-15-46                              | -93.7                     | 1   | 1  |
| <b>Sibley</b>    |                           |  |  |  |   |                                     |                      |  |                           |   |  |
| G305             | Structures & Improvements | 11.0   | 9.0  | -79.5  | -41.1                                   | EG002-D-15-46                       | 10.0                 | EG002-D-15-46                              | -78.5                     | 1   | 1  |
| G311             | LP Gas Equipment          | 11.0   | 9.0  | -79.5  | -41.1                                   | EG002-D-15-46                       | 10.0                 | EG002-D-15-46                              | -87.5                     | 1   | 1  |
| G320             | Other Equipment           | 11.0   | 9.0  | -79.5  | -41.1                                   | EG002-D-15-46                       | 10.0                 | EG002-D-15-46                              | -78.5                     | 1   | 1  |

| Account | Description                      | Current Approved<br>Remaining Life<br>01/01/19 (Yrs) | Proposed<br>Remaining Life<br>01/01/21 (Yrs) | Current<br>Approved Net<br>Salvage<br>01/01/19 (%) | Proposed Net<br>Salvage<br>01/01/21 (%) | Latest Life<br>Change<br>(Docket #) | Life Change<br>(Yrs) | Latest Net Salvage<br>Change (Docket<br>#) | Net Salvage<br>Change (%) | Number of Life<br>Changes in the<br>Last Five Years | Number of Net<br>Salvage Changes in<br>the Last Five Years |
|---------|----------------------------------|--|--|--|---|-------------------------------------|----------------------|--|---------------------------|---|--|
| Wescott |                                  |  |  |  |   |                                     |                      |  |                           |   |  |
| G361    | Structures & Improvements        | 5.0  | 3.0  | -19.2  | -19.6                                   | EG002-D-14-181                      | 6.0                  | EG002-D-15-46                              | -9.2                      | 0   | 1  |
| G362    | Gas Holders                      | 5.0  | 3.0  | -19.2  | -19.6                                   | EG002-D-14-181                      | 6.0                  | EG002-D-15-46                              | -24.2                     | 0   | 1  |
| G363    | Purification Equipment           | 5.0  | 3.0  | -19.2  | -19.6                                   | EG002-D-14-181                      | 6.0                  | EG002-D-15-46                              | -20.2                     | 0   | 1  |
| G363.1  | Liquefaction Equipment           | 5.0  | 3.0  | -19.2  | -19.6                                   | EG002-D-14-181                      | 6.0                  | EG002-D-15-46                              | -21.2                     | 0   | 1  |
| G363.2  | Vaporizing Equipment             | 9.0  | 7.0  | -19.2  | -19.6                                   | EG002-D-98-221                      | 30.0                 | EG002-D-15-46                              | -21.2                     | 0   | 1  |
| G363.3  | Compressor Equipment             | 14.0   | 12.0   | -19.2  | -19.6                                   | EG002-D-13-1158                     | 15.0                 | EG002-D-15-46                              | -21.2                     | 0   | 1  |
| G363.4  | Measuring & Regulating Equipment | 5.0  | 3.0  | -19.2  | -19.6                                   | EG002-D-14-181                      | 6.0                  | EG002-D-15-46                              | -25.2                     | 0   | 1  |
| G363.5  | Other Equipment                  | 5.0  | 3.0  | -19.2  | -19.6                                   | EG002-D-14-181                      | 6.0                  | EG002-D-15-46                              | -19.2                     | 0   | 1  |

### Black Dog Steam Removal Estimates by Year

|  | Actuals      |              |              |              |            | Forecasted |              |              |              |              |              |              |                              |
|--|--------------|--------------|--------------|--------------|------------|------------|--------------|--------------|--------------|--------------|--------------|--------------|------------------------------|
| (Amounts in Millions)                    | 2015         | 2016         | 2017         | 2018         | 2019       | 2020       | 2021         | 2022         | 2023         | 2024         | 2025         | Total        | % Complete as of<br>1/1/2020 |
| <b>Identified Items</b>                  |              |              |              |              |            |            |              |              |              |              |              |              |                              |
| Asbestos Remediation                     | 0.8          | 0.2          | -            | -            | -          | -          | 1.0          | -            | -            | -            | -            | 2.0          | 50%                          |
| Ash/Ponds/Coal Yard                      | 5.1          | 5.6          | 1.9          | 5.1          | 3.2        | 3.3        | 0.2          | 0.3          | 0.2          | 0.1          | 0.1          | 25.1         | 83%                          |
| Boilers                                  | 1.0          | 2.1          | 1.3          | 0.2          | -          | -          | 1.0          | 2.5          | 2.5          | 2.0          | 1.6          | 14.2         | 32%                          |
| Contingency                              | -            | -            | -            | -            | -          | 0.7        | 1.1          | 2.3          | 1.0          | 1.6          | 2.8          | 9.5          | 0%                           |
| Equipment Removal                        | 2.0          | 1.3          | 0.5          | -            | -          | -          | 3.2          | 0.5          | 0.5          | 0.5          | 0.5          | 9.0          | 42%                          |
| Pre-Demolition Cleaning                  | -            | -            | 0.3          | -            | -          | -          | -            | -            | -            | -            | -            | 0.3          | 100%                         |
| Project/Constr Mgmt/Indirects            | 1.5          | 1.0          | 0.4          | 0.6          | 1.0        | 0.5        | 0.4          | 0.4          | 0.4          | 0.4          | 0.4          | 7.0          | 64%                          |
| Structures Demolition                    | -            | -            | 0.6          | 1.2          | 2.5        | -          | -            | -            | -            | -            | -            | 4.3          | 100%                         |
| Utilities Allowance                      | -            | -            | -            | 0.1          | -          | -          | -            | -            | -            | -            | -            | 0.1          | 100%                         |
| <b>Total Identified</b>                  | <b>10.4</b>  | <b>10.2</b>  | <b>5.0</b>   | <b>7.2</b>   | <b>6.7</b> | <b>4.5</b> | <b>6.9</b>   | <b>6.0</b>   | <b>4.6</b>   | <b>4.6</b>   | <b>5.4</b>   | <b>71.5</b>  | <b>55%</b>                   |
| <b>Unidentified Items</b>                | <b>-</b>     | <b>-</b>     | <b>-</b>     | <b>-</b>     | <b>-</b>   | <b>-</b>   | <b>-</b>     | <b>-</b>     | <b>-</b>     | <b>-</b>     | <b>-</b>     | <b>-</b>     |                              |
| <b>Total Identified and Unidentified</b> | <b>10.4</b>  | <b>10.2</b>  | <b>5.0</b>   | <b>7.2</b>   | <b>6.7</b> | <b>4.5</b> | <b>6.9</b>   | <b>6.0</b>   | <b>4.6</b>   | <b>4.6</b>   | <b>5.4</b>   | <b>71.5</b>  | <b>55%</b>                   |
| <b>Scrap Credit</b>                      | <b>(0.2)</b> | <b>(0.1)</b> | <b>(0.1)</b> | <b>(0.1)</b> | <b>-</b>   | <b>-</b>   | <b>(0.1)</b> | <b>(0.1)</b> | <b>(0.1)</b> | <b>(0.1)</b> | <b>(0.1)</b> | <b>(1.0)</b> | <b>50%</b>                   |
| <b>Total (including Scrap)</b>           | <b>10.2</b>  | <b>10.1</b>  | <b>4.9</b>   | <b>7.1</b>   | <b>6.7</b> | <b>4.5</b> | <b>6.8</b>   | <b>5.9</b>   | <b>4.5</b>   | <b>4.5</b>   | <b>5.3</b>   | <b>70.5</b>  | <b>55%</b>                   |



### Minnesota Valley Removal Estimates by Year

|  | Actuals    |            | Forecasted |            |             |             |                              |
|--|------------|------------|------------|------------|-------------|-------------|------------------------------|
| (Amounts in Millions)                    | 2018       | 2019       | 2020       | 2021       | 2022        | Total       | % Complete as of<br>1/1/2020 |
| <b><u>Identified Items</u></b>           |            |            |            |            |             |             |                              |
| Asbestos Remediation                     | -          | -          | -          | 0.2        | 0.9         | 1.1         | 0%                           |
| Ash/Ponds/Coal Yard                      | 2.5        | 2.1        | -          | -          | -           | 4.6         | 100%                         |
| Boilers                                  | -          | -          | -          | -          | 1.1         | 1.1         | 0%                           |
| Contingency                              | -          | -          | -          | -          | 6.0         | 6.0         | 0%                           |
| Equipment Removal                        | -          | -          | -          | -          | 0.9         | 0.9         | 0%                           |
| Pre-Demolition Cleaning                  | -          | -          | -          | -          | 0.2         | 0.2         | 0%                           |
| Project/Constr Mgmt/Indirects            | -          | -          | 0.1        | 0.2        | 0.9         | 1.2         | 0%                           |
| Structures Demolition                    | -          | -          | -          | -          | 1.1         | 1.1         | 0%                           |
| Utilities Allowance                      | -          | -          | -          | -          | 0.2         | 0.2         | 0%                           |
| <b>Total Identified</b>                  | <b>2.5</b> | <b>2.1</b> | <b>0.1</b> | <b>0.4</b> | <b>11.3</b> | <b>16.4</b> | <b>28%</b>                   |
| <b>Unidentified Items</b>                | <b>-</b>   | <b>-</b>   | <b>-</b>   | <b>-</b>   | <b>-</b>    | <b>-</b>    |                              |
| <b>Total Identified and Unidentified</b> | <b>2.5</b> | <b>2.1</b> | <b>0.1</b> | <b>0.4</b> | <b>11.3</b> | <b>16.4</b> | <b>28%</b>                   |
| <b>Scrap Credit</b>                      | <b>-</b>   | <b>-</b>   | <b>-</b>   | <b>-</b>   | <b>-</b>    | <b>-</b>    |                              |
| <b>Total (including Scrap)</b>           | <b>2.5</b> | <b>2.1</b> | <b>0.1</b> | <b>0.4</b> | <b>11.3</b> | <b>16.4</b> | <b>28%</b>                   |

Electric Steam Production

| FERC Account                                 | Present          |          |                    | Proposed |                    |                |
|--|------------------|----------|--------------------|----------|--------------------|----------------|
|  | Plant Balance    | Net Salv | Estimated Net      | Net Salv | Estimated Net      | Proposed Less  |
|  | 1/1/2020         | %        | Salvage in Reserve | %        | Salvage in Reserve | Present        |
|  | (1)              | (2)      | at End of Life     | (4)      | at End of Life     | (6)            |
| Allen S. King                                |                  |          |                    |          |                    |                |
| E311   | \$ 39,623,999    | -8.2     | \$ 3,249,168       | -9.2     | \$ 3,654,407       | \$ 405,239     |
| E312   | \$ 524,338,681   | -8.2     | \$ 42,995,772      | -9.2     | \$ 48,358,238      | \$ 5,362,466   |
| E314   | \$ 94,114,439    | -8.2     | \$ 7,717,384       | -9.2     | \$ 8,679,902       | \$ 962,518     |
| E315   | \$ 46,992,609    | -8.2     | \$ 3,853,394       | -9.2     | \$ 4,333,992       | \$ 480,598     |
| E316   | \$ 7,894,024     | -8.2     | \$ 647,310         | -9.2     | \$ 728,043         | \$ 80,733      |
|  | \$ 712,963,751   |          | \$ 58,463,028      |          | \$ 65,754,582      | \$ 7,291,554   |
| From 2019 Dismantling Study for King         |                  |          |                    | -9.2%    | \$ 65,754,582      |                |
| Red Wing                                     |                  |          |                    |          |                    |                |
| E311   | \$ 12,459,336    | -27.8    | \$ 3,463,695       | -23.5    | \$ 2,926,804       | \$ (536,892)   |
| E312   | \$ 47,058,942    | -27.8    | \$ 13,082,386      | -23.5    | \$ 11,054,545      | \$ (2,027,841) |
| E314   | \$ 3,298,153     | -27.8    | \$ 916,887         | -23.5    | \$ 774,764         | \$ (142,122)   |
| E315   | \$ 1,905,550     | -27.8    | \$ 529,743         | -23.5    | \$ 447,630         | \$ (82,113)    |
| E316   | \$ 1,470,455     | -27.8    | \$ 408,787         | -23.5    | \$ 345,422         | \$ (63,364)    |
|  | \$ 66,192,436    |          | \$ 18,401,497      |          | \$ 15,549,165      | \$ (2,852,332) |
| From 2019 Dismantling Study for Red Wing     |                  |          |                    | -23.5%   | \$ 15,549,165      |                |
| Sherco Units 1 & 2                           |                  |          |                    |          |                    |                |
| E311   | \$ 95,870,631    | -15.2    | \$ 14,572,336      | -15.1    | \$ 14,486,134      | \$ (86,202)    |
| E312   | \$ 432,257,219   | -15.2    | \$ 65,703,097      | -15.1    | \$ 65,314,435      | \$ (388,663)   |
| E314   | \$ 126,723,103   | -15.2    | \$ 19,261,912      | -15.1    | \$ 19,147,969      | \$ (113,943)   |
| E315   | \$ 53,734,094    | -15.2    | \$ 8,167,582       | -15.1    | \$ 8,119,267       | \$ (48,315)    |
| E316   | \$ 12,237,819    | -15.2    | \$ 1,860,148       | -15.1    | \$ 1,849,145       | \$ (11,004)    |
|  | \$ 720,822,866   |          | \$ 109,565,076     |          | \$ 108,916,950     | \$ (648,125)   |
| From 2019 Dismantling Study for Sherco 1 & 2 |                  |          |                    | -15.1%   | \$ 108,916,950     |                |
| Sherco Unit 3 (*)                            |                  |          |                    |          |                    |                |
| E311   | \$ 132,758,983   | -5.4     | \$ 7,168,985       | -7.9     | \$ 10,438,271      | \$ 3,269,285   |
| E312   | \$ 419,348,026   | -5.4     | \$ 22,644,793      | -7.9     | \$ 32,971,540      | \$ 10,326,747  |
| E314   | \$ 88,618,830    | -5.4     | \$ 4,785,417       | -7.9     | \$ 6,967,719       | \$ 2,182,302   |
| E315   | \$ 83,566,721    | -5.4     | \$ 4,512,603       | -7.9     | \$ 6,570,494       | \$ 2,057,891   |
| E316   | \$ 31,675,940    | -5.4     | \$ 1,710,501       | -7.9     | \$ 2,490,544       | \$ 780,043     |
|  | \$ 755,968,499   |          | \$ 40,822,299      |          | \$ 59,438,567      | \$ 18,616,268  |
| From 2019 Dismantling Study for Sherco 3     |                  |          |                    | -7.9%    | \$ 59,438,567      |                |
| Wilmarth                                     |                  |          |                    |          |                    |                |
| E311   | \$ 11,196,195    | -26.8    | \$ 3,000,580       | -25.8    | \$ 2,888,315       | \$ (112,266)   |
| E312   | \$ 41,907,289    | -26.8    | \$ 11,231,154      | -25.8    | \$ 10,810,944      | \$ (420,210)   |
| E314   | \$ 6,214,894     | -26.8    | \$ 1,665,592       | -25.8    | \$ 1,603,274       | \$ (62,318)    |
| E315   | \$ 1,541,817     | -26.8    | \$ 413,207         | -25.8    | \$ 397,747         | \$ (15,460)    |
| E316   | \$ 787,526       | -26.8    | \$ 211,057         | -25.8    | \$ 203,160         | \$ (7,897)     |
|  | \$ 61,647,720    |          | \$ 16,521,589      |          | \$ 15,903,439      | \$ (618,150)   |
| From 2019 Dismantling Study for Wilmarth     |                  |          |                    | -25.8%   | \$ 15,903,439      |                |
| Total Steam Production                       | \$ 2,317,595,273 |          | \$ 243,773,488     |          | \$ 265,562,703     | \$ 21,789,215  |

\* Amounts reported in this section are for the entire unit, not just Xcel Energy's share.

Electric Hydro Production

|   |               | Present  |                    |          | Proposed           |               |               |
|---|---------------|----------|--------------------|----------|--------------------|---------------|---------------|
| FERC Account                                    | Plant Balance | Net Salv | Estimated Net      |          |                    | Estimated Net | Proposed Less |
|   | 1/1/2020      | %        | Salvage in Reserve | Net Salv | Salvage in Reserve |               |               |
|   | (1)           | (2)      | at End of Life     | %        | at End of Life     |               |               |
|   | (1)           | (2)      | (3)                | (4)      | (5)                | (6)           | Present       |
| Hennepin Island                                 |               |          |                    |          |                    |               |               |
| E302  | \$ 2,857,039  | 0.0      | \$ -               | 0.0      | \$ -               | \$ -          |               |
| E331  | \$ 1,407,680  | -26.4    | \$ 371,628         | -26.7    | \$ 375,837         | \$ 4,210      |               |
| E332  | \$ 4,398,484  | -26.4    | \$ 1,161,200       | -26.7    | \$ 1,174,354       | \$ 13,154     |               |
| E333  | \$ 10,177,067 | -26.4    | \$ 2,686,746       | -26.7    | \$ 2,717,182       | \$ 30,436     |               |
| E334  | \$ 3,256,972  | -26.4    | \$ 859,841         | -26.7    | \$ 869,581         | \$ 9,741      |               |
| E335  | \$ 37,779     | -26.4    | \$ 9,974           | -26.7    | \$ 10,087          | \$ 113        |               |
|   | \$ 22,135,020 | -26.4    | \$ 5,089,387       |          | \$ 5,147,041       | \$ 57,654     |               |
| From 2019 Dismantling Study for Hennepin Island |               |          |                    | -26.7%   | \$ 5,147,041       |               |               |
|   |               |          |                    | Note 1   | Note 2             |               |               |
| St. Croix Falls                                 |               |          |                    |          |                    |               |               |
| E331  | \$ 37,924     | -7.5     | \$ 2,844           | -15.0    | \$ 5,689           | \$ 2,844      |               |
| E332  | \$ 2,176,614  | -7.5     | \$ 163,246         | -15.0    | \$ 326,492         | \$ 163,246    |               |
|   | \$ 2,214,538  | -7.5     | \$ 166,090         |          | \$ 332,181         | \$ 166,090    |               |
| St. Croix Falls                                 |               |          |                    | -15.0%   | \$ 332,181         |               |               |
| Note 3  |               |          |                    |          |                    |               |               |
| Upper Dam                                       |               |          |                    |          |                    |               |               |
| E332  | \$ 4,491,476  | -26.4    | \$ 1,185,750       | -26.7    | \$ 1,199,182       | \$ 13,433     |               |
| E335  | \$ 23,046     | -26.4    | \$ 6,084           | -26.7    | \$ 6,153           | \$ 69         |               |
|   | \$ 4,514,522  | -26.4    | \$ 1,191,834       |          | \$ 1,205,335       | \$ 13,502     |               |
| From 2019 Dismantling Study for Upper Dam       |               |          |                    | -26.7%   | \$ 1,205,335       |               |               |
|   |               |          |                    |          | Note 2             |               |               |
| Total Hydro Production                          | \$ 28,864,079 |          | \$ 6,447,311       |          | \$ 6,684,557       | \$ 237,246    |               |

Note 1: To calculate the proposed net salvage percent, FERC 302 Licenses was excluded from the plant balance as removal costs do not apply to this account.

Note 2: The dismantling costs for the Upper Dam are not separately stated in the TLG Dismantling Report. Therefore, the \$6.4M TLG estimate is allocated based on plant balance to each portion in order to calculate the net salvage percent.

Note 3: St. Croix Falls is mainly located in Wisconsin but a portion of the facility is in Minnesota. The balances above represent the Minnesota assets included on NSP-Minnesota's records. This facility was not included in the TLG Dismantling Study. Therefore, we are using the net salvage rate for FERC 332 approved by the Public Service Commission of Wisconsin.

Electric Other Production

|  |                | Present  |                    |          | Proposed           |                       |  |
|--|----------------|----------|--------------------|----------|--------------------|-----------------------|--|
| FERC Account   | Plant Balance  | Net Salv | Estimated Net      | Net Salv | Estimated Net      | Proposed Less Present |  |
|  | 1/1/2020       | %        | Salvage in Reserve | %        | Salvage in Reserve |                       |  |
|  | (1)            | (2)      | at End of Life     | (4)      | at End of Life     |                       |  |
| (5)  |                |          |                    |          |                    |                       |  |
| (6)  |                |          |                    |          |                    |                       |  |
| Angus C. Anson Units 2 & 3                               |                |          |                    |          |                    |                       |  |
| E341   | \$ -           | -9.6     | \$ -               | -11.2    | \$ -               | \$ -                  |  |
| E342   | \$ 1,105,599   | -9.6     | \$ 106,138         | -11.2    | \$ 123,498         | \$ 17,361             |  |
| E344   | \$ 79,691,780  | -9.6     | \$ 7,650,411       | -11.2    | \$ 8,901,759       | \$ 1,251,348          |  |
| E345   | \$ 3,571,653   | -9.6     | \$ 342,879         | -11.2    | \$ 398,962         | \$ 56,083             |  |
| E346   | \$ 2,629,376   | -9.6     | \$ 252,420         | -11.2    | \$ 293,708         | \$ 41,287             |  |
|  | \$ 86,998,409  |          | \$ 8,351,847       |          | \$ 9,717,926       | \$ 1,366,079          |  |
| From 2019 Dismantling Study for Angus Anson Units 2 & 3  |                |          |                    | -11.2%   | \$ 9,717,926       |                       |  |
| Angus C. Anson Unit 4                                    |                |          |                    |          |                    |                       |  |
| E341   | \$ 7,721,804   | -6.5     | \$ 501,917         | -6.5     | \$ 502,271         | \$ 354                |  |
| E342   | \$ 13,506      | -6.5     | \$ 878             | -6.5     | \$ 879             | \$ 1                  |  |
| E344   | \$ 33,545,732  | -6.5     | \$ 2,180,473       | -6.5     | \$ 2,182,011       | \$ 1,538              |  |
| E345   | \$ 4,955,471   | -6.5     | \$ 322,106         | -6.5     | \$ 322,333         | \$ 227                |  |
| E346   | \$ 20,727      | -6.5     | \$ 1,347           | -6.5     | \$ 1,348           | \$ 1                  |  |
|  | \$ 46,257,240  |          | \$ 3,006,721       |          | \$ 3,008,842       | \$ 2,121              |  |
| From 2019 Dismantling Study for Angus Anson 4            |                |          |                    | -6.5%    | \$ 3,008,842       |                       |  |
| Black Dog Unit 5   |                |          |                    |          |                    |                       |  |
| E342   | \$ 12,546,877  | -11.4    | \$ 1,430,344       | -7.2     | \$ 901,458         | \$ (528,886)          |  |
| E343   | \$ 23,430,244  | -11.4    | \$ 2,671,048       | -7.2     | \$ 1,683,397       | \$ (987,650)          |  |
| E344   | \$ 127,512,984 | -11.4    | \$ 14,536,480      | -7.2     | \$ 9,161,451       | \$ (5,375,030)        |  |
| E345   | \$ 27,865,573  | -11.4    | \$ 3,176,675       | -7.2     | \$ 2,002,063       | \$ (1,174,612)        |  |
| E346   | \$ 5,536,330   | -11.4    | \$ 631,142         | -7.2     | \$ 397,770         | \$ (233,372)          |  |
|  | \$ 196,892,009 |          | \$ 22,445,689      |          | \$ 14,146,139      | \$ (8,299,550)        |  |
| From 2019 Dismantling Study for Black Dog Unit 5         |                |          |                    | -7.2%    | \$ 14,146,139      |                       |  |
| Black Dog Unit 6   |                |          |                    |          |                    |                       |  |
| E341   | \$ 42,792,538  | -11.4    | \$ 4,878,349       | -10.3    | \$ 4,417,922       | \$ (460,427)          |  |
| E341   | \$ 13,806,954  | -5.0     | \$ 690,348         | -10.3    | \$ 1,425,437       | \$ 735,089            |  |
| E342   | \$ 9,512,175   | -5.0     | \$ 475,609         | -10.3    | \$ 982,042         | \$ 506,433            |  |
| E344   | \$ 62,269,695  | -5.0     | \$ 3,113,485       | -10.3    | \$ 6,428,753       | \$ 3,315,269          |  |
| E345   | \$ 10,978,424  | -5.0     | \$ 548,921         | -10.3    | \$ 1,133,418       | \$ 584,497            |  |
| E346   | \$ 5,662,089   | -5.0     | \$ 283,104         | -10.3    | \$ 584,557         | \$ 301,452            |  |
|  | \$ 145,021,874 |          | \$ 9,989,816       |          | \$ 14,972,128      | \$ 4,982,312          |  |
| From 2019 Dismantling Study for Black Dog Unit 6         |                |          |                    | -10.3%   | \$ 14,972,128      |                       |  |
| Blazing Star I   |                |          |                    |          |                    |                       |  |
| E340   | \$ -           | 0.0      | \$ -               | 0.0      | \$ -               | \$ -                  |  |
| E341   | \$ 22,224,648  | -8.5     | \$ 1,889,095       | -11.6    | \$ 2,568,828       | \$ 679,733            |  |
| E342   | \$ -           | -8.5     | \$ -               | -11.6    | \$ -               | \$ -                  |  |
| E344   | \$ 268,420,378 | -8.5     | \$ 22,815,732      | -11.6    | \$ 31,025,271      | \$ 8,209,539          |  |
| E345   | \$ 10,136,822  | -8.5     | \$ 861,630         | -11.6    | \$ 1,171,661       | \$ 310,031            |  |
| E346   | \$ -           | -8.5     | \$ -               | -11.6    | \$ -               | \$ -                  |  |
|  | \$ 300,781,847 |          | \$ 25,566,457      |          | \$ 34,765,760      | \$ 9,199,303          |  |
| From 2019 Dismantling Study for Blazing Star I           |                |          |                    | -11.6%   | \$ 34,765,760      |                       |  |
| Blue Lake Units 1 thru 4                                 |                |          |                    |          |                    |                       |  |
| E341   | \$ -           | -22.9    | \$ -               | -30.6    | \$ -               | \$ -                  |  |
| E342   | \$ 1,343,354   | -22.9    | \$ 307,628         | -30.6    | \$ 410,974         | \$ 103,346            |  |
| E344   | \$ 21,207,661  | -22.9    | \$ 4,856,554       | -30.6    | \$ 6,488,094       | \$ 1,631,540          |  |
| E345   | \$ 1,508,868   | -22.9    | \$ 345,531         | -30.6    | \$ 461,610         | \$ 116,080            |  |
| E346   | \$ 498,898     | -22.9    | \$ 114,248         | -30.6    | \$ 152,629         | \$ 38,381             |  |
|  | \$ 24,558,781  |          | \$ 5,623,961       |          | \$ 7,513,308       | \$ 1,889,347          |  |
| From 2019 Dismantling Study for Blue Lake Units 1 thru 4 |                |          |                    | -30.6%   | \$ 7,513,308       |                       |  |

Electric Other Production

|   |                | Present  |                    |          | Proposed           |               |  |
|---|----------------|----------|--------------------|----------|--------------------|---------------|--|
| FERC Account                                    | Plant Balance  | Net Salv | Estimated Net      | Net Salv | Estimated Net      | Proposed Less |  |
|   | 1/1/2020       | %        | Salvage in Reserve | %        | Salvage in Reserve |               |  |
|   | (1)            | (2)      | at End of Life     | (4)      | at End of Life     |               |  |
| (6)   |                |          |                    |          |                    |               |  |
| Blue Lake Units 7 & 8                           |                |          |                    |          |                    |               |  |
| E341  | \$ 1,703,454   | -11.7    | \$ 199,304         | -12.7    | \$ 216,500         | \$ 17,196     |  |
| E342  | \$ 47,986      | -11.7    | \$ 5,614           | -12.7    | \$ 6,099           | \$ 484        |  |
| E344  | \$ 62,361,317  | -11.7    | \$ 7,296,274       | -12.7    | \$ 7,925,783       | \$ 629,509    |  |
| E345  | \$ 7,907,322   | -11.7    | \$ 925,157         | -12.7    | \$ 1,004,978       | \$ 79,821     |  |
| E346  | \$ 32,958      | -11.7    | \$ 3,856           | -12.7    | \$ 4,189           | \$ 333        |  |
|   | \$ 72,053,037  |          | \$ 8,430,205       |          | \$ 9,157,548       | \$ 727,342    |  |
| From 2019 Dismantling Study for Blue Lake 7 & 8 |                |          |                    | -12.7%   | \$ 9,157,548       |               |  |
| Border Winds                                    |                |          |                    |          |                    |               |  |
| E340  | \$ -           | 0.0      | \$ -               | 0.0      | \$ -               | \$ -          |  |
| E341  | \$ 22,226,432  | -8.5     | \$ 1,889,247       | -9.5     | \$ 2,103,424       | \$ 214,177    |  |
| E342  | \$ -           | -8.5     | \$ -               | -9.5     | \$ -               | \$ -          |  |
| E344  | \$ 207,402,451 | -8.5     | \$ 17,629,208      | -9.5     | \$ 19,627,769      | \$ 1,998,561  |  |
| E345  | \$ 34,794,649  | -8.5     | \$ 2,957,545       | -9.5     | \$ 3,292,832       | \$ 335,286    |  |
| E346  | \$ 228,153     | -8.5     | \$ 19,393          | -9.5     | \$ 21,592          | \$ 2,199      |  |
|   | \$ 264,651,685 |          | \$ 22,495,393      |          | \$ 25,045,616      | \$ 2,550,223  |  |
| From 2019 Dismantling Study for Border Winds    |                |          |                    | -9.5%    | \$ 25,045,616      |               |  |
| Notes 2 & 4                                     |                |          |                    |          |                    |               |  |
| Courtaney Wind                                  |                |          |                    |          |                    |               |  |
| E340  | \$ 2,085,661   | 0.0      | \$ -               | 0.0      | \$ -               | \$ -          |  |
| E341  | \$ 7,621,664   | -8.5     | \$ 647,841         | -10.4    | \$ 793,101         | \$ 145,260    |  |
| E342  | \$ -           | -8.5     | \$ -               | -10.4    | \$ -               | \$ -          |  |
| E344  | \$ 262,278,975 | -8.5     | \$ 22,293,713      | -10.4    | \$ 27,292,436      | \$ 4,998,723  |  |
| E345  | \$ 9,591,089   | -8.5     | \$ 815,243         | -10.4    | \$ 998,037         | \$ 182,795    |  |
| E346  | \$ 36,482      | -8.5     | \$ 3,101           | -10.4    | \$ 3,796           | \$ 695        |  |
|   | \$ 281,613,870 |          | \$ 23,759,898      |          | \$ 29,087,370      | \$ 5,327,472  |  |
| From 2019 Dismantling Study for Courtaney       |                |          |                    | -10.4%   | \$ 29,087,370      |               |  |
| Notes 2 & 4                                     |                |          |                    |          |                    |               |  |
| Foxtail Wind                                    |                |          |                    |          |                    |               |  |
| E341  | \$ 33,969,734  | -8.5     | \$ 2,887,427       | -9.1     | \$ 3,080,110       | \$ 192,682    |  |
| E344  | \$ 211,841,413 | -8.5     | \$ 18,006,520      | -9.1     | \$ 19,208,123      | \$ 1,201,603  |  |
|   | \$ 245,811,147 |          | \$ 20,893,947      |          | \$ 22,288,232      | \$ 1,394,285  |  |
| From 2019 Dismantling Study for Foxtail         |                |          |                    | -9.1%    | \$ 22,288,232      |               |  |
| Note 4  |                |          |                    |          |                    |               |  |
| Grand Meadow Wind                               |                |          |                    |          |                    |               |  |
| E340  | \$ 10,672,452  | 0.0      | \$ -               | 0.0      | \$ -               | \$ -          |  |
| E341  | \$ 5,589,546   | -11.1    | \$ 620,440         | -12.5    | \$ 698,173         | \$ 77,733     |  |
| E342  | \$ -           | -11.1    | \$ -               | -12.5    | \$ -               | \$ -          |  |
| E344  | \$ 182,577,054 | -11.1    | \$ 20,266,053      | -12.5    | \$ 22,805,137      | \$ 2,539,084  |  |
| E345  | \$ 12,064,305  | -11.1    | \$ 1,339,138       | -12.5    | \$ 1,506,915       | \$ 167,777    |  |
| E346  | \$ 207,761     | -11.1    | \$ 23,062          | -12.5    | \$ 25,951          | \$ 2,889      |  |
|   | \$ 211,111,119 |          | \$ 22,248,692      |          | \$ 25,036,176      | \$ 2,787,484  |  |
| From 2019 Dismantling Study for Grand Meadow    |                |          |                    | -12.5%   | \$ 25,036,176      |               |  |
| Note 2  |                |          |                    |          |                    |               |  |
| High Bridge                                     |                |          |                    |          |                    |               |  |
| E341  | \$ 71,113,002  | -3.5     | \$ 2,488,955       | -4.3     | \$ 3,039,386       | \$ 550,431    |  |
| E342  | \$ 232,410     | -3.5     | \$ 8,134           | -4.3     | \$ 9,933           | \$ 1,799      |  |
| E343  | \$ 66,361,540  | -3.5     | \$ 2,322,654       | -4.3     | \$ 2,836,308       | \$ 513,654    |  |
| E344  | \$ 200,486,360 | -3.5     | \$ 7,017,023       | -4.3     | \$ 8,568,833       | \$ 1,551,811  |  |
| E345  | \$ 52,024,030  | -3.5     | \$ 1,820,841       | -4.3     | \$ 2,223,519       | \$ 402,678    |  |
| E346  | \$ 7,144,763   | -3.5     | \$ 250,067         | -4.3     | \$ 305,369         | \$ 55,302     |  |
|   | \$ 397,362,104 |          | \$ 13,907,674      |          | \$ 16,983,348      | \$ 3,075,675  |  |
| From 2019 Dismantling Study for High Bridge     |                |          |                    | -4.3%    | \$ 16,983,348      |               |  |

Electric Other Production

|   |                           | Present       |   |               | Proposed  |                          |  |
|---|---------------------------|---------------|---|---------------|---|--------------------------|--|
| FERC Account                                    | Plant Balance<br>1/1/2020 | Net Salv<br>% | Estimated Net<br>Salvage in Reserve<br>at End of Life | Net Salv<br>% | Estimated Net<br>Salvage in Reserve<br>at End of Life | Proposed Less<br>Present |  |
|   | (1)                       | (2)           | (3)   | (4)           | (5)   | (6)                      |  |
| Inver Hills                                     |                           |               |   |               |   |                          |  |
| E341  | \$ 1,618,514              | -18.3         | \$ 296,188  | -19.4         | \$ 314,518  | \$ 18,329                |  |
| E342  | \$ 614,949                | -18.3         | \$ 112,536  | -19.4         | \$ 119,500  | \$ 6,964                 |  |
| E344  | \$ 53,436,050             | -18.3         | \$ 9,778,797  | -19.4         | \$ 10,383,953   | \$ 605,156               |  |
| E345  | \$ 4,314,473              | -18.3         | \$ 789,549  | -19.4         | \$ 838,409  | \$ 48,861                |  |
| E346  | \$ 618,880                | -18.3         | \$ 113,255  | -19.4         | \$ 120,264  | \$ 7,009                 |  |
|   | \$ 60,602,865             |               | \$ 11,090,324   |               | \$ 11,776,644   | \$ 686,319               |  |
| From 2019 Dismantling Study for Inver Hills     |                           |               |   | -19.4%        | \$ 11,776,644   |                          |  |
| Lake Benton II Wind                             |                           |               |   |               |   |                          |  |
| E340  | \$ 146,853                | 0.0           | \$ -  | 0.0           | \$ -  | \$ -                     |  |
| E341  | \$ 32,138,690             | -8.5          | \$ 2,731,789  | -10.8         | \$ 3,460,198  | \$ 728,410               |  |
| E344  | \$ 113,291,566            | -8.5          | \$ 9,629,783  | -10.8         | \$ 12,197,488   | \$ 2,567,705             |  |
| E345  | \$ 10,883,094             | -8.5          | \$ 925,063  | -10.8         | \$ 1,171,724  | \$ 246,661               |  |
|   | \$ 156,460,203            |               | \$ 13,286,635   |               | \$ 16,829,410   | \$ 3,542,775             |  |
| From 2019 Dismantling Study for Lake Benton II  |                           |               |   | -10.8%        | \$ 16,829,410   |                          |  |
|   |                           |               |   | Note 2        |   |                          |  |
| Nobles Wind                                     |                           |               |   |               |   |                          |  |
| E340  | \$ 3,884,834              | 0.0           | \$ -  | 0.0           | \$ -  | \$ -                     |  |
| E341  | \$ 13,536,911             | -6.0          | \$ 812,215  | -8.5          | \$ 1,145,197  | \$ 332,982               |  |
| E344  | \$ 471,140,614            | -6.0          | \$ 28,268,437   | -8.5          | \$ 39,857,601   | \$ 11,589,164            |  |
| E345  | \$ 29,938,414             | -6.0          | \$ 1,796,305  | -8.5          | \$ 2,532,733  | \$ 736,428               |  |
| E346  | \$ 627,971                | -6.0          | \$ 37,678   | -8.5          | \$ 53,125   | \$ 15,447                |  |
|   | \$ 519,128,745            |               | \$ 30,914,635   |               | \$ 43,588,656   | \$ 12,674,021            |  |
| From 2019 Dismantling Study for Nobles          |                           |               |   | -8.5%         | \$ 43,588,656   |                          |  |
|   |                           |               |   | Note 2        |   |                          |  |
| Pleasant Valley Wind                            |                           |               |   |               |   |                          |  |
| E341  | \$ 25,806,960             | -8.5          | \$ 2,193,592  | -11.7         | \$ 3,008,920  | \$ 815,329               |  |
| E344  | \$ 263,644,922            | -8.5          | \$ 22,409,818   | -11.7         | \$ 30,739,246   | \$ 8,329,428             |  |
| E345  | \$ 42,507,679             | -8.5          | \$ 3,613,153  | -11.7         | \$ 4,956,113  | \$ 1,342,960             |  |
| E346  | \$ 292,092                | -8.5          | \$ 24,828   | -11.7         | \$ 34,056   | \$ 9,228                 |  |
|   | \$ 332,251,652            |               | \$ 28,241,390   |               | \$ 38,738,336   | \$ 10,496,945            |  |
| From 2019 Dismantling Study for Pleasant Valley |                           |               |   | -11.7%        | \$ 38,738,336   |                          |  |
| Riverside                                       |                           |               |   |               |   |                          |  |
| E341  | \$ 52,441,362             | -11.3         | \$ 5,925,874  | -13.2         | \$ 6,923,149  | \$ 997,275               |  |
| E342  | \$ 1,033,460              | -11.3         | \$ 116,781  | -13.2         | \$ 136,434  | \$ 19,653                |  |
| E343  | \$ 50,662,922             | -11.3         | \$ 5,724,910  | -13.2         | \$ 6,688,365  | \$ 963,455               |  |
| E344  | \$ 154,911,011            | -11.3         | \$ 17,504,944   | -13.2         | \$ 20,450,881   | \$ 2,945,936             |  |
| E345  | \$ 40,361,888             | -11.3         | \$ 4,560,893  | -13.2         | \$ 5,328,454  | \$ 767,560               |  |
| E346  | \$ 9,075,926              | -11.3         | \$ 1,025,580  | -13.2         | \$ 1,198,176  | \$ 172,597               |  |
|   | \$ 308,486,568            |               | \$ 34,858,982   |               | \$ 40,725,459   | \$ 5,866,477             |  |
| From 2019 Dismantling Study for Riverside       |                           |               |   | -13.2%        | \$ 40,725,459   |                          |  |
| Total Other Production                          | \$ 3,650,043,156          |               | \$ 305,112,267  |               | \$ 363,380,897  | \$ 58,268,631            |  |

Note 1: As TLG's estimate was for the entire Black Dog site including the former steam units, the Company performed analysis and calculations to determine the portions attributable to the steam demolition versus the future removal for the other production units and common/shared facilities.

Note 2: To calculate the proposed net salvage percent, FERC 340 Wind Rights was excluded from the plant balance as removal costs do not apply to this account.

Note 3: Blazing Star I's plant balance is as of the in-service date in April 2020.

Note 4: Border, Courtenay, and Foxtail wind farms are located in North Dakota which only requires removal to a depth of 48". Thus, the 48" removal scenario was used to calculate the net salvage rate.

Gas Production and Storage

|   |               | Present  |                    |          | Proposed           |                |  |
|---|---------------|----------|--------------------|----------|--------------------|----------------|--|
| FERC Account                              | Plant Balance | Net Salv | Estimated Net      | Net Salv | Estimated Net      | Proposed Less  |  |
|   | 1/1/2020      | %        | Salvage in Reserve | %        | Salvage in Reserve | Present        |  |
|   | (1)           | (2)      | at End of Life     | (4)      | at End of Life     | (6)            |  |
| Maplewood                                 |               |          |                    |          |                    |                |  |
| G305                                      | \$ 1,611,046  | -93.7    | \$ 1,509,550       | -87.7    | \$ 1,412,195       | \$ (97,354)    |  |
| G311                                      | \$ 3,766,755  | -93.7    | \$ 3,529,449       | -87.7    | \$ 3,301,827       | \$ (227,622)   |  |
| G320                                      | \$ 455,629    | -93.7    | \$ 426,925         | -87.7    | \$ 399,391         | \$ (27,533)    |  |
|   | \$ 5,833,430  | -93.7    | \$ 5,465,923       |          | \$ 5,113,414       | \$ (352,510)   |  |
| From 2019 Dismantling Study for Maplewood |               |          |                    | -87.7%   | \$ 5,113,414       |                |  |
| Sibley                                    |               |          |                    |          |                    |                |  |
| G305                                      | \$ 1,166,477  | -79.5    | \$ 927,349         | -41.1    | \$ 479,997         | \$ (447,352)   |  |
| G311                                      | \$ 9,488,978  | -79.5    | \$ 7,543,738       | -41.1    | \$ 3,904,649       | \$ (3,639,089) |  |
| G320                                      | \$ 496,538    | -79.5    | \$ 394,748         | -41.1    | \$ 204,322         | \$ (190,426)   |  |
|   | \$ 11,151,994 | -79.5    | \$ 8,865,835       |          | \$ 4,588,968       | \$ (4,276,867) |  |
| From 2019 Dismantling Study for Sibley    |               |          |                    | -41.1%   | \$ 4,588,968       |                |  |
| Wescott                                   |               |          |                    |          |                    |                |  |
| G361                                      | \$ 6,735,066  | -19.2    | \$ 1,293,133       | -19.6    | \$ 1,317,482       | \$ 24,349      |  |
| G362                                      | \$ 8,199,422  | -19.2    | \$ 1,574,289       | -19.6    | \$ 1,603,932       | \$ 29,643      |  |
| G363                                      | \$ 985,962    | -19.2    | \$ 189,305         | -19.6    | \$ 192,869         | \$ 3,565       |  |
| G363.1                                    | \$ 3,564,676  | -19.2    | \$ 684,418         | -19.6    | \$ 697,305         | \$ 12,887      |  |
| G363.2                                    | \$ 9,336,198  | -19.2    | \$ 1,792,550       | -19.6    | \$ 1,826,303       | \$ 33,753      |  |
| G363.3                                    | \$ 23,733,503 | -19.2    | \$ 4,556,833       | -19.6    | \$ 4,642,636       | \$ 85,803      |  |
| G363.4                                    | \$ 73,634     | -19.2    | \$ 14,138          | -19.6    | \$ 14,404          | \$ 266         |  |
| G363.5                                    | \$ 4,843,620  | -19.2    | \$ 929,975         | -19.6    | \$ 947,486         | \$ 17,511      |  |
|   | \$ 57,472,081 | -19.2    | \$ 11,034,640      |          | \$ 11,242,417      | \$ 207,778     |  |
| From 2019 Dismantling Study for Wescott   |               |          |                    | -19.6%   | \$ 11,242,417      |                |  |
| Total Gas Production and Storage          | \$ 74,457,504 |          | \$ 25,366,398      |          | \$ 20,944,799      | \$ (4,421,599) |  |

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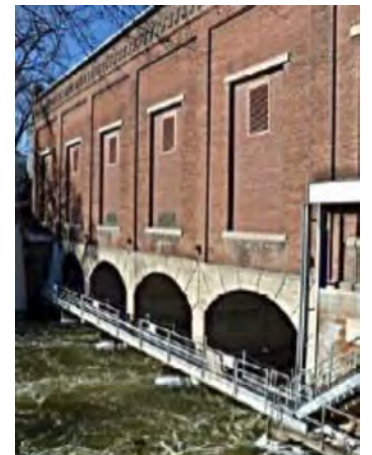


## **DISMANTLING COST STUDY**

**for**

**Allen S. King Unit 1  
Angus Anson Units 1-4  
Black Dog Units 2, 3, 5 and 6  
Blue Lake Units 1-4, 7 and 8  
Granite City Units 1-4  
Hennepin Island  
High Bridge Units 1-3  
Inver Hills Units 1- 6  
Key City Units 1-4  
Maplewood Gas Plant  
Minnesota Valley Units 1-3  
Red Wing Units 1 & 2  
Riverside Units 7, 8, 9 and 10  
Sherburne County Units 1-3  
Sibley Gas Plant  
Wescott Gas Plant  
Wilmarth Units 1 & 2  
Stations**

**Blazing Star I Wind Farm  
Border Winds Project  
Courtenay Wind Farm  
Foxtail Wind Farm  
Grand Meadow Wind Farm  
Lake Benton II Wind Farm  
Nobles Wind Farm  
Pleasant Valley Wind Farm**



*prepared for*

**Xcel Energy**

*prepared by*

**TLG Services, Inc.**

***An Entergy Company***

148 New Milford Road East  
Bridgewater, CT

**April 2020**



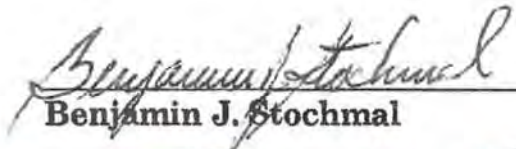


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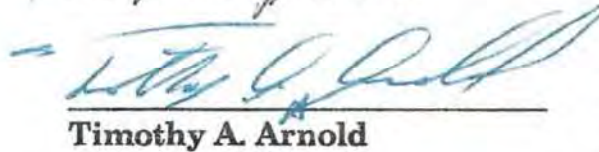
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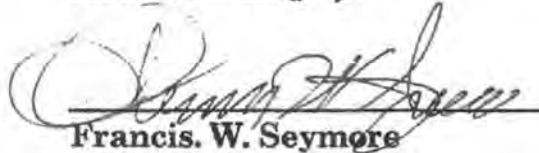
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## REVISION LOG

| Rev. No. | CRA No. | Date       | Item Revised | Reason for Revision |
|----------|---------|------------|--------------|---------------------|
| 0        |         | 04/01/2020 |              | Final Issue         |

## **ACRONYMS / DEFINITIONS**

|   |      |   |
|---|------|---|
| • | AIF  | Atomic Industrial Forum                                   |
| • | CT   | Combustion Turbine  |
| • | CCGT | Combined Cycle Gas Turbine                                |
| • | DOC  | Decommissioning Operations Contractor                     |
| • | DOE  | Department of Energy                                      |
| • | HRSG | Heat Recovery Steam Generator                             |
| • | LS   | Lump Sum  |
| • | Mtr  | Motor   |
| • | MV   | Medium Voltage  |
| • | Mw   | Megawatt  |
| • | MWe  | Megawatt (electric) – 2020 Net Max. Capacity (NMC) Rating |
| • | NESP | National Environmental Studies Project                    |
| • | NG   | Natural Gas   |
| • | OSHA | Occupational Safety & Health Administration               |
| • | PCB  | Polychlorinated Biphenyl                                  |
| • | RDF  | Refuse Derived Fuel                                       |
| • | TLG  | TLG Services, Inc.  |
| • | WTG  | Wind Turbine Generator                                    |

## **EXECUTIVE SUMMARY**

This report, prepared by TLG Services, Inc. (TLG), provides estimated costs for the complete dismantling, unless otherwise specified, of the following electric generating stations, wind farms, gas storage and production plants operated by Xcel Energy (Xcel), which either owns or has a share in ownership in each of these facilities:

*Generating Stations Located in Minnesota:*

- Allen S. King
- Black Dog
- Blue Lake
- Granite City
- Hennepin Island
- High Bridge
- Inver Hills
- Key City
- Minnesota Valley
- Red Wing
- Riverside
- Sherburne County
- Wilmarth

*Generating Station Located in South Dakota:*

- Angus Anson

*Gas production and storage plants (all located in Minnesota):*

- Maplewood
- Sibley
- Wescott

*Wind Farms Located in Minnesota:*

- Blazing Star I Wind Farm
- Grand Meadow Wind Farm
- Lake Benton II Wind Farm
- Nobles Wind Farm
- Pleasant Valley Wind Farm

*Wind Farms Located in North Dakota:*

- Border Winds Project
- Courtenay Wind Farm
- Foxtail Wind Farm



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The dismantling estimate includes the cost of removing the equipment and structures for each of the above-referenced facilities and limited restoration of the sites. The electrical switchyards are assumed to remain in place and are not included in the estimate.

The scope of the dismantling estimate includes the following significant work activities and labor, equipment, material, and waste disposal cost elements:

- Preparation of the units for safe dismantling
- Abatement of asbestos containing materials prior to dismantling (where applicable)
- Removal and disposition of all installed equipment (except where noted)
- Demolition and disposition of subsurface utilities and buildings and foundations (except where noted)
- Removal of below grade foundations (except where noted)
- Coal yard and ash pond remediation (Sherburne County, King, and Minnesota Valley)
- Limited site restoration (grading and seeding for drainage and erosion control)
- Demolition contractor's on-site management, engineering, safety, and administrative staff
- Demolition contractor's expenses, including profit, insurance, permits, and fees
- Xcel's on-site management, oversight, and security staff
- A cost credit associated with the disposition of scrap metals
- Cost contingency

The general approach in assembling the estimate was to develop an inventory of equipment and structures designated to be removed for each facility. This inventory was established using site walk-downs (including discussions with the Operations & Maintenance staff), station-provided equipment databases, and plant drawings. This inventory accounted for similarities between facilities.

The abatement, removal, demolition and restoration activity costs are estimated by applying unit cost factors (developed for each inventory item) against the inventory. Costs for project management, shared equipment and consumables, and similar types of costs are estimated on a period-dependent basis (i.e., the magnitude of the expense depends, in part, on the duration of the project and the types of activities taking place). The potential value of scrap from materials generated in dismantling the plant components and building structural steel is included as a credit in the dismantling cost

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estimate. Contingency is provided within this estimate to account for unpredictable project events.

OSHA states that demolition involves additional hazards due to unknown factors which make demolition work particularly dangerous. OSHA further states that the hazards of demolition work can be controlled and eliminated with the proper planning, the right personal protective equipment, necessary training, and compliance with OSHA standards. This cost estimate is intended to provide sufficient monies to allow Xcel management to perform the project using these principles and standards.

The dismantling costs, expressed in thousands of 2019 dollars, are provided in the following table.

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**SUMMARY OF DISMANTLING COSTS**

(All costs are in thousands of 2019 dollars)

| <b>Station</b>   | <b>Unit</b> | <b>MWe rating</b> | <b>Type</b> | <b>Fuel</b> | <b>In Service</b> | <b>Station Cost</b> |
|--|-------------|-------------------|-------------|-------------|-------------------|---------------------|
| <b><i>Electric Generation Facilities –Fossil and Hydro</i></b> |             |                   |             |             |                   |                     |
| Allen S. King  | 1           | 511               | Steam       | Coal        | 1968              | 65,755              |
| Angus Anson  | 1           |                   | Steam       | N/A         | 1966              | 12,727              |
|  | 2           | 109               | CT          | NG/Oil      | 1994              |                     |
|  | 3           | 109               | CT          | NG/Oil      | 1994              |                     |
|  | 4           | 168               | CT          | NG/Oil      | 2005              |                     |
| Black Dog<br>(Unit 3 Retired)                                  | 2           | 117               | Steam       | (note 1)    | 1952              | 48,729              |
|  | 3           | 108               | Steam       | Coal/NG     | 1955              |                     |
|  | 5           | 181               | CCGT        | NG          | 2002              |                     |
|  | 6           | 228               | CT          | NG          | 2018              |                     |
| Blue Lake  | 1           | 50                | CT          | NG/Oil      | 1974              | 16,670              |
|  | 2           | 50                | CT          | NG/Oil      | 1974              |                     |
|  | 3           | 46                | CT          | NG/Oil      | 1974              |                     |
|  | 4           | 48                | CT          | NG/Oil      | 1974              |                     |
|  | 7           | 174               | CT          | NG/Oil      | 2005              |                     |
|  | 8           | 177               | CT          | NG/Oil      | 2005              |                     |
| Granite City<br>(All Units Retired)                            | 1           | 18                | CT          | NG/Oil      | 1969              | 4,885               |
|  | 2           | 18                | CT          | NG/Oil      | 1969              |                     |
|  | 3           | 18                | CT          | NG/Oil      | 1969              |                     |
|  | 4           | 18                | CT          | NG/Oil      | 1969              |                     |
| Hennepin Island  | 1-5         | 13.9              | Hydro       | Water       | 1882              | 6,352               |
| High Bridge  | 1           | 185               | CCGT        | NG/Oil      | 2008              | 16,983              |
|  | 2           | 185               | CCGT        | NG/Oil      | 2008              |                     |
|  | 3           | 236               | Steam       | (note 2)    | 2008              |                     |
| Inver Hills  | 1           | 62                | CT          | NG/Oil      | 1972              | 11,777              |
|  | 2           | 62                | CT          | NG/Oil      | 1972              |                     |
|  | 3           | 62                | CT          | NG/Oil      | 1972              |                     |
|  | 4           | 62                | CT          | NG/Oil      | 1972              |                     |
|  | 5           | 61                | CT          | NG/Oil      | 1972              |                     |
|  | 6           | 62                | CT          | NG/Oil      | 1972              |                     |

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**SUMMARY OF DISMANTLING COSTS  
(continued)**

(All costs are in thousands of 2019 dollars)

| Station                                       | Unit | MWe rating | Type  | Fuel     | In Service | Station Cost |
|---|------|------------|-------|----------|------------|--------------|
| <i>Electric Generation Facilities -Fossil</i> |      |            |       |          |            |              |
| Key City                                      | 1    | 18         | CT    | NG/Oil   | 1970       | 4,530        |
| (All Units Retired)                           | 2    | 18         | CT    | NG/Oil   | 1970       |              |
|   | 3    | 18         | CT    | NG/Oil   | 1970       |              |
|   | 4    | 18         | CT    | NG/Oil   | 1970       |              |
| Minnesota Valley                              | 1    | 10         | Steam | Coal     | 1949       | 22,508       |
| (All Units Retired)                           | 2    | 10         | Steam | Coal     | 1949       |              |
|   | 3    | 44         | Steam | Coal     | 1953       |              |
| Red Wing                                      | 1    | 9          | Steam | RDF      | 1949       | 15,549       |
|   | 2    | 9          | Steam | RDF      | 1949       |              |
| Riverside                                     | 7    | 160        | Steam | (note 3) | 1964       | 40,725       |
| (Unit 8 Retired)                              | 8    | 231        | Steam | Coal     | 2009       |              |
|   | 9    | 171        | CT    | NG/Oil   | 2009       |              |
|   | 10   | 171        | CT    | NG/Oil   | 2009       |              |
| Sherburne County                              | 1    | 680        | Steam | Coal     | 1976       | 168,356      |
|   | 2    | 682        | Steam | Coal     | 1977       |              |
|   | 3    | 876        | Steam | Coal     | 1987       |              |
| Wilmarth                                      | 1    | 9          | Steam | RDF      | 1948       | 15,903       |
|   | 2    | 9          | Steam | RDF      | 1951       |              |
| <i>Gas Production/Storage Facilities</i>      |      |            |       |          |            |              |
| Maplewood                                     |      |            |       |          | 1957       | 5,113        |
| Sibley  |      |            |       |          | 1953       | 4,589        |
| Wescott                                       |      |            |       |          | 1972       | 11,242       |
| Fleet Totals                                  |      | 6,439      |       |          |            | \$472,396    |

**NOTES:**

- 1 Unit 2 receives steam from Units 5 HRSG
- 2 Unit 3 receives steam from Units 1 and 2 HRSGs
- 3 Unit 7 receives steam from Units 9 and 10 HRSGs

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## SUMMARY OF DISMANTLING COSTS

### Wind Farms (Complete Removal)

(All costs are in thousands of 2019 dollars)

| <b>Station</b>                                    | <b>Units</b> | <b>MWe rating</b> | <b>Type</b>            | <b>Wind Farm Cost</b> |
|---|--------------|-------------------|------------------------|-----------------------|
| <i><b>Electric Generation Facilities -WTG</b></i> |              |                   |                        |                       |
| Blazing Star I                                    | 100          | 200               | Wind Turbine Generator | 34,766                |
| Border Winds                                      | 75           | 148               | Wind Turbine Generator | 30,974                |
| Courtenay   | 100          | 190               | Wind Turbine Generator | 36,313                |
| Foxtail   | 75           | 150               | Wind Turbine Generator | 27,558                |
| Grand Meadow                                      | 67           | 99                | Wind Turbine Generator | 25,036                |
| Lake Benton II                                    | 44           | 99                | Wind Turbine Generator | 16,829                |
| Nobles  | 134          | 197               | Wind Turbine Generator | 43,589                |
| Pleasant Valley                                   | 100          | 196               | Wind Turbine Generator | 38,738                |
| <b>Fleet Totals</b>                               |              | <b>1,279</b>      |                        | <b>\$253,804</b>      |

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**SUMMARY OF DISMANTLING COSTS**  
**Wind Farms (Removal to 48 inches below grade)**  
 (All costs are in thousands of 2019 dollars)

| <b>Station</b>                                    | <b>Units</b> | <b>MWe rating</b> | <b>Type</b>            | <b>Wind Farm Cost</b> |
|---|--------------|-------------------|------------------------|-----------------------|
| <i><b>Electric Generation Facilities -WTG</b></i> |              |                   |                        |                       |
| Blazing Star I                                    | 100          | 200               | Wind Turbine Generator | 28,362                |
| Border Winds                                      | 75           | 148               | Wind Turbine Generator | 25,046                |
| Courtenay   | 100          | 190               | Wind Turbine Generator | 29,087                |
| Foxtail   | 75           | 150               | Wind Turbine Generator | 22,288                |
| Grand Meadow                                      | 67           | 99                | Wind Turbine Generator | 21,697                |
| Lake Benton II                                    | 44           | 99                | Wind Turbine Generator | 14,197                |
| Nobles  | 134          | 197               | Wind Turbine Generator | 35,955                |
| Pleasant Valley                                   | 100          | 196               | Wind Turbine Generator | 31,505                |
| <b>Fleet Totals</b>                               |              | <b>1,279</b>      |                        | <b>\$208,138</b>      |

## **1. INTRODUCTION**

### **1.1 OBJECTIVE OF STUDY**

The objective of this dismantling cost study prepared by TLG Services is to present an estimate of the costs to dismantle Xcel Energy's fossil-fueled and wind farm generating electrical generating facilities, plus their gas production and storage facilities, in Minnesota, South Dakota, and North Dakota. This study is not intended to be a dismantling plan for each of the stations, but a cost estimate prepared to support current financial planning for future dismantling.

### **1.2 FACILITY DESCRIPTIONS**

#### **Electric Generation Facilities**

**Allen S. King** is a single unit coal fired generating facility with a cyclone-fired boiler. It has a generating capacity of 511 MWe while burning low sulfur Wyoming coal. The plant is located in Oak Park Heights, Minnesota, on the St. Croix River. The unit was installed in 1968. From 2004 to 2007 the unit was completely refurbished as part of an emissions reduction project.

**Angus Anson** is a three-unit simple cycle combustion gas turbine peaking facility, capable of firing on oil or natural gas. Units 1 and 2 were placed in service in 1994. Unit 3 was placed in service in 2005. The station generating capacity is 386 megawatts. Unit 1, 2, and 3 are rated at 109, 109, and 168 MWe, respectively. The station is located in Sioux Falls, South Dakota adjacent to the decommissioned Pathfinder nuclear facility. The remaining Pathfinder facility features holds the non-nuclear remnants of the test nuclear power plant (minus the reactor) built in 1965.

**Black Dog** generating station is located on the Minnesota River just south of the Twin Cities. Unit 5, which is a natural gas fired combined cycle combustion gas turbine, replaced the original Unit 1 boiler and steam turbine. The exhaust heat from Unit 5 gas turbine generates steam in the HRSG and powers the original Unit 2 steam turbine that was installed in the 1950's. The Unit 2 boiler has been abandoned in place. The boiler chimney has been removed. Units 3 is abandoned in place and Unit 4 was mostly removed to make room for a new simple cycle combustion gas turbine, Unit 6. The Unit 4 primary precipitator, air heater, forced draft, induced draft and gas recirculation fans, deaerator and storage tank, and one feed-water heater remain in place. The coal yard facilities have been removed as well as the boiler chimneys.

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**Blue Lake** is a six-unit simple cycle combustion gas turbine peaking facility, capable of firing on oil or natural gas. The station generating capacity is 545 megawatts. Units 1-4 are rated at 50 MWe, 50 MWe, 46 MWe, 48 MWe, respectively. Units 7 and 8 are rated at 174 MWe and 177 MWe. The station is located in Shakopee, Minnesota along the Minnesota River. Units 1-4 were placed in service in 1974. Units 7 and 8 were placed in service in 2005.

**Granite City** is a four-unit simple cycle combustion gas turbine peaking facility, capable of firing on oil or natural gas. The station generating capacity was 72 megawatts with each of the four units rated at 18 MWe. The station is located in St. Cloud, Minnesota. The units were installed in 1970. The station was retired from service in June 2019.

**Hennepin Island** is a hydroelectric power plant located on the Mississippi River in Minneapolis, MN, on the west side of Hennepin Island. The station consists of five turbine-generator sets, and has a combined generating capacity is 13.9 Mw. The plant was installed in 1882; it was last refurbished in 2010.

**High Bridge** is a three-unit facility consisting of two combined cycle combustion gas turbines and one steam turbine. The combustion turbines are each direct coupled to a 185 MWe electric generator. The exhaust gas of each combustion turbine is ducted through its own HRSG. The steam from the HRSG is piped to a 236 MWe steam turbine. The station has a net dependable capacity of 606 MWe. The station was placed in service in 2008. It is located in downtown St. Paul, Minnesota, on the Mississippi River.

**Inver Hills** is a six-unit simple cycle combustion gas turbine peaking facility, capable of firing on oil or natural gas. The station generating capacity is 371 megawatts. Units 1-4 and 6 are rated at 62 MWe each. Unit 5 is rated at 61 MWe. The station is located in Inver Grove Heights, Minnesota. The units were placed in service in 1972.

**Key City** was a four-unit simple cycle combustion gas turbine peaking facility, capable of firing on oil or natural gas. The station generating capacity was 72 megawatts with Units 1-4 at 18 MWe each. The station is located in Mankato, Minnesota. The units were installed in 1970, and retired in March of 2015.

**Minnesota Valley** is a three-unit facility abandoned in place. The station consists of two 10 MWe and one 44 MWe coal fired units. The station is located in Chippewa County, Granite Falls, Minnesota. The two 10 MWe units were installed in the late 1940's. The third unit was installed in 1953. The station was retired from service in 2013. All coal yard facilities have been removed.



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**Red Wing** is a two-unit generating facility that burns processed municipal solid waste, referred to as refuse-derived fuel (RDF). The station employs a combination duct scrubber with a baghouse to effectively cut emissions from burning RDF. The scrubber treats flue gas with a water spray and dry lime. The baghouse traps particulate by forcing gas streams through large filter bags. The generating capacity of each unit is 9 MWe. The station is located in Red Wing, Minnesota. The units were installed in the early 1950's (coal fired units) and later modified to burn RDF.

**Riverside** is a three-unit facility consisting of two combined cycle combustion gas turbine generators (Units 9 and 10) and one steam turbine (refurbished Unit 7 steam turbine). The combustion turbines are each direct coupled to a 171 MWe electric generator. The exhaust gas of each combustion turbine is ducted through its own HRSG. The steam from the HRSG is piped to the Unit 7 160 MWe steam turbine. Abandoned in place, and included in this estimate, are the retired Units 6, 7 and 8 boilers, and the Unit 8 steam turbine with all its associated piping and system components. The three operational units went into service in 2009. The station is located northeast of Minneapolis on the Mississippi River.

**Sherburne County** is a three-unit 2,238 MWe coal-fired facility. The station is located in Becker, Minnesota, 45 miles northwest of the Twin Cities, on the Mississippi River. Units 1, 2 and 3 have a net dependable capacity of 680, 682, and 876 MWe each, respectively. The units were installed in 1976, 1977, and 1987.

**Wilmarth** is an electric generating facility that burns RDF. The station employs a combination duct scrubber with a baghouse to effectively cut emissions from burning RDF. The scrubber treats flue gas with a water spray and dry lime. The baghouse traps particulate by forcing gas streams through large filter bags. The generating capacity of Unit 1 and 2 is 9 MWe each. The station is located in Mankato, Minnesota. The units were installed in the early 1950's and modified in 1987 to burn RDF.

**Gas Production/Storage Facilities**

**Maplewood** is a propane storage facility with an effective propane storage capacity of 1.355 million gallons. The plant, located in Maplewood, Minnesota, was placed in-service in 1957.

**Sibley** is a propane storage facility used to supplement natural gas supplies during peak demand periods, with an effective propane storage capacity of 1.2

million gallons. The plant, located in Mendota Heights, Minnesota, was placed in service in 1953.

**Wescott** is a liquefied natural gas peak-shaving plant. The facility collects and stores natural gas for future supply to the local natural gas distribution systems during cold winter periods when regional natural gas supplies may not meet the increased demand. The facility is located in Inver Grove Heights, Minnesota, and was completed in 1972.

### **Wind Farms**

**Blazing Star I** is a 100-unit wind turbine complex located on privately owned farmland in Lincoln County in southwestern Minnesota. The wind farm is composed of 10, 2.0 MWe V-110 and 90, 2.0 MWe V-120 Vestas wind turbines for a complex total of 200 MWe. The units are expected to be placed into full service in 2020.

**Border Winds Project** is a 75-unit wind turbine complex located on privately owned farmland in Rolla, North Dakota. The wind farm is composed of 75, 2.0 Mwe (nominal) V-100-2.0 Vestas wind turbines for a complex total of 148 MWe. The units were placed into service in 2015.

**Courtenay** is a 100-unit wind turbine complex located on privately owned farmland in Jamestown, North Dakota. The wind farm is composed of 100, 2.0 MWe (nominal) V-100-2.0 Vestas wind turbines for a complex total of 190 MWe. The units were placed into service in 2016.

**Foxtail** is a 75-unit wind turbine complex located on privately owned farmland in Kulm, North Dakota. The wind farm is composed of 7, 2.0 MWe V-110 and 68, 2.0 MWe V-120 Vestas wind turbines for a complex total of 150 MWe. The units were placed into service in 2019.

**Grand Meadow** is a 67-unit wind turbine complex located in a stretch of farm fields six miles long and four miles wide. The farm is spread out over roughly 10,000 acres southeast of Interstate 90 in Grand Meadow, Clayton, and Dexter Townships in Mower County, Minnesota. Each GE 1.5-77 wind turbine / generator set has a rated capacity of 1.5 Mwe (nominal) for a complex total of 99 MWe. The units were placed in service in 2008.

**Lake Benton II** is a 44-unit wind turbine complex located on privately owned farmland in Ruthton, Minnesota. The wind farm is composed of 5, 2.1 Mwe (nominal) GE 2.1-116 and 39, 2.3 Mwe (nominal) GE 2.3-116 General Electric

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wind turbines for a complex total of 99 MWe. The units were placed into service in 2019.

**Nobles** is a 134-unit wind turbine complex located in the Buffalo Ridge area of Minnesota. The wind farm is spread out over roughly 42 square miles in Nobles County, Minnesota, in Olney, Dewald, Larkin, and Summit Lake townships. Each GE 1.5-77 wind turbine / generator set has a rated capacity of 1.5 MWe (nominal) for a complex total of 197 MWe. The units were placed in service in 2011.

**Pleasant Valley** is a 100-unit wind turbine complex located on privately owned farmland in Dexter, Minnesota. The wind farm is composed of 100, 2.0 (nominal) MWe V-100-2.0 Vestas wind turbines for a complex total of 196 MWe. The units were placed into service in 2015.

### **1.3 SCOPE**

The scope of the dismantling estimate includes the following significant cost elements:

- Preparation for safe dismantling;
  - Hazardous materials characterization for such items as ACM (asbestos-containing materials), lead, mercury, PCBs, hydrocarbons in soil, etc.
  - Isolation of the units in preparation for safe dismantling (e.g. ensuring systems are de-energized, fuel and chemical storage tanks are drained and cleaned, etc. (where applicable))
- Abatement of ACM prior to dismantling (where applicable)
- Labor, equipment, and material costs associated with the removal and disposition of all installed equipment
- Labor, equipment, and material costs associated with the demolition and disposition of buildings and foundations
- Demolition contractor's on-site management, engineering, safety, and administrative staff
- Demolition contractor's expenses, including insurance, permits, and fees.
- Xcel's on-site management, oversight, and security staff
- A cost credit associated with the disposition of scrap metals
- Cost contingency

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Costs are provided for each generating station or facility, identified by significant cost element. The cost per station includes the costs for dismantling the generating unit and the common station facilities. Costs are provided in 2019 dollars.

#### **1.4 GENERAL APPROACH**

The general approach in assembling the estimate was to develop an inventory of equipment and structures designated to be removed for each facility. This inventory was established using site walk-downs (including discussions with the Operations & Maintenance staff), station-provided equipment databases, and plant drawings. This inventory accounted for similarities between facilities.

The abatement, removal, demolition and restoration activity costs are estimated by applying unit cost factors (developed for each inventory item) against the inventory. Costs for project management, shared equipment and consumables, and similar types of costs are estimated on a period-dependent basis (i.e., the magnitude of the expense depends, in part, on the duration of the project and the types of activities taking place). The potential value of scrap from materials generated in dismantling the plant components and building structural steel is included as a credit in the dismantling cost estimate. Contingency is provided within this estimate to account for unpredictable project events.

OSHA states that demolition involves additional hazards due to unknown factors which make demolition work particularly dangerous. OSHA further states that the hazards of demolition work can be controlled and eliminated with the proper planning, the right personal protective equipment, necessary training, and compliance with OSHA standards. The cost estimate is intended to provide sufficient monies to allow Xcel management to perform the project using these principles and standards.

Limited site landscaping is included, which covers grading and seeding for drainage and erosion control.

Section 2 of this report identifies the activities and sequence of activities necessary to dismantle a generating station. Section 3 provides the specific bases for the estimate. Section 4 discusses scrap metal and associated credits to the dismantling costs. Section 5 provides the results. Appendices, noted throughout this report, provide additional information important to understanding this estimate.

## **2. DISMANTLING OPERATIONS**

The estimate for dismantling the stations is based on the complete removal of the units and common station facilities (except where noted). The following sections describe the project organization, basic activities, and special equipment necessary for accomplishing the dismantling project.

The actual dismantling program begins once the station owner has decided to dismantle the site, either immediately following final shutdown, or after a period of storage following final shutdown. The dismantling program has been organized into three distinct periods: Period 1 - Engineering/Planning and Asbestos and Other Hazardous Material Abatement (if necessary); Period 2 - Dismantling Operations; and Period 3 - Site Restoration. This section summarizes the activities performed under each Period of the program.

For the purposes of this estimate it is assumed that once the decision to dismantle has been made and a project start date established, the work in each of these periods will be completed successively (no delay between periods). This report does not attempt to describe all of the activities necessary to dismantle a station, but identifies representative activities appropriate to this type of project.

### **2.1 PRE-SHUTDOWN ACTIVITIES**

The estimates include a planning staff for a year prior to final shutdown to plan for the dismantling program. A staff of seven full-time equivalent personnel is included in this estimate; smaller stations will have a reduced staffing amount.

### **2.2 POST-SHUTDOWN PLANT STAFF TRANSITION ACTIVITIES**

The estimate is based on each station being shut down and placed into a post-shutdown configuration by the plant staff. The length of time that the facility is in this configuration is indeterminate and the costs for maintaining the facility in this configuration is not included within the scope of this dismantling effort. The activities to be completed post-shutdown, but prior to station dismantling, include:

- Removal of consumables and supplies not needed in the post-shutdown configuration
- Removal of residual fuels (including oil/coal)
- Removal of acids and caustics; flushing and cleaning of storage tanks

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- Disposition of surplus bulk chemicals and gas storage containers
- Removal of miscellaneous hazardous wastes and combustible materials
- Installation of any appropriate physical barriers (sealing circulating water system) and/or security barriers

The estimate does not account for an extended period of time between final shutdown of the unit(s) and onset of the dismantling program. As such, the plant operations and maintenance staff would be expected to perform the following activities in the interval of time between final plant shutdown, and the onset of the dismantling program.

- If the unit is to be maintained in a condition where lighting, electricity, heating, water, sanitary, and similar services are to remain active, reconfigure these systems to minimize maintenance requirements
- Maintenance of the facility (maintaining roofs and windows, drain systems, and electrical systems to preclude creating hazardous working conditions in the future)

## **2.3 DISMANTLING ENGINEERING / PLANNING AND ASBESTOS ABATEMENT**

When the decision is made to begin physical dismantling of a station, Xcel Energy will begin field dismantling activities, beginning with engineering and planning, and removal of asbestos and other hazardous materials from the station.

### **2.3.1 Engineering and Planning**

A preliminary planning phase of the program begins once it is has been determined that a station will be dismantled and the project has been authorized to proceed. During this phase, the owner assembles its dismantling management organization, makes appropriate decisions regarding the extent of dismantling and the approach to managing the activities, and accomplishes those site preparation activities necessary to transition from a plant shutdown configuration to site dismantling. For purposes of this estimate it is assumed that the intent is to dismantle the entire station as a single project. Costs incurred during this preliminary phase of the program are included in the dismantling costs presented in this study.

Xcel Energy prepares the stations for dismantling by performing the following activities:

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- Prepare specifications that identify and describe the objectives and major work activities to be accomplished (establishing the final site configuration)
- Assemble plant documentation that may be relevant to dismantling (drawings, hazardous material reports, environmental studies, etc.)
- Select an asbestos abatement contractor (if required) and Dismantling Contractor
- Assemble and mobilize the management and oversight team responsible for the project
- Documenting hazardous materials location and inventory

**2.3.2 Asbestos / Hazardous Material Abatement (as applicable)**

The asbestos abatement contractor prepares for this work by thoroughly understanding the scope of the asbestos remediation work and obtaining the permits necessary to initiate the work. Abatement of asbestos is considered an important prerequisite to dismantling the station's systems and structures. The method by which asbestos is abated is strictly controlled by federal and/or state regulations and includes the following requirements:

- Work will be done inside enclosures designed to capture any asbestos-containing particles. With the exception of removal of small quantities of asbestos in local areas, it would be expected that most work will be done in large enclosures (containment tents). The enclosures will have a filtered exhaust and be maintained under negative air pressure (air will leak into the enclosure rather than leak out).
- The air outside of the enclosures will be monitored to ensure barriers are effective.
- Workers, while working inside enclosures, will wear respiratory protective equipment as well as protective clothing.
- All materials removed from the enclosure will be packaged in accordance with regulations (minimum double-bag), and will be removed via a materials handling access area.
- Workers will enter and exit the enclosures through a personnel decontamination chamber in a controlled manner (ensuring asbestos contamination does not spread beyond the containment).

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- After the asbestos abatement is complete, the effectiveness of the process will be established via regulatory-specified processes (generally verifying that there is no asbestos containing material capable of becoming airborne).
- Asbestos containing materials will be disposed of at a properly licensed disposal facility.
- After ensuring that all asbestos has been removed, the enclosures will be taken down in accordance with regulatory requirements and disposed of at a licensed facility.
- Clean coal-fired boilers by washing down all surfaces interior to the boilers.
- Clean fly-ash handling equipment, e.g., filters and holding tanks.
- De-water ash settling ponds and/or basins.

### 2.3.3 Dismantling Preparations

The dismantling contractor prepares the station for dismantling by performing the following activities:

- Installing environmental barriers and monitoring equipment
- Reviewing plant drawings and specifications that may be useful for the dismantling project
- Identifying the processes to achieve the final desired station configuration
- Identifying the major work sequence
- Preparing dismantling activity specifications and work orders/forms
- Preparing detailed dismantling procedures
- Preparing a dismantling plan
- Preparing permit application(s) for plant demolition
- Mobilizing site staff
- Configuring temporary services/facilities to support dismantling operations
- Arranging for heavy lift and dismantling equipment, rigging, and tooling
- Hiring and training the labor force



## **2.4 DISMANTLING OPERATIONS**

Dismantling activities are initiated after completing the engineering and planning process, and after asbestos abatement and removal of hazardous materials is complete. The sequence of activities will be determined at the time of dismantling, but typically a sequence would include the following items. Dismantling sequences are presented for each of the Xcel Energy facility types. In all types the station is electrically disconnected from all power sources; the Dismantling Contractor will provide temporary power as needed to support the removal activities.

### **2.4.1 Steam Plants**

- Removing coal yard equipment (if required), including unloading structures, conveyors, transfer towers, and reclaim systems
- Removing above-ground storage tanks
- Removing large equipment from rooftops or at higher elevations
- Removing equipment that must be removed prior to start of boiler structure removal, including fly-ash handling, coal handling, burner fuel supply, scrubbers, air and flue gas ducts, etc.
- Removing electrostatic precipitator and bag houses by cutting casings and connecting gas ducts
- Removing the top of the boiler enclosure to allow access to the platens
- Removing the boiler waterwalls
- Removing steam drum and deaerator by severing all connections and lowering to grade
- Removing boiler structural steel
- Disassembling the turbine/generator and condenser
- Removing all other equipment and components required prior to structures demolition
- Removing the turbine building superstructure and interior floors
- Blasting/dismantling the concrete turbine-generator pedestal(s)
- Removing siding from buildings
- Dismantling steel framing
- Demolishing structural concrete

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- Removing the stack(s)
- Removing cooling tower(s) and / or cooling water intake and discharge structures
- Removing all other site structures within the scope of the dismantling program
- Sorting and organizing materials for pickup by the scrap dealer(s)
- Size reducing concrete rubble to remove reinforcing steel
- Removing any temporary services used to support the dismantling effort (lighting / ventilation / electrical / groundwater management)

**2.4.2 Combustion Turbines**

- Removing above-ground storage tanks
- Removing large equipment from rooftops or at higher elevations
- Disassembling the turbine and generator
- Removing all other equipment and components required prior to building demolition
- Blasting/dismantling the concrete turbine-generator foundation(s)
- Demolishing remaining concrete
- Removing cooling tower(s) and / or cooling water intake and discharge structures (High Bridge only)
- Removing all other site structures within the scope of the dismantling program
- Sorting and organizing materials for pickup by the scrap dealer(s)
- Size reducing concrete rubble to remove reinforcing steel

**2.4.3 Hydroelectric Plants**

- Installing cofferdams at inlet to power channel and discharge channel
- Removing large equipment from rooftops or at higher elevations
- Disassembling and removing the generators
- Disassembling and removing the water turbines
- Removing all other equipment and components required prior to structures demolition

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- Removing the powerhouse structure and interior floors
- Blasting/dismantling the concrete turbine-generator foundations
- Dismantling steel framing
- Demolishing brick walls and structural concrete
- Removing all other site structures within the scope of the dismantling program
- Sorting and organizing materials for pickup by the scrap dealer(s)
- Size reducing concrete rubble to remove reinforcing steel

**2.4.4 Wind Turbines (complete removal)**

- Removing turbine blades from turbine shaft
- Removing turbine-generator housings from towers
- Removing towers from foundations
- Removing all other equipment and components required prior to structures demolition
- Blasting/dismantling the concrete tower foundations
- Excavating and removing all buried electrical cables
- Removing all other site structures within the scope of the dismantling program
- Sorting and organizing materials for pickup by the scrap dealer(s)
- Size reducing concrete rubble to enhance its suitability for backfill

**2.4.5 Wind Turbines (removal to 48" below grade)**

- Removing turbine blades from turbine shaft
- Removing turbine-generator housings from towers
- Removing towers from foundations
- Removing all other equipment and components required prior to structures demolition
- Removing the concrete tower foundation pedestal to 48" below grade
- Buried electrical cables below 48" left in place
- Removing all other site structures within the scope of the dismantling program

- Sorting and organizing materials for pickup by the scrap dealer(s)
- Size reducing concrete rubble to enhance its suitability for backfill

## **2.5 SITE RESTORATION**

Site restoration activities are initiated following completion of the dismantling operations. The objective of site restoration in this estimate is to restore the station grounds to a configuration that does not pose a safety hazard; and plant vegetation for erosion control. As such, landscaping will be limited to grading, placement of top soil, and seeding. Site restoration as used in this estimate is not intended to re-configure the station for redevelopment, e.g. use as a recreational or industrial facility.

A typical site restoration sequence would be:

- Crush all concrete rubble and remove reinforcing steel. Concrete debris will be shipped off site for disposal as construction debris. Reinforcing steel will be recycled
- Backfill below grade voids with clean compactible fill as necessary.
- General grading of the station
- Placement of top soil or other suitable surface material necessary to maintain erosion control
- Landscaping to the extent necessary to re-vegetate the station (grass or similar plant materials), and
- Demobilizing personnel and equipment

### 3. COST ESTIMATE

The basis, methodology, and assumptions for the site-specific cost estimate are described in the following paragraphs.

#### 3.1 BASIS OF ESTIMATE

##### Inventory of Materials to be Removed

The inventory is an essential element of the estimate, since dismantling costs are determined by applying unit cost factors against the corresponding inventory quantities. For each of these estimates a site-specific inventory of materials to be removed was developed using a combination of methods. The inventory used in developing the estimate for each station is provided in Appendix A.

Comparable Boiler / Turbine Unit Information Available to TLG Where TLG had previously developed inventory information for a boiler and turbine of similar size, fuel type and vintage, referred to as “reference unit”, this information was used to represent the boiler / turbine systems inventory for the comparable Xcel Energy unit. In the same manner, non-steam power facilities were also used as reference units for other, similar Xcel Energy facilities. The inventory was adjusted to reflect the difference between the rating of the Xcel Energy reference unit and the rating of the comparable unit.

There are expected differences in other facilities, even if the power generating equipment are similar between comparable units. These include systems and structures associated with cooling water intake and discharge, fuel handling, exhaust gas, maintenance buildings and shops, pollution-control, and the quantity and extent of asbestos containing material (if applicable). For these systems and structures TLG developed the inventory by conducting a walk-down of the station, and extracting information from station-specific drawings and photos.

Comparable Plant Information Not Available to TLG Where the Xcel Energy unit(s) had no comparable match in the TLG database, the site specific inventory was developed “from scratch”, by completing a physical walk-down of each such unit, discussions with the stations’ Operations & Maintenance staff, and extracting data from station-specific maintenance databases (lists of equipment), drawings, and photos.

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Economic Cost Drivers (Reference in Section 6)

In developing an estimate, the cost of labor, equipment and material, credit for scrap, and similar costs will influence the results of the estimate. The basis for the significant cost drivers are:

1. Craft labor rates are based on existing contracts with craft labor contractors. These rates were provided by Xcel Energy (Ref. 1).
2. Utility labor rates are based on labor costs for positions likely to be employed during the dismantling project. The 2014 rates were escalated to 2019 values, per Xcel Energy approval, using U.S. Department of Labor's Bureau of Labor Statistics, Consumer Price Index Series ID:CUUR0000SAS (Ref. 2).
3. Material and equipment costs for conventional demolition and/or construction activities, Contractors Insurance, Small Tools Allowance, Permit / Fees, and Contractor's Fee are based on R.S. Means Construction Cost Data (Ref. 3).
4. Scrap metal prices are based on a five-year average of published indices (Ref. 4).
5. Contingency, contractor fee, contractor insurance, environmental sampling, and permits & fees are based upon R.S. Means Construction Cost Data.
6. Costs in this estimate are in 2019 dollars.
7. Property taxes (or payments in lieu of taxes) are not included within the estimate.
8. The estimate to dismantle the stations does not address credit associated with the residual value of the land.

Project Organization

For the purposes of this study, the dismantling project for each station is assumed to be managed by Xcel Energy's Project Director, who would have the primary responsibility for dismantling the station. A Dismantling Contractor, experienced in dismantling similar facilities, would be hired as the prime contractor for the removal of plant components and site facilities. The Dismantling Contractor's Project Manager would report to the Project Director. The Dismantling Contractor would manage and supervise the dismantling activities of the station and be responsible for completing the work in an expeditious and safe manner. Contractor personnel would manage and direct the labor force in accordance with approved procedures and in accordance with a health and safety program. The Xcel staff would maintain and/or provide the engineering, safety, and environmental compliance oversight, and the security

services necessary to support dismantling operations. Figures 3.1 and 3.2 identify typical organizations for the plant/utility staff and the associated contractor personnel during the dismantling phase of the project. The smaller facilities included within this estimate would have a commensurately smaller project organization e.g. Angus Anson, Blue Lake, and Grand Meadow.

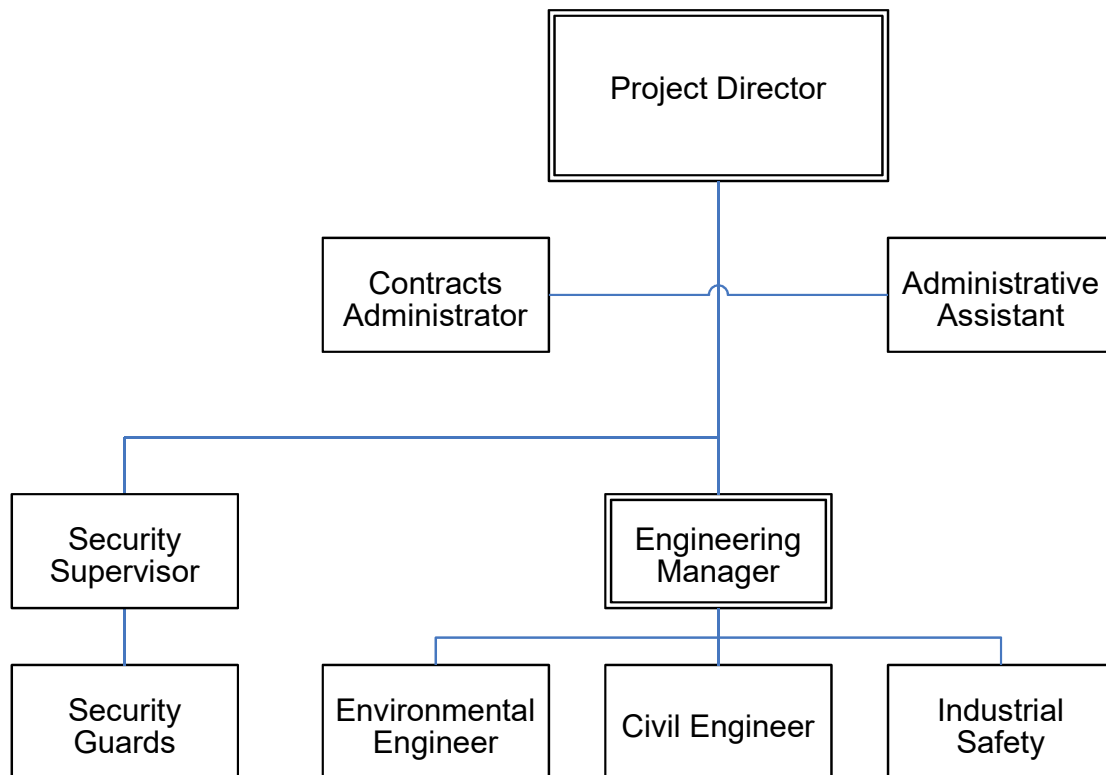
## **3.2 METHODOLOGY**

The methodology used to develop the cost estimate follows the basic approach presented in the AIF/NESP-036, "Guidelines for Producing Commercial Nuclear Power Plant Decommissioning Cost Estimates" (Ref. 5) and the US DOE "Decommissioning Handbook" (Ref. 6). These publications utilize a unit cost factor method for estimating decommissioning activity costs to simplify the estimating calculations. Unit cost factors for concrete removal (\$/cubic yard), steel removal (\$/ton), and cutting costs (\$/in) are developed from the labor cost information from R. S. Means. The activity-dependent costs are estimated using item quantities (cubic yards, tons, inches, etc.) developed from plant drawings and inventory documents. The unit factors used in this study reflect the latest available information on worker productivity in plant dismantling. A sample unit cost factor is provided in Appendix B. A list of unit cost factors is provided in Appendix C.

An activity duration critical path is developed to determine the total dismantling program schedule. This program schedule is then used to determine the period-dependent costs for program management, administration, field engineering, equipment rental, quality assurance, and security. TLG escalated 2014 Xcel Energy salary and hourly rates for personnel associated with period-dependent costs. The costs for conventional demolition of structures, materials, backfill, landscaping, and equipment rental are obtained from R.S. Means. Examples of such unit cost factor development are presented in AIF/NESP-036.

The unit cost factor method provides a demonstrable basis for establishing reliable cost estimates. The detail of activities for labor costs, equipment and consumables costs provide assurance that cost elements have not been omitted. Detailed unit cost factors, coupled with the site-specific inventory of piping, components and structures provide confidence in the cost estimates.

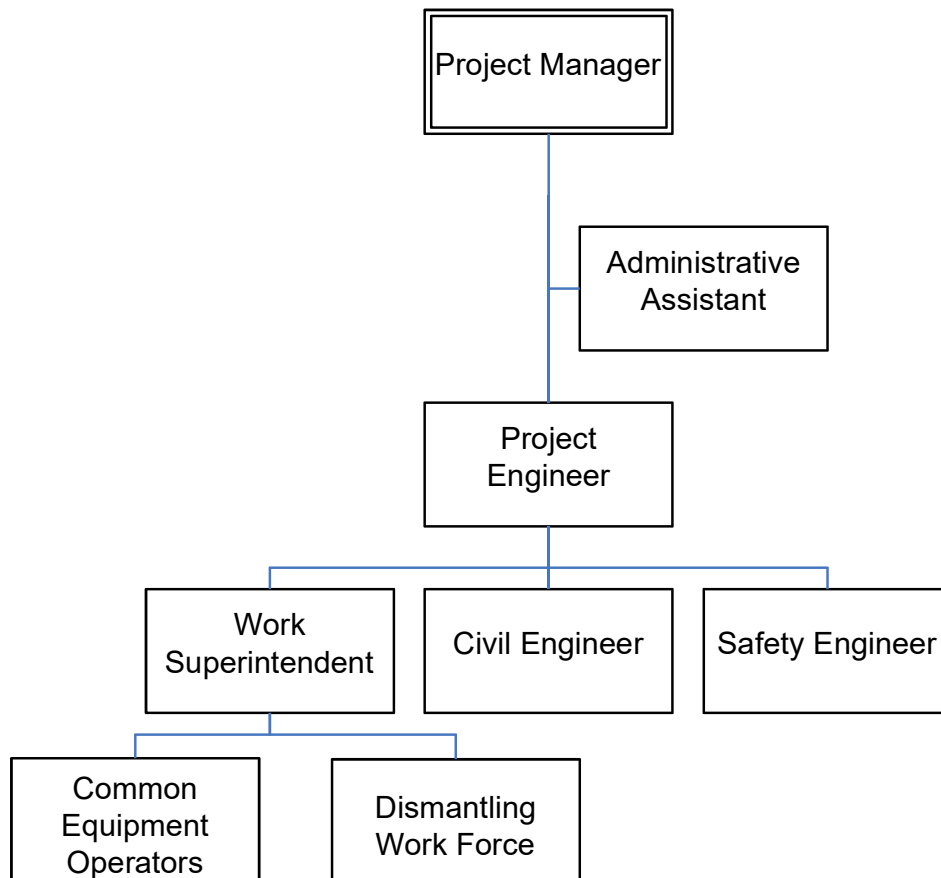
**FIGURE 3.1**  
**DISMANTLING PROJECT ORGANIZATION**  
**UTILITY STAFF**



For a large station such as Sherburne County, this represents a full-time equivalent staffing level of six personnel. This value is reduced for smaller stations.



**FIGURE 3.2**  
**DISMANTLING PROJECT ORGANIZATION**  
**DECOMMISSIONING CONTRACTOR STAFF**



For a large station such as Sherburne County, this represents a full-time equivalent staffing level of 11.5 personnel. This value is reduced for smaller stations.

The activity-dependent and period-dependent costs are combined with applicable collateral costs to yield the direct decommissioning cost. A contingency is then applied. "Contingencies" are defined in the American Association of Cost Engineers "Project and Cost Engineers' Handbook" (Ref. 7) as "specific provision for unforeseeable elements of cost within the defined project scope; particularly important where previous experience relating estimates and actual costs has shown that unforeseeable events which will increase costs are likely to occur." The cost elements in this estimate are based on ideal conditions; therefore, a contingency factor has been applied.

Examples of items that could occur but have not otherwise been accounted for in this estimate include: labor work stoppages, bad weather delays, equipment/tool breakage, changes in the anticipated plant shutdown conditions, etc. These types of unforeseeable events are discussed in the AIF/NESP-036 study. Guidelines are also provided for applying contingency.

### **3.3 ASSUMPTIONS**

The following assumptions were used in developing the dismantling estimate.

#### Pre-requisite Activities

1. Dismantling of the station will not commence until all units are retired (cost estimate is not based on independent dismantling of units while adjacent units are operating).
2. The arrangements of the unit facilities as they exist in 2019 based upon walk-downs conducted by TLG, and databases and drawings provided by owner.
3. The dismantling process will be an engineered process with substantial consideration for occupational (worker) safety.
4. The demolition will be performed by a Dismantling Contractor who is responsible to provide adequate staff and equipment to complete the dismantling in a safe manner.
5. Site security costs to restrict access to the demolition project by unauthorized personnel are included.
6. The estimates are based on industrial safety and environmental regulations effective in 2019.
7. All power to the structures will be disconnected prior to beginning removal activities ("Cold and Dark"). The Decommissioning Contractor will provide for temporary power as needed to support dismantling activities.

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8. End of life water inventory management in regulated ponds will be addressed in accordance with federal and state rules and closed in place after shutdown.
9. On-site fuel inventories will be used and/or removed prior to start of dismantling.
10. Silos, precipitators, hoppers, tanks, etc., will be emptied by operations and maintenance staff after shutdown.
11. Acids, caustics, and similar hazardous materials will be removed by operations and maintenance staff after shutdown.
12. Consumables, such as ion exchange materials and filters, will also be removed by operations and maintenance staff after shutdown.
13. Stores, spare parts, gas storage containers, laboratory equipment, office furniture, etc., will be removed by the owner after shutdown.
14. Oils used in station transformers may contain PCBs. Lubricating and transformer oils are drained and removed by operations and maintenance staff after shutdown. If any PCB contaminated oil is encountered, it will be removed and disposed of properly.
15. Asbestos (if present) will be removed prior to the start of dismantling. Asbestos insulation and PACM (presumed asbestos containing materials) will be disposed of at licensed facilities. Quantities of asbestos are based on owner-provided information where available. Where such information was not available, the quantities of asbestos were estimated.
16. Prior to initiating dismantling, essentially all live circuits will have been de-energized (to preclude creating an industrial hazard). If required, temporary services systems (air, water, electrical, fire water, etc.) will be used to support dismantling operations and will remain in service throughout the project until no longer required.

**Economic Assumptions**

17. Post-shutdown “dormancy” costs (i.e., security and maintenance on any of the units retired prematurely) are not included in the study.
18. Escalation/inflation of the costs over the remaining operating life is not included.
19. An allowance of 2% of craft labor costs is used for small tools.
20. A 12.5% fee is added to the Demolition Contractor’s cost to account for its overhead and profit.
21. A 25% contingency is applied to asbestos remediation activities.

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- 22. A 15% contingency is applied to all remaining dismantling-related costs.
- 23. A credit for scrap metal cost recovery is included in the estimates. Retired plant equipment is assumed to have no value as salvage (sold for re-use).

**Physical Work Assumptions**

- 24. The costs for disposition (if required) of contaminated soil (e.g., PCBs, hydrocarbons, lead, asbestos, mercury, acids or caustics) are outside the scope of this estimate.
- 25. Large equipment and components will be removed prior to structures demolition.
- 26. An environmental hazards crew will be maintained throughout the demolition period to address such items as lead paint and asbestos that was inaccessible during the asbestos remediation period (where applicable).
- 27. Turbine pedestals and powerhouse building foundations will be removed by demolition equipment and back-filled to grade.
- 28. Structures and foundations will be removed with any resulting voids back-filled to grade level. An additional scenario is provided for the wind farms where the equipment and structures are removed only to a depth of 48 inches.
- 29. Chimney stacks will be blasted to the ground and broken into rubble, the steel liners cut and removed, and the foundations removed.
- 30. The dismantling of the electrical equipment terminates at the switch yard boundary. The switch yard is left intact.
- 31. Concrete rubble generated during dismantling will be crushed, reinforcing steel removed, and the concrete disposed of offsite as construction debris.
- 32. The site will be graded; however, no effort was included in this estimate to restore the original contour of the land. Ground cover will be established for erosion control.
- 33. Roads, parking lots, etc., are removed after the facility is dismantled (with the exception of the immediate area around the switchyard).

**Scheduling Assumptions**

- 34. All work is performed during an eight-hour workday, five days per week, with no overtime.
- 35. Multiple crews work parallel activities to the maximum extent possible, consistent with efficiency (adequate access for cutting, removal, and

laydown space) and with industrial safety appropriate for demolition of heavy components and structures.

36. Scheduling was calculated without constraints on availability of labor, equipment, or materials.

### **3.4 STATION-SPECIFIC NOTES**

#### **3.4.1 Allen S. King**

- All currently operational coal handling equipment and the abandoned-in-place coal barge unloader facility with the twenty-two dolphin-type barge piers are included in the estimate.
- A cofferdam will be installed to allow removal of the condenser cooling water discharge structure and the discharge structure from the cooling tower.
- The boiler and precipitator will be cleaned prior to dismantling.
- Lead paint on concrete surfaces will be removed prior to demolition of the concrete structures.
- Rockbestos-insulated electrical cabling and other ACM in cable trays will be removed (all cable trays & cabling disposed of as ACM).
- The soil beneath the area of the coal pile will be removed to a depth of five feet; the soil will be disposed of offsite as solid waste.
- The ash pond will be backfilled with clean fill prior to placement of the closure cap.

#### **3.4.2 Angus Anson**

- The Pathfinder Unit 1 building has been included in this estimate.
- There is a reduced decommissioning management and contractor staff due to the smaller size of this facility.
- Lead paint on concrete surfaces will be removed prior to demolition of the concrete structures.
- Concrete will only be removed to three feet below grade.
- Two large oil storage tanks are included in the estimate. One tank is currently in service. The other tank has been cleaned and remains on stand-by.

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**3.4.3 Black Dog**

- The abandoned-in-place Unit 2 boiler is included in the estimate.
- All chimneys from the coal burning operation have been removed.
- All operational coal handling equipment external to the building e.g. conveyors, rail car unloader, transfer towers, stacker conveyor etc. have been removed. Coal conveyors inside the plant have been abandoned in place but not yet removed.
- A cofferdam will be installed to remove the intake condenser cooling water structure.

**3.4.4 Blue Lake**

- There is a reduced decommissioning management and contractor staff due to the smaller size of this facility.
- Two large oil storage tanks are included in the estimate. One tank is currently in service. The other tank has been cleaned and remains on stand-by.

**3.4.5 Granite City**

- There is a reduced decommissioning management and contractor staff due to the smaller size of this facility.
- Two large oil storage tanks are included in the estimate. The tanks have been cleaned.

**3.4.6 Hennepin Island**

- There is a reduced decommissioning management and contractor staff due to the smaller size of this facility.
- The estimate does not include dam or earthworks removal, or ongoing maintenance.
- Inlet channel to turbines will be backfilled.
- Lead paint on concrete surfaces will be removed prior to demolition of the concrete structures.

**3.4.7 High Bridge**

- There is a reduced decommissioning management and contractor staff due to the smaller size of this facility.

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- A cofferdam will be installed to remove the river intake and discharge structure.

**3.4.8 Inver Hills**

- Gas supply lines will be cut and capped at the source.
- There is a reduced decommissioning management and contractor staff due to the smaller size of this facility.

**3.4.9 Key City**

- There is a reduced decommissioning management and contractor staff due to the smaller size of this facility.
- Two large oil storage tanks are included in the estimate. The tanks have been cleaned.

**3.4.10 Maplewood Gas Plant**

- Facility includes multiple liquefied natural gas storage tanks.
- There is a reduced decommissioning management and contractor staff due to the smaller size of this facility.

**3.4.11 Minnesota Valley**

- All three of the abandoned in-place units are included in the estimate.
- The asbestos quantities were calculated considering Unit 3 to be all asbestos and Units 1 and 2 to only have small amounts on the partially dismantled boilers.
- A cofferdam will be installed to remove the river intake and discharge structure.
- There is a reduced decommissioning management and contractor staff due to the smaller size of this facility.
- The boiler and precipitator will be cleaned prior to dismantling.
- Lead paint on concrete surfaces will be removed prior to demolition of the concrete structures.
- Rockbestos-insulated electrical cabling and other ACM in cable trays will be removed (all cable trays & cabling disposed of as ACM).
- All coal yard facilities have been removed and the ash ponds have been closed.

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**3.4.12 Red Wing**

- The RDF unloading facility and the conveyor transport system are included in the estimate.
- A cofferdam will be installed to remove the cooling water intake and discharge structure.
- The barge unloading facility is not included in the estimate.
- The boiler and precipitator will be cleaned prior to dismantling.
- Lead paint on concrete surfaces will be removed prior to demolition of the concrete structures.
- Rockbestos-insulated electrical cabling and other ACM in cable trays will be removed (all cable trays & cabling disposed of as ACM).
- The ash landfills will be closed in place by capping with a synthetic liner, placing cover over the cap, and seeding.

**3.4.13 Riverside**

- Included in this estimate are the following abandoned-in-place facilities and equipment:
  - Unit 6, 7 and 8 building structure
  - Unit 6 and 7 boilers
  - Unit 8 boiler, turbine and associated equipment
- Cofferdams will be installed to remove the four cooling water intake and discharge structures.
- Includes barge unloading dock and concrete piles.
- Rockbestos-insulated electrical cabling and other ACM in cable trays will be removed (all cable trays & cabling disposed of as ACM).

**3.4.14 Sherburne County**

- All coal handling facilities e.g. coal barn, rail car dumper building, coal yard control and maintenance facility, earthen storage berms, conveyor systems, transfer towers etc. are included in this estimate.
- All warehouse/storage type buildings on the site are included in the estimate.
- A cofferdam will be installed to remove the cooling water intake and discharge structure.



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- The boiler and precipitator/baghouse will be cleaned prior to dismantling.
- Rockbestos-insulated electrical cabling and other ACM in cable trays will be removed (all cable trays & cabling disposed of as ACM) – Units 1 and 2 only.
- The soil beneath the area of the coal pile will be removed to a depth of five feet; the soil will be disposed of on site in the ash pond.
- The ash pond will be backfilled with coal yard soil prior to placement of the closure cap.
- The Unit 3 dry ash landfill will be closed and capped in accordance with Minnesota's solid waste permit requirements and applicable federal coal combustion residual rules.
- Some of the planning for Sherburne County includes a unit shutdown with the other units remaining in operation for a number of years. In this event, the costs in Table 5.1n, for the shutdown unit only, should be increased by some fraction to allow for constraints on demolition activities on the shutdown with the other units operational. Based upon discussions with Xcel Energy personnel, an increase of 20% can be used for planning purposes.
- The ash landfills will be closed in place by capping with a synthetic liner, placing cover over the cap, and seeding.
- Two large settling tanks are included in the estimate.

**3.4.15 Sibley Gas Plant**

- Facility includes multiple liquefied natural gas storage tanks.
- There is a reduced decommissioning management and contractor staff due to the smaller size of this facility.

**3.4.16 Wescott Gas Plant**

- Facility includes two large insulated liquefied natural gas storage tanks.
- There is a reduced decommissioning management and contractor staff due to the smaller size of this facility.

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**3.4.17 Wilmarth**

- The RDF bulk storage facility is not included in the estimate. Only the transport section of the facility with conveyor systems and transfer towers is included.
- There is a reduced decommissioning management and contractor staff due to the smaller size of this facility.
- The boiler and precipitator will be cleaned prior to dismantling.
- Lead paint on concrete surfaces will be removed prior to demolition of the concrete structures.
- Rockbestos-insulated electrical cabling and other ACM in cable trays will be removed (all cable trays & cabling disposed of as ACM).
- The ash landfills will be closed in place by capping with a synthetic liner, placing cover over the cap, and seeding.

**3.4.18 Wind Farms – Blazing Star I, Border Winds, Courtenay, Foxtail, Grand Meadow, Lake Benton II, Nobles, Pleasant Valley**

- All underground power and control cables will be excavated and removed.
- Tower foundations are completely removed.
- All access roads surfaces will be excavated and removed. The excavated areas will be back-filled with soil.
- There is a reduced decommissioning management and contractor staff due to the smaller size of this facility.

**3.4.19 Wind Farms (Removal to 48-inch depth) – Blazing Star I, Border Winds, Courtenay, Foxtail, Grand Meadow, Lake Benton II, Nobles, Pleasant Valley**

- All underground power and control cables will be excavated and removed to a depth of 48 inches below grade.
- Tower foundations pedestals will be removed to 48 inches below grade.
- All access roads surfaces will be excavated and removed. The excavated areas will be back-filled with soil.
- There is a reduced decommissioning management and contractor staff due to the smaller size of this facility.

#### **4. SCRAP METAL CREDITS**

The dismantling of a typical fossil plant occurs after a lengthy plant operating life. The existing plant equipment is considered obsolete and suitable for scrap as deadweight quantities only. Xcel Energy will make economically reasonable efforts to salvage equipment following final plant shutdown. However, dismantling techniques assumed by TLG for equipment in this analysis are not consistent with removal techniques required for salvage (resale) of equipment. Experience has indicated that buyers prefer equipment stripped down to very specific requirements before they would consider purchase. This can require expensive work to remove the equipment from its installed location, which is inconsistent with the rapid dismantling approach assumed in this estimate. Since placing a salvage value on this machinery and equipment would be speculative, and the value would be small in comparison to the overall cost of dismantling, this analysis does not attempt to quantify the value that an owner may realize based upon those efforts.

Furniture, tools, mobile equipment such as forklifts, trucks, bulldozers, and other property is removed at no cost or credit to the decommissioning project. Disposition may include relocation to other facilities. Spare parts are made available for alternative use.

The materials used in the equipment and buildings are suitable for recycle as scrap metals. As such, an estimated value of the scrap metal credit has been developed and applied to each station's cost estimate. The value of scrap was estimated using a five-year average of market values extracted from published sources and applying this value to the estimated quantities of materials generated from the dismantling project. There were four basic types of metals used in the scrap estimates; carbon steel (the most common material used at the station), copper, stainless steel (high alloy steel) and aluminum. The scrap credit, in addition to considering the quantity and types of materials, also considered the cost of handling and transporting these materials to a major scrap processing location in the Twin Cities area where scrap is used or sold. The value of the scrap is reduced by the transportation costs.

The basis for scrap metal value is summarized in Table 4.1. A summary of the basis for the scrap credit is provided in Tables 4.2 which details the scrap quantities by material type from each unit, and Table 4.3 lists the dollar value of these quantities.

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**TABLE 4.1a**  
**BASIS FOR SCRAP METAL VALUE**  
 (2019 dollars)

**Fossil Stations**

| <b>Type of Material</b> | <b>Scrap Category <sup>1</sup></b> | <b>Market Value <sup>2</sup></b> | <b>Units</b> | <b>Transport Cost <sup>3</sup></b> | <b>Scrap Metal Credit <sup>4</sup><br/>(per ton)</b> |
|-------------------------|------------------------------------|----------------------------------|--------------|------------------------------------|--|
| Carbon Steel            | Cast Iron                          | 202.40                           | Per Ton      | 46.85                              | 155.56   |
|                         | No. 1                              | 253.01                           | Per Ton      | 46.85                              | 206.16   |
|                         | Mixed Scrap                        | 202.40                           | Per Ton      | 46.85                              | 155.56   |
|                         | Galvanized                         | 55.66                            | Per Ton      | 46.85                              | 8.81   |
| Stainless Steel         | SS-1                               | 0.77                             | Per Pound    | 0.02                               | 1,490.20   |
| Copper                  | Insulated Cable                    | 1.32                             | Per Pound    | 0.02                               | 2,586.11   |
|                         | No. 2 Copper                       | 2.11                             | Per Pound    | 0.02                               | 4,168.50   |
|                         | Copper-Nickel                      | 3.20                             | Per Pound    | 0.02                               | 6,355.94   |
|                         | Large Motor                        | 0.32                             | Per Pound    | 0.02                               | 585.41   |
| Non-Ferrous             | Aluminum                           | 0.29                             | Per Pound    | 0.02                               | 532.27   |

Note 1: Scrap categories are consistent with information provided in Recycler's World.

Note 2: The market value for scrap metal used in this estimate is based on Recycler's World U.S. Scrap Metal Index Spot Market Prices. Values shown represent the average over a 5-year period from January 1, 2015 to December 31, 2019 (See Section 6, reference 4).

Note 3: The estimated cost for handling and transporting the materials to a major scrap processing center in the Twin Cities area is \$46.85 / ton or \$0.023 / pound.

Note 4: The scrap metal credit reflects the market value of scrap adjusted for handling and transport cost to local scrap metal recycler.

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**TABLE 4.1b**  
**BASIS FOR SCRAP METAL VALUE**  
 (2019 dollars)

**Wind Farms**

| <b>Type of Material</b> | <b>Scrap Category <sup>1</sup></b> | <b>Market Value <sup>2</sup></b> | <b>Units</b> | <b>Scrap Metal Credit <sup>3</sup><br/>(per ton)</b> |
|-------------------------|------------------------------------|----------------------------------|--------------|--|
| Carbon Steel            | Cast Iron                          | 202.40                           | Per Ton      | 202.40   |
|                         | No. 1                              | 253.01                           | Per Ton      | 253.01   |
|                         | Mixed Scrap                        | 202.40                           | Per Ton      | 202.40   |
|                         | Galvanized                         | 55.66                            | Per Ton      | 55.66  |
| Stainless Steel         | SS-1                               | 0.77                             | Per Pound    | 1,537.05   |
| Copper                  | Insulated Cable                    | 1.32                             | Per Pound    | 2,632.95   |
|                         | No. 2 Copper                       | 2.11                             | Per Pound    | 4,215.35   |
|                         | Copper-Nickel                      | 3.20                             | Per Pound    | 6,402.79   |
|                         | Large Motor                        | 0.32                             | Per Pound    | 632.26   |
| Non-Ferrous             | Aluminum                           | 0.29                             | Per Pound    | 579.12   |

Note 1: Scrap categories are consistent with information provided in Recycler's World.

Note 2: The market value for scrap metal used in this estimate is based on Recycler's World U.S. Scrap Metal Index Spot Market Prices. Values shown represent the average over a 5-year period from January 1, 2015 to December 31, 2019 (See Section 6, Reference 4).

Note 3: The scrap metal credit reflects the market value of scrap cost to local scrap metal recycler. Scrap from the wind farms does not include transportation costs; the transport of the scrap from wind farms is separately accounted for in the cost tables *within "Item 1b. Haul Off of Materials (Trucking / Rail)."*

**TABLE 4.2a**  
**QUANTITY OF SCRAP METALS BY STATION**  
**(pounds)**

**Fossil Stations**

| Station Name     | Carbon Steel      |                    |                    | Stainless Steel  | Galvanized       | Copper           |                  |                   | Copper           | Aluminum         | Total              |
|------------------|-------------------|--------------------|--------------------|------------------|------------------|------------------|------------------|-------------------|------------------|------------------|--------------------|
|                  | Cast Iron         | No. 1              | Mixed Scrap        | SS-1             | Steel            | Insul Cbl        | No. 2 Cu         | Large Mtr         | Nickel           |                  |                    |
| Allen S . King   | 2,976,846         | 41,253,822         | 53,751,220         | 231,075          | 1,010,675        | 157,197          | 590,394          | 1,816,821         | 515,763          | -                | 102,303,814        |
| Angus Anson      | 944,532           | 7,869,287          | 10,367,485         | 366,129          | 262,382          | 62,845           | 555,614          | 235,889           | 90,000           | -                | 20,754,163         |
| Black Dog        | 1,643,294         | 27,421,437         | 35,094,140         | 770,520          | 691,748          | 203,840          | 500,072          | 1,777,520         | 221,615          | -                | 68,324,186         |
| Blue Lake        | 562,895           | 7,151,454          | 16,794,779         | 471,749          | 151,311          | 66,137           | 534,704          | 167,052           | -                | -                | 25,900,081         |
| Granite City     | 415,622           | 1,347,785          | 3,827,752          | 14,999           | 123,454          | 19,672           | 117,956          | 37,557            | -                | -                | 5,904,796          |
| Hennepin Island  | -                 | 696,327            | 1,821,010          | 1,204            | 32,320           | 17,700           | 44,413           | -                 | -                | -                | 2,612,973          |
| High Bridge      | 844,602           | 11,853,600         | 18,671,353         | 312,326          | 572,357          | 113,539          | 661,690          | 1,016,734         | -                | -                | 34,046,202         |
| Inver Hills      | 203,824           | 4,050,420          | 12,115,948         | 911,580          | 66,005           | -                | 537,241          | 6,408             | -                | -                | 17,891,426         |
| Key City         | 415,622           | 1,000,333          | 3,795,209          | 14,999           | 123,454          | 19,672           | 107,108          | 37,557            | -                | -                | 5,513,953          |
| Maplewood        | 55,689            | 2,277,558          | 514,983            | 109,319          | 31,504           | 6,904            | 16,564           | 374               | -                | -                | 3,012,895          |
| Minnesota Valley | 638,559           | 12,944,074         | 20,225,105         | 554,769          | 397,131          | 68,843           | 241,236          | 1,395,489         | 294,202          | -                | 36,759,408         |
| Red Wing         | 269,371           | 5,792,041          | 7,537,990          | 459,747          | 242,290          | 29,016           | 21,797           | 235,896           | 34,301           | -                | 14,622,450         |
| Riverside        | 717,166           | 26,334,947         | 48,412,618         | 275,384          | 437,669          | 61,010           | 596,359          | 1,432,370         | -                | -                | 78,267,523         |
| Sherburne County | 4,008,245         | 133,744,558        | 185,765,812        | 2,132,542        | 3,718,089        | 836,673          | 893,799          | 5,411,303         | -                | 103              | 336,511,124        |
| Sibley           | 53,710            | 1,828,422          | 373,174            | 103,107          | 43,503           | 6,703            | 13,829           | 7,250             | -                | -                | 2,429,699          |
| Wescott          | 47,236            | 7,963,162          | 1,606,330          | 189,165          | 68,387           | 33,887           | 16,236           | 2,591             | -                | 1,398,204        | 11,325,198         |
| Wilmarth         | 303,646           | 5,170,263          | 7,265,649          | 153,131          | 168,520          | 29,016           | 21,797           | 235,896           | 80,000           | -                | 13,427,919         |
| <b>Total</b>     | <b>14,100,859</b> | <b>298,699,489</b> | <b>427,940,558</b> | <b>7,071,745</b> | <b>8,140,800</b> | <b>1,732,655</b> | <b>5,470,810</b> | <b>13,816,706</b> | <b>1,235,881</b> | <b>1,398,307</b> | <b>779,607,809</b> |

**TABLE 4.2b  
QUANTITY OF SCRAP METALS BY STATION  
(pounds)**

**Wind Farms (Complete Removal)**

| Station Name                    | Carbon Steel      |                    | Copper           |                   | Aluminum          | Total              |
|---------------------------------|-------------------|--------------------|------------------|-------------------|-------------------|--------------------|
|                                 | No. 1             | Mixed Scrap        | No. 2 Cu         | Large Mtr         |                   |                    |
| Blazing Star I                  | 5,913,057         | 43,858,999         | 534,453          | 6,015,842         | 2,085,396         | 58,407,747         |
| Border Winds Project            | 4,404,257         | 23,658,643         | 400,839          | 3,819,509         | 1,564,047         | 33,847,295         |
| Courtenay                       | 5,906,025         | 35,509,601         | 534,453          | 5,092,678         | 2,085,396         | 49,128,153         |
| Foxtail                         | 5,655,813         | 32,880,310         | 400,839          | 4,514,897         | 1,564,047         | 45,015,907         |
| Grand Meadow                    | 3,862,624         | 33,764,540         | 358,083          | 5,302,782         | 1,397,215         | 44,685,245         |
| Lake Benton II                  | 3,244,453         | 22,905,242         | 261,714          | 3,326,828         | 1,026,369         | 30,764,606         |
| Nobles                          | 10,771,870        | 51,911,086         | 716,166          | 10,639,600        | 2,794,431         | 76,833,154         |
| Pleasant Valley                 | 6,238,545         | 37,955,390         | 534,453          | 5,092,678         | 2,085,396         | 51,906,462         |
| <b>Total (Complete Removal)</b> | <b>45,996,644</b> | <b>282,443,812</b> | <b>3,741,000</b> | <b>43,804,815</b> | <b>14,602,298</b> | <b>390,588,569</b> |

**TABLE 4.2c**  
**QUANTITY OF SCRAP METALS BY STATION**  
(pounds)

**Wind Farms (Down to 48 inches below grade)**

| Station Name                        | Carbon Steel     |                    | Copper        |                   | Aluminum | Total              |
|-------------------------------------|------------------|--------------------|---------------|-------------------|----------|--------------------|
|                                     | No. 1            | Mixed Scrap        | No. 2 Cu      | Large Mtr         |          |                    |
| Blazing Star I (48 in.)             | 669,104          | 43,858,999         | 11,641        | 6,015,842         | -        | 50,555,586         |
| Border Winds Project (48 in.)       | 485,434          | 23,658,643         | 8,731         | 3,819,509         | -        | 27,972,316         |
| Courtenay (48 in.)                  | 662,072          | 35,509,601         | 11,641        | 5,092,678         | -        | 41,275,992         |
| Foxtail (48 in.)                    | 610,801          | 32,880,310         | 8,731         | 4,514,897         | -        | 38,014,739         |
| Grand Meadow (48 in.)               | 561,512          | 33,764,540         | 7,799         | 5,302,782         | -        | 39,636,634         |
| Lake Benton II (48 in.)             | 385,519          | 22,905,242         | 5,122         | 3,326,828         | -        | 26,622,712         |
| Nobles (48 in.)                     | 1,306,946        | 51,911,086         | 15,599        | 10,639,600        | -        | 63,873,231         |
| Pleasant Valley (48 in.)            | 658,709          | 37,955,390         | 11,641        | 5,092,678         | -        | 43,718,418         |
| <b>Total (Down 48 inch Removal)</b> | <b>5,340,099</b> | <b>282,443,812</b> | <b>80,903</b> | <b>43,804,815</b> | <b>-</b> | <b>331,669,629</b> |



**TABLE 4.3a  
SCRAP METAL CREDITS BY STATION**  
(thousands of 2019 dollars)

**Fossil Stations**

| Station Name     | Carbon Steel    |                  |                  | Stainless Steel | Galvanized Steel | Copper          |                  |                 | Copper          |               | Total            |
|------------------|-----------------|------------------|------------------|-----------------|------------------|-----------------|------------------|-----------------|-----------------|---------------|------------------|
|                  | Cast Iron       | No. 1            | Mixed Scrap      | SS-1            | Steel            | Insul Cbl       | No. 2 Cu         | Large Mtr       | Nickel          | Aluminum      |                  |
| Allen S. King    | \$ 232          | \$ 4,252         | \$ 4,181         | \$ 172          | \$ 4             | \$ 203          | \$ 1,231         | \$ 532          | \$ 1,639        | \$ -          | \$ 12,446        |
| Angus Anson      | \$ 73           | \$ 811           | \$ 806           | \$ 273          | \$ 1             | \$ 81           | \$ 1,158         | \$ 69           | \$ 286          | \$ -          | \$ 3,559         |
| Black Dog        | \$ 128          | \$ 2,827         | \$ 2,730         | \$ 574          | \$ 3             | \$ 264          | \$ 1,042         | \$ 520          | \$ 704          | \$ -          | \$ 8,792         |
| Blue Lake        | \$ 44           | \$ 737           | \$ 1,306         | \$ 352          | \$ 1             | \$ 86           | \$ 1,114         | \$ 49           | \$ -            | \$ -          | \$ 3,688         |
| Granite City     | \$ 32           | \$ 139           | \$ 298           | \$ 11           | \$ 1             | \$ 25           | \$ 246           | \$ 11           | \$ -            | \$ -          | \$ 763           |
| Hennepin Island  | \$ -            | \$ 72            | \$ 142           | \$ 1            | \$ 0             | \$ 23           | \$ 93            | \$ -            | \$ -            | \$ -          | \$ 330           |
| High Bridge      | \$ 66           | \$ 1,222         | \$ 1,452         | \$ 233          | \$ 3             | \$ 147          | \$ 1,379         | \$ 298          | \$ -            | \$ -          | \$ 4,799         |
| Inver Hills      | \$ 16           | \$ 418           | \$ 942           | \$ 679          | \$ 0             | \$ -            | \$ 1,120         | \$ 2            | \$ -            | \$ -          | \$ 3,177         |
| Key City         | \$ 32           | \$ 103           | \$ 295           | \$ 11           | \$ 1             | \$ 25           | \$ 223           | \$ 11           | \$ -            | \$ -          | \$ 702           |
| Maplewood        | \$ 4            | \$ 235           | \$ 40            | \$ 81           | \$ 0             | \$ 9            | \$ 35            | \$ 0            | \$ -            | \$ -          | \$ 404           |
| Minnesota Valley | \$ 50           | \$ 1,334         | \$ 1,573         | \$ 413          | \$ 2             | \$ 89           | \$ 503           | \$ 408          | \$ 935          | \$ -          | \$ 5,307         |
| Red Wing         | \$ 21           | \$ 597           | \$ 586           | \$ 343          | \$ 1             | \$ 38           | \$ 45            | \$ 69           | \$ 109          | \$ -          | \$ 1,809         |
| Riverside        | \$ 56           | \$ 2,715         | \$ 3,766         | \$ 205          | \$ 2             | \$ 79           | \$ 1,243         | \$ 419          | \$ -            | \$ -          | \$ 8,484         |
| Sherburne County | \$ 312          | \$ 13,786        | \$ 14,449        | \$ 1,589        | \$ 16            | \$ 1,082        | \$ 1,863         | \$ 1,584        | \$ -            | \$ 0          | \$ 34,681        |
| Sibley           | \$ 4            | \$ 188           | \$ 29            | \$ 77           | \$ 0             | \$ 9            | \$ 29            | \$ 2            | \$ -            | \$ -          | \$ 338           |
| Wescott          | \$ 4            | \$ 821           | \$ 125           | \$ 141          | \$ 0             | \$ 44           | \$ 34            | \$ 1            | \$ -            | \$ 372        | \$ 1,541         |
| Wilmarth         | \$ 24           | \$ 533           | \$ 565           | \$ 114          | \$ 1             | \$ 38           | \$ 45            | \$ 69           | \$ 254          | \$ -          | \$ 1,643         |
| <b>Total</b>     | <b>\$ 1,097</b> | <b>\$ 30,790</b> | <b>\$ 33,285</b> | <b>\$ 5,269</b> | <b>\$ 36</b>     | <b>\$ 2,240</b> | <b>\$ 11,403</b> | <b>\$ 4,044</b> | <b>\$ 3,928</b> | <b>\$ 372</b> | <b>\$ 92,464</b> |

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**TABLE 4.3b**  
**SCRAP METAL CREDITS BY STATION**  
(thousands of 2019 dollars)

**Wind Farms (Complete Removal)**

| Station Name                    | Carbon Steel    |                  | Copper          |                  |                 |           | Total         |
|---------------------------------|-----------------|------------------|-----------------|------------------|-----------------|-----------|---------------|
|                                 | No. 1           | Mixed Scrap      | No. 2 Cu        | Large Mtr        | Aluminum        |           |               |
| Blazing Star I                  | \$ 748          | \$ 4,439         | \$ 1,126        | \$ 1,902         | \$ 604          | \$        | 8,819         |
| Border Winds Project            | \$ 557          | \$ 2,394         | \$ 845          | \$ 1,207         | \$ 453          | \$        | 5,457         |
| Courtenay                       | \$ 747          | \$ 3,594         | \$ 1,126        | \$ 1,610         | \$ 604          | \$        | 7,681         |
| Foxtail                         | \$ 715          | \$ 3,327         | \$ 845          | \$ 1,427         | \$ 453          | \$        | 6,768         |
| Grand Meadow                    | \$ 489          | \$ 3,417         | \$ 755          | \$ 1,676         | \$ 405          | \$        | 6,741         |
| Lake Benton II                  | \$ 410          | \$ 2,318         | \$ 552          | \$ 1,052         | \$ 297          | \$        | 4,629         |
| Nobles                          | \$ 1,363        | \$ 5,253         | \$ 1,509        | \$ 3,363         | \$ 809          | \$        | 12,298        |
| Pleasant Valley                 | \$ 789          | \$ 3,841         | \$ 1,126        | \$ 1,610         | \$ 604          | \$        | 7,971         |
| <b>Total (Complete Removal)</b> | <b>\$ 5,819</b> | <b>\$ 28,583</b> | <b>\$ 7,885</b> | <b>\$ 13,848</b> | <b>\$ 4,228</b> | <b>\$</b> | <b>60,363</b> |

**TABLE 4.3c**  
**SCRAP METAL CREDITS BY STATION**  
(thousands of 2019 dollars)

**Wind Farms (Down to 48 inches below grade)**

| Station Name                        | Carbon Steel  |                  | Copper        |                  |             |             |  |  | Total         |
|-------------------------------------|---------------|------------------|---------------|------------------|-------------|-------------|--|--|---------------|
|                                     | No. 1         | Mixed Scrap      | No. 2 Cu      | Large Mtr        | Aluminum    |             |  |  |               |
| Blazing Star I (48 in.)             | \$ 85         | \$ 4,439         | \$ 25         | \$ 1,902         | \$ -        | \$ -        |  |  | 6,449         |
| Border Winds Project (48 in.)       | \$ 61         | \$ 2,394         | \$ 18         | \$ 1,207         | \$ -        | \$ -        |  |  | 3,682         |
| Courtenay (48 in.)                  | \$ 84         | \$ 3,594         | \$ 25         | \$ 1,610         | \$ -        | \$ -        |  |  | 5,312         |
| Foxtail (48 in.)                    | \$ 77         | \$ 3,327         | \$ 18         | \$ 1,427         | \$ -        | \$ -        |  |  | 4,850         |
| Grand Meadow (48 in.)               | \$ 71         | \$ 3,417         | \$ 16         | \$ 1,676         | \$ -        | \$ -        |  |  | 5,181         |
| Lake Benton II (48 in.)             | \$ 49         | \$ 2,318         | \$ 11         | \$ 1,052         | \$ -        | \$ -        |  |  | 3,429         |
| Nobles (48 in.)                     | \$ 165        | \$ 5,253         | \$ 33         | \$ 3,363         | \$ -        | \$ -        |  |  | 8,815         |
| Pleasant Valley (48 in.)            | \$ 83         | \$ 3,841         | \$ 25         | \$ 1,610         | \$ -        | \$ -        |  |  | 5,559         |
| <b>Total (Down 48 inch Removal)</b> | <b>\$ 676</b> | <b>\$ 28,583</b> | <b>\$ 171</b> | <b>\$ 13,848</b> | <b>\$ -</b> | <b>\$ -</b> |  |  | <b>43,277</b> |

## **5. RESULTS**

An estimate for dismantling each of the Xcel Energy fossil-fuel and wind farm generating stations in Minnesota and South Dakota was developed by applying the system and structures inventories against the associated unit cost factors and accounting for program support costs. A summary of each station's major cost categories is presented in Table 5.1 for the fossil stations, and in Table 5.2 for the wind farms.

### **5.1 FOSSIL STATIONS**

Breakdowns of the major cost categories by unit and common facilities are provided in Tables 5.1a through 5.1q. Note that columns may not total due to rounding.

The following is an explanation of the contents of each line item in these tables:

*Station Unit Rating (MWe)* – This is the nominal electrical rating of each unit at the station. In Table 5.1 this represents the sum of all units on site.

*Characterization / Temporary Services* – The cost associated with performing a hazardous materials survey of the site prior to beginning field activities. Includes costs associated with de-energizing systems and isolation of the electrical systems in the buildings scheduled for dismantling. Costs for installing temporary services to support the dismantling are also included.

*Worker Access* – The cost associated with providing safe access to areas of the station being dismantled.

*Pre-Demolition Cleaning (Boiler / Precipitator / Tanks)* – The cost associated with cleaning coal-fired boilers and precipitators / baghouses, and associated flue-gas emission control systems. This line item also includes costs to clean acid and caustic storage tanks.

*Asbestos / Lead Paint Remediation* – The cost associated with remediating asbestos from the station prior to initiating dismantling activities. It should be noted that dismantling can proceed much more efficiently if asbestos containing materials have been removed. This line item also includes lead paint abatement from concrete surfaces in the buildings.

*Equipment Removal* – The cost associated with removing all station equipment (piping, valves, heat exchangers, tanks, electrical equipment, etc.).

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*Boiler(s)* – The cost associated with removing the boiler.

*Structures Demolition* – The cost associated with demolishing the buildings and concrete foundations.

*Backfill / Grade / Landscaping / Well Closure* – The cost associated with backfilling below grade voids, and grading and landscaping the grounds to preclude erosion of soils. This line item also includes costs to seal groundwater monitoring wells.

*Coal Yard Closure* – The cost associated with removal and disposal of soil waste beneath the footprint of the coal field to a depth of 5 feet, and backfilling the void.

*Ash Landfills / Ash Ponds & Landfills Including Evaporation Ponds / Ash Pond Dewatering* – The cost associated with closure of the ponds on site, including placement of a cap on the pond(s) after backfilling.

*Utility Management / Oversight* – The staff directly assigned to manage the dismantling project, including planning, execution, oversight, and restoration.

*Demolition Contractor Mgmt. / Super. / Safety Staff* – The contractor's staff assigned to manage, engineer, and supervise the dismantling project, including site safety personnel.

*Security* – Personnel assigned to control access to the dismantling site.

*Property Taxes* – Not included in this estimate.

The following six items, grouped as Project Expenses, are calculated on a station basis, but are apportioned among the generating units on site by a ratio of the craft labor hours for each generating unit.

*Shared Heavy Equipment / Operating Engineers* – The cost for renting / operating equipment in general use throughout the dismantling project (cranes, trucks, forklifts, front-end loaders, etc.).

*Small Tool Allowance* – The cost for procuring small tools; this is consistent with R.S. Means 2019 Item 01 54 39.70-0100.

*Utilities Allowance (Office Equip & Supplies / Telephone, Electric etc.)* – The cost for procuring utility services and office supplies in support of the field office for the utility management and demolition contractor staffs.

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*Permits* – The cost of obtaining permits; this is consistent with R.S. Means 2019 Item 01 41 26.50.

*Demolition Contractors Insurance* – The cost of the demolition contractors insurance; the value is consistent with the R.S. Means 2019 Item 01 31 13.30, lines 0020, 0200, and 0600.

*Demolition Contractors Fee* – A fee applied to contractor activities; this represents the Contractors overhead and profit payment for the project and is consistent with R.S. Means 2019 Item 01 31 13.80 lines 0350, 0400 and 0450.

*Contingency* – The cost to cover expenses for unforeseen events that are likely to occur. The estimate assumes 25% (consistent with TLG's experience for similarly highly regulated activities in the nuclear industry) for the asbestos remediation work, and 15% for all other project activities, consistent with the R.S. Means 2019 Item 01 21 16.50 lines 0050 and 0100.

*Scrap Credit* – A credit to the project for the recovery of scrap metals. This corresponds to value shown in Table 4.3a through 4.3c.

The following is an explanation of the contents of each column in the 5.1 Tables:

*Unit* – Costs directly attributed to the physical work associated with dismantling a generating unit.

*Common* – Costs directly attributed to the physical work associated with dismantling facilities shared by more than one unit.

*Station* – Costs associated with supporting the physical dismantling work for a station.

*Station Total* – The summation of all Unit columns, plus Common and Station columns.

This study provides an estimate for dismantling under current requirements, based on present-day costs and available technology. As inputs to the cost model change over time, such as labor rates, equipment costs, scrap metal value, etc., this cost estimate should be reviewed and updated to reflect these changes.

**TABLE 5.1**  
**SUMMARY OF ACTIVITY COSTS – FOSSIL STATIONS**  
**(2019 Dollars)**

| Activities (Costs)  | Allen S. King | Angus Anson | Black Dog   | Blue Lake   | Granite City | Hennepin Island | High Bridge | Inver Hills | Key City  | Maplewood | Minnesota Valley | Red Wing    | Riverside   | Sherburne County | Sibley    | Wescott     | Wilmarth    | Fleet Totals |
|---|---------------|-------------|-------------|-------------|--------------|-----------------|-------------|-------------|-----------|-----------|------------------|-------------|-------------|------------------|-----------|-------------|-------------|--------------|
| Station Rating (MWe)  | 511           | 386         | 526         | 545         | 0            | 14              | 606         | 371         | 0         | 0         | 0                | 18          | 590         | 2238             | 0         | 0           | 18          | 5778         |
| Characterization / Temporary Services   | 351,606       | 297,606     | 907,818     | 330,606     | 239,606      | 237,606         | 456,606     | 263,439     | 239,606   | 125,803   | 519,212          | 471,212     | 1,035,818   | 1,136,818        | 125,803   | 159,404     | 471,000     | 7,369,573    |
| Worker Access   | 630,789       | -           | 793,518     | -           | -            | -               | -           | -           | -         | -         | 187,086          | 123,388     | -           | 1,988,310        | -         | -           | 123,388     | 3,846,477    |
| Pre-Demolition Cleaning (Boiler / Precipitator / Tanks)                                 | 1,080,300     | 240,000     | -           | -           | -            | -               | -           | 342,500     | -         | -         | 500,900          | 515,600     | 526,800     | 3,243,150        | -         | -           | 515,600     | 6,964,850    |
| Asbestos / Lead Paint Remediation   | 4,284,988     | 142,847     | 4,731,083   | -           | -            | 146,869         | -           | -           | -         | -         | 3,576,022        | 1,443,877   | 3,167,908   | 5,517,768        | -         | -           | 1,443,877   | 24,455,269   |
| Equipment Removal   | 9,548,255     | 5,634,452   | 7,019,825   | 5,928,449   | 874,216      | 316,678         | 4,605,839   | 4,440,318   | 874,216   | 1,362,397 | 2,863,962        | 2,030,731   | 4,234,148   | 30,534,794       | 1,129,907 | 4,647,516   | 1,746,502   | 87,792,206   |
| Boiler(s)   | 3,460,641     | -           | 3,167,478   | -           | -            | -               | -           | -           | -         | -         | 1,193,285        | 540,184     | 2,693,576   | 12,984,236       | -         | -           | 841,285     | 24,880,685   |
| Structures Demolition   | 12,492,666    | 1,769,185   | 6,719,654   | 2,723,261   | 948,877      | 1,605,413       | 4,537,694   | 1,533,028   | 802,108   | 116,305   | 3,871,934        | 2,505,253   | 9,411,897   | 35,356,935       | 84,384    | 763,648     | 1,969,579   | 87,241,729   |
| Backfill / Grade / Landscaping / Well Closure   | 3,697,788     | 1,133,560   | 2,767,357   | 1,529,390   | 383,922      | 790,474         | 1,742,979   | 1,343,018   | 243,348   | 161,005   | 1,432,771        | 1,079,539   | 2,408,203   | 9,987,445        | 164,731   | 756,289     | 780,770     | 30,492,588   |
| Coal Yard Closure   | 10,718,358    | -           | -           | -           | -            | -               | -           | -           | -         | -         | -                | -           | -           | 8,264,365        | -         | -           | -           | 18,982,723   |
| Ash Landfills / Ash Ponds & Landfills Including Evaporation Ponds / Ash Pond Dewatering | 950,000       | -           | 3,215,960   | -           | -            | -               | -           | -           | -         | -         | -                | 457,152     | -           | 23,923,905       | -         | -           | 1,400,239   | 29,947,256   |
| Utility Management / Oversight  | 3,027,199     | 945,676     | 3,459,078   | 1,580,835   | 784,321      | 778,453         | 1,618,917   | 1,333,298   | 781,800   | 871,780   | 1,979,405        | 1,119,169   | 3,482,165   | 3,860,869        | 839,852   | 1,003,663   | 1,119,169   | 28,585,648   |
| Demolition Contractor Mgmt / Super. / Safety Staff                                      | 3,699,644     | 886,053     | 4,873,798   | 1,562,983   | 488,361      | 401,322         | 1,654,047   | 971,065     | 482,147   | 550,634   | 2,196,028        | 1,130,906   | 4,775,533   | 6,129,664        | 499,554   | 1,028,973   | 1,130,906   | 32,461,621   |
| Security  | 776,195       | 197,940     | 960,031     | 197,940     | 115,679      | 145,241         | 208,222     | 131,103     | 114,394   | 194,084   | 298,195          | 272,488     | 965,867     | 1,135,113        | 177,374   | 227,502     | 272,488     | 6,389,856    |
| Property Taxes  | 0             | 0           | 0           | 0           | 0            | 0               | 0           | 0           | 0         | 0         | 0                | 0           | 0           | 0                | 0         | 0           | 0           | 0            |
| <b>Project Expenses</b>   |               |             |             |             |              |                 |             |             |           |           |                  |             |             |                  |           |             |             |              |
| Shared Heavy Equipment / Operating Engineers  | 3,194,695     | 882,518     | 4,301,682   | 1,441,364   | 476,691      | 622,535         | 1,526,730   | 886,484     | 470,350   | 863,495   | 2,010,686        | 1,209,872   | 4,169,727   | 5,525,323        | 781,061   | 1,028,362   | 1,209,872   | 30,601,346   |
| Small Tool Allowance  | 683,023       | 173,521     | 508,038     | 206,202     | 44,900       | 57,969          | 220,828     | 147,564     | 39,153    | 33,294    | 262,821          | 153,819     | 406,870     | 1,936,030        | 28,080    | 123,849     | 138,068     | 5,163,971    |
| Utilities Allowance   | 52,508        | 30,400      | 64,945      | 30,400      | 17,796       | 22,306          | 31,979      | 20,135      | 17,569    | 29,807    | 45,797           | 41,849      | 65,339      | 76,789           | 27,241    | 34,940      | 41,849      | 651,617      |
| Permits   | 685,566       | 139,877     | 488,388     | 171,908     | 43,429       | 52,514          | 184,708     | 124,344     | 39,606    | 40,534    | 233,256          | 146,292     | 412,323     | 1,832,569        | 35,510    | 106,787     | 148,037     | 4,885,649    |
| Demolition Contractors Insurance  | 1,613,171     | 329,137     | 1,149,202   | 404,509     | 102,191      | 123,569         | 434,626     | 292,589     | 93,195    | 95,379    | 548,864          | 344,233     | 970,216     | 4,312,127        | 83,556    | 251,276     | 348,338     | 11,496,176   |
| Demolition Contractors Fee  | 6,680,544     | 1,346,638   | 4,479,356   | 1,595,761   | 391,450      | 496,988         | 1,717,737   | 1,174,177   | 352,394   | 353,503   | 2,155,825        | 1,382,875   | 3,699,103   | 18,327,570       | 307,534   | 984,009     | 1,401,050   | 46,846,515   |
| Sub-Total   | 67,627,939    | 14,149,409  | 49,607,111  | 17,703,605  | 4,911,409    | 5,797,909       | 18,940,824  | 13,003,063  | 4,549,886 | 4,798,021 | 23,876,048       | 14,968,441  | 42,515,494  | 176,073,780      | 4,284,587 | 11,116,217  | 15,132,016  | 489,055,758  |
| Contingency   | 10,572,690    | 2,136,696   | 7,914,175   | 2,655,541   | 736,711      | 884,376         | 2,841,124   | 1,950,459   | 682,483   | 719,703   | 3,939,009        | 2,389,654   | 6,694,115   | 26,962,844       | 642,688   | 1,007,433   | 2,414,190   | 75,803,891   |
| Project Total (before scrap credit)   | 78,200,629    | 16,286,105  | 57,521,286  | 20,359,146  | 5,648,121    | 6,682,285       | 21,781,947  | 14,953,523  | 5,232,369 | 5,517,724 | 27,815,058       | 17,358,094  | 49,209,609  | 203,036,624      | 4,927,275 | 12,783,650  | 17,546,206  | 564,859,649  |
| Scrap Credit  | (12,446,046)  | (3,559,337) | (8,791,626) | (3,688,291) | (762,978)    | (329,908)       | (4,798,596) | (3,176,879) | (702,022) | (404,310) | (5,307,403)      | (1,808,929) | (8,484,150) | (34,681,107)     | (338,307) | (1,541,232) | (1,642,767) | (92,463,894) |
| Project Total   | 65,754,582    | 12,726,768  | 48,729,657  | 16,670,855  | 4,885,143    | 6,352,377       | 16,983,348  | 11,776,644  | 4,530,347 | 5,113,414 | 22,507,655       | 15,549,165  | 40,725,459  | 168,355,517      | 4,588,968 | 11,242,417  | 15,903,439  | 472,395,755  |

**TABLE 5.1a**  
**ALLEN S. KING STATION**  
**SUMMARY OF ACTIVITY COSTS**  
(2019 Dollars)

| Activities   | Unit 1       | Common      | Station   | Station Total |
|--|--------------|-------------|-----------|---------------|
| Allen S. King Unit Rating (MWe)  | 511          |             |           | 511           |
| Characterization / Temporary Services                                    | 150,000      | -           | 201,606   | 351,606       |
| Worker Access  | 630,789      | -           |           | 630,789       |
| Pre-Demolition Cleaning (Boiler / Precipitator / Tanks)                  | 1,000,300    | 80,000      |           | 1,080,300     |
| Asbestos / Lead Paint Remediation  | 4,284,988    | -           |           | 4,284,988     |
| Equipment Removal  | 7,865,365    | 1,682,890   |           | 9,548,255     |
| Boiler(s)  | 3,460,641    | -           |           | 3,460,641     |
| Structures Demolition  | 10,016,294   | 2,476,372   |           | 12,492,666    |
| Backfill / Grade / Landscaping / Well Closure                            | 2,605,976    | 977,821     | 113,991   | 3,697,788     |
| Coal Yard Closure  |              | 10,718,358  |           | 10,718,358    |
| Ash Landfills / Ash Ponds & Landfills Including Evaporation Ponds        |              | 950,000     |           | 950,000       |
| Utility Management / Oversight   |              |             | 3,027,199 | 3,027,199     |
| Demolition Contractor Management / Supervisory / Safety Staff            |              |             | 3,699,644 | 3,699,644     |
| Security   |              |             | 776,195   | 776,195       |
| Property Taxes   | -            | -           | -         | 0             |
| <b>Project Expenses</b>  |              |             |           |               |
| Shared Heavy Equipment / Operating Engineers                             |              |             | 3,194,695 | 3,194,695     |
| Small Tool Allowance   | 580,281      | 102,742     | n/a       | 683,023       |
| Utilities Allowance (Office Equip & supplies / Telephone, Electric etc.) |              |             | 52,508    | 52,508        |
| Permits  |              |             | 685,566   | 685,566       |
| Demolition Contractors Insurance   |              |             | 1,613,171 | 1,613,171     |
| Demolition Contractors Fee   |              |             | 6,680,544 | 6,680,544     |
| Sub-Total  |              |             |           | 67,627,939    |
| Contingency  |              |             |           | 10,572,690    |
| Project Total (before scrap credit)                                      |              |             |           | 78,200,628    |
| Scrap Credit   | (11,244,369) | (1,201,677) | -         | (12,446,046)  |
| Project Total  |              |             |           | 65,754,582    |



**TABLE 5.1b**  
**ANGUS ANSON STATION**  
**SUMMARY OF ACTIVITY COSTS**  
(2019 Dollars)

| Activities   | Unit 1      | Unit 2    | Unit 3    | Unit 4    | Common   | Station   | Station Total |
|--|-------------|-----------|-----------|-----------|----------|-----------|---------------|
| Angus Anson Unit Rating (MW/e)   | 0           | 109       | 109       | 168       |          |           | 386           |
| Characterization / Temporary Services                                    | 25,000      | 22,000    | 22,333    | 26,667    | -        | 201,606   | 297,606       |
| Pre-Demolition Cleaning (Tanks)  | -           | -         | -         | -         | 240,000  |           | 240,000       |
| Lead Paint Remediation   | 142,847     | -         | -         | -         | -        |           | 142,847       |
| Equipment Removal  | 2,642,304   | 589,684   | 592,643   | 1,471,114 | 338,707  |           | 5,634,452     |
| Structures Demolition  | 1,044,734   | 158,683   | 161,649   | 343,728   | 60,391   |           | 1,769,185     |
| Backfill / Grade / Landscaping / Well Closure                            | 541,304     | 74,092    | 75,477    | 150,687   | 192,001  | 100,000   | 1,133,560     |
| Utility Management / Oversight   |             |           |           |           |          | 945,676   | 945,676       |
| Demolition Contractor Management / Supervisory / Safety Staff            |             |           |           |           |          | 886,053   | 886,053       |
| Security   |             |           |           |           |          | 197,940   | 197,940       |
| Property Taxes   | -           | -         | -         | -         | -        | -         | 0             |
| <b>Project Expenses</b>  |             |           |           |           |          |           |               |
| Shared Heavy Equipment / Operating Engineers                             |             |           |           |           |          | 882,518   | 882,518       |
| Small Tool Allowance   | 87,924      | 16,889    | 17,042    | 39,844    | 11,822   | n/a       | 173,521       |
| Utilities Allowance (Office Equip & supplies / Telephone, Electric etc.) |             |           |           |           |          | 30,400    | 30,400        |
| Permits  |             |           |           |           |          | 139,877   | 139,877       |
| Demolition Contractors Insurance   |             |           |           |           |          | 329,137   | 329,137       |
| Demolition Contractors Fee   |             |           |           |           |          | 1,346,638 | 1,346,638     |
| Sub-Total  |             |           |           |           |          |           | 14,149,409    |
| Contingency  |             |           |           |           |          |           | 2,136,696     |
| Project Total (before scrap credit)                                      |             |           |           |           |          |           | 16,286,105    |
| Scrap Credit   | (1,394,645) | (547,154) | (554,872) | (980,393) | (82,273) | -         | (3,559,337)   |
| Project Total  |             |           |           |           |          |           | 12,726,768    |

**TABLE 5.1c**  
**BLACK DOG STATION**  
**SUMMARY OF ACTIVITY COSTS**  
(2019 Dollars)

| Activities   | Unit 2      | Unit 3      | Unit 5      | Unit 6      | Common    | Station   | Station Total |
|--|-------------|-------------|-------------|-------------|-----------|-----------|---------------|
| Black Dog Unit Rating (MWe)  | 117         | 0           | 181         | 228         |           |           | 526           |
| Characterization / Temporary Services                                    | 64,000      | 67,000      | 79,000      | 93,000      | -         | 604,818   | 907,818       |
| Worker Access  | 387,123     | 406,395     | -           | -           | -         |           | 793,518       |
| Asbestos Remediation   | 1,956,422   | 1,969,760   | -           | 800,000     | 4,902     |           | 4,731,083     |
| Equipment Removal  | 2,289,715   | 2,297,438   | 1,366,958   | 981,902     | 83,813    |           | 7,019,825     |
| Boiler(s)  | 1,750,299   | 1,417,179   | -           | -           | -         |           | 3,167,478     |
| Structures Demolition  | 823,953     | 1,315,352   | 1,535,212   | 2,081,747   | 963,391   |           | 6,719,654     |
| Backfill / Grade / Landscaping / Well Closure                            | 438,647     | 460,484     | 462,694     | 435,600     | 869,932   | 100,000   | 2,767,357     |
| Ash Landfills / Ash Ponds & Landfills Including Evaporation Ponds        |             |             |             |             | 3,215,960 |           | 3,215,960     |
| Utility Management / Oversight   |             |             |             |             |           | 3,459,078 | 3,459,078     |
| Demolition Contractor Management / Supervisory / Safety Staff            |             |             |             |             |           | 4,873,798 | 4,873,798     |
| Security   |             |             |             |             |           | 960,031   | 960,031       |
| Property Taxes   | -           | -           | -           | -           | -         | -         | 0             |
| <b>Project Expenses</b>  |             |             |             |             |           |           |               |
| Shared Heavy Equipment / Operating Engineers                             |             |             |             |             |           | 4,301,582 | 4,301,582     |
| Small Tool Allowance   | 154,203     | 158,672     | 68,877      | 87,845      | 38,441    | n/a       | 508,038       |
| Utilities Allowance (Office Equip & supplies / Telephone, Electric etc.) |             |             |             |             |           | 64,945    | 64,945        |
| Permits  |             |             |             |             |           | 488,388   | 488,388       |
| Demolition Contractors Insurance   |             |             |             |             |           | 1,149,202 | 1,149,202     |
| Demolition Contractors Fee   |             |             |             |             |           | 4,479,356 | 4,479,356     |
| Sub-Total  |             |             |             |             |           |           | 49,607,111    |
| Contingency  |             |             |             |             |           |           | 7,914,175     |
| Project Total (before scrap credit)                                      |             |             |             |             |           |           | 57,521,286    |
| Scrap Credit   | (2,502,344) | (2,983,623) | (1,370,844) | (1,737,309) | (197,508) | -         | (8,791,629)   |
| Project Total  |             |             |             |             |           |           | 48,729,657    |

**TABLE 5.1d**  
**BLUE LAKE STATION**  
**SUMMARY OF ACTIVITY COSTS**  
(2019 Dollars)

| Activities   | Unit 1    | Unit 2    | Unit 3    | Unit 4    | Unit 7    | Unit 8    | Common    | Station   | Station Total |
|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|---------------|
| Blue Lake Unit Rating (MWe)  | 50        | 50        | 46        | 48        | 174       | 177       |           |           | 545           |
| Characterization / Temporary Services                                    | 12,250    | 12,250    | 12,250    | 12,250    | 40,000    | 40,000    | -         | 201,606   | 330,606       |
| Equipment Removal  | 566,731   | 566,731   | 566,731   | 566,731   | 1,472,140 | 1,472,140 | 717,247   |           | 5,928,449     |
| Structures Demolition  | 234,043   | 203,009   | 203,009   | 203,009   | 461,241   | 461,241   | 957,708   |           | 2,723,261     |
| Backfill / Grade / Landscaping   | 160,053   | 160,053   | 160,053   | 160,053   | 265,653   | 265,653   | 357,874   | -         | 1,529,390     |
| Utility Management / Oversight   |           |           |           |           |           |           |           | 1,580,835 | 1,580,835     |
| Demolition Contractor Management / Supervisory / Safety Staff            |           |           |           |           |           |           |           | 1,562,983 | 1,562,983     |
| Security   |           |           |           |           |           |           |           | 197,940   | 197,940       |
| Property Taxes   | -         | -         | -         | -         | -         | -         | -         | -         | 0             |
| <b>Project Expenses</b>  |           |           |           |           |           |           |           |           |               |
| Shared Heavy Equipment / Operating Engineers                             |           |           |           |           |           |           |           | 1,441,364 | 1,441,364     |
| Small Tool Allowance   | 19,462    | 18,841    | 18,841    | 18,841    | 44,781    | 44,781    | 40,657    | n/a       | 206,202       |
| Utilities Allowance (Office Equip & supplies / Telephone, Electric etc.) |           |           |           |           |           |           |           | 30,400    | 30,400        |
| Permits  |           |           |           |           |           |           |           | 171,908   | 171,908       |
| Demolition Contractors Insurance   |           |           |           |           |           |           |           | 404,509   | 404,509       |
| Demolition Contractors Fee   |           |           |           |           |           |           |           | 1,595,761 | 1,595,761     |
| Sub-Total  |           |           |           |           |           |           |           |           | 17,703,605    |
| Contingency (excluding activities currently under contract)              |           |           |           |           |           |           |           |           | 2,655,541     |
| Project Total (before scrap credit)                                      |           |           |           |           |           |           |           |           | 20,359,146    |
| Scrap Credit   | (473,687) | (415,070) | (415,070) | (415,070) | (862,163) | (862,163) | (245,069) | -         | (3,688,291)   |
| Project Total  |           |           |           |           |           |           |           |           | 16,670,855    |

**TABLE 5.1e**  
**GRANITE CITY STATION**  
**SUMMARY OF ACTIVITY COSTS**  
(2019 Dollars)

| Activities   | Unit 1    | Unit 2    | Unit 3    | Unit 4    | Common    | Station | Station Total |
|--|-----------|-----------|-----------|-----------|-----------|---------|---------------|
| Granite City Unit Rating (MWe)   | 0         | 0         | 0         | 0         |           |         | 0             |
| Characterization / Temporary Services                                    | 9,500     | 9,500     | 9,500     | 9,500     | -         | 201,606 | 239,606       |
| Equipment Removal  | 218,554   | 218,554   | 218,554   | 218,554   | -         |         | 874,216       |
| Structures Demolition  | 142,423   | 142,423   | 142,423   | 142,423   | 379,183   |         | 948,877       |
| Backfill / Grade / Landscaping   | 83,590    | 83,590    | 83,590    | 83,590    | 49,563    | -       | 383,922       |
| Utility Management / Oversight   |           |           |           |           |           | 784,321 | 784,321       |
| Demolition Contractor Management / Supervisory / Safety Staff            |           |           |           |           |           | 488,361 | 488,361       |
| Security   |           |           |           |           |           | 115,679 | 115,679       |
| Property Taxes   | -         | -         | -         | -         | -         | -       | 0             |
| <b>Project Expenses</b>  |           |           |           |           |           |         |               |
| Shared Heavy Equipment / Operating Engineers                             |           |           |           |           |           | 476,691 | 476,691       |
| Small Tool Allowance   | 9,081     | 9,081     | 9,081     | 9,081     | 8,575     | n/a     | 44,900        |
| Utilities Allowance (Office Equip & supplies / Telephone, Electric etc.) |           |           |           |           |           | 17,766  | 17,766        |
| Permits  |           |           |           |           |           | 43,429  | 43,429        |
| Demolition Contractors Insurance   |           |           |           |           |           | 102,191 | 102,191       |
| Demolition Contractors Fee   |           |           |           |           |           | 391,450 | 391,450       |
| Sub-Total  |           |           |           |           |           |         | 4,911,409     |
| Contingency  |           |           |           |           |           |         | 736,711       |
| Project Total (before scrap credit)                                      |           |           |           |           |           |         | 5,648,121     |
| Scrap Credit   | (159,623) | (159,623) | (159,623) | (159,623) | (124,486) | -       | (762,978)     |
| Project Total  |           |           |           |           |           |         | 4,885,143     |

**TABLE 5.1f**  
**HENNEPIN ISLAND STATION**  
**SUMMARY OF ACTIVITY COSTS**  
(2019 Dollars)

| Activities   | Unit 1-5  | Station | Station Total |
|--|-----------|---------|---------------|
| Hennepin Island Unit Rating (MWe)  | 14        |         | 14            |
| Characterization / Temporary Services                                    | 36,000    | 201,606 | 237,606       |
| Lead Paint Remediation   | 146,899   |         | 146,899       |
| Equipment Removal  | 316,678   |         | 316,678       |
| Structures Demolition  | 1,605,413 |         | 1,605,413     |
| Grade / Landscaping  | 790,474   | -       | 790,474       |
| Utility Management / Oversight   |           | 778,453 | 778,453       |
| Demolition Contractor Management / Supervisory / Safety Staff            |           | 401,322 | 401,322       |
| Security   |           | 145,241 | 145,241       |
| Property Taxes   | -         | -       | 0             |
| <b>Project Expenses</b>  |           |         |               |
| Shared Heavy Equipment / Operating Engineers                             |           | 622,535 | 622,535       |
| Small Tool Allowance   | 57,909    | n/a     | 57,909        |
| Utilities Allowance (Office Equip & supplies / Telephone, Electric etc.) |           | 22,306  | 22,306        |
| Permits  |           | 52,514  | 52,514        |
| Demolition Contractors Insurance   |           | 123,569 | 123,569       |
| Demolition Contractors Fee   |           | 496,988 | 496,988       |
| Sub-Total  |           |         | 5,797,909     |
| Contingency  |           |         | 884,376       |
| Project Total (before scrap credit)                                      |           |         | 6,682,285     |
| Scrap Credit   | (329,908) | -       | (329,908)     |
| Project Total  |           |         | 6,352,377     |

**TABLE 5.1g**  
**HIGH BRIDGE STATION**  
**SUMMARY OF ACTIVITY COSTS**  
(2019 Dollars)

| Activities   | Unit 7      | Unit 8      | Unit 9      | Common    | Station   | Station Total |
|--|-------------|-------------|-------------|-----------|-----------|---------------|
| High Bridge Unit Rating (MWe)  | 185         | 185         | 236         |           |           | 606           |
| Characterization / Temporary Services                                    | 79,000      | 79,000      | 97,000      | -         | 201,606   | 456,606       |
| Equipment Removal  | 1,393,993   | 1,393,993   | 1,452,905   | 364,947   |           | 4,605,839     |
| Boiler(s)  | -           | -           | -           | -         |           | 0             |
| Structures Demolition  | 1,109,013   | 1,109,013   | 1,777,707   | 541,872   |           | 4,537,604     |
| Backfill / Grade / Landscaping / Well Closure                            | 327,086     | 327,086     | 801,030     | 187,777   | 100,000   | 1,742,979     |
| Utility Management / Oversight   |             |             |             |           | 1,618,917 | 1,618,917     |
| Demolition Contractor Management / Supervisory / Safety Staff            |             |             |             |           | 1,654,047 | 1,654,047     |
| Security   |             |             |             |           | 208,222   | 208,222       |
| Property Taxes   | -           | -           | -           | -         | -         | 0             |
| <b>Project Expenses</b>  |             |             |             |           |           |               |
| Shared Heavy Equipment / Operating Engineers                             |             |             |             |           | 1,526,730 | 1,526,730     |
| Small Tool Allowance   | 58,182      | 58,182      | 82,573      | 21,892    | n/a       | 220,828       |
| Utilities Allowance (Office Equip & supplies / Telephone, Electric etc.) |             |             |             |           | 31,979    | 31,979        |
| Permits  |             |             |             |           | 184,708   | 184,708       |
| Demolition Contractors Insurance   |             |             |             |           | 434,626   | 434,626       |
| Demolition Contractors Fee   |             |             |             |           | 1,717,737 | 1,717,737     |
| Sub-Total  |             |             |             |           |           | 18,940,824    |
| Contingency  |             |             |             |           |           | 2,841,124     |
| Project Total (before scrap credit)                                      |             |             |             |           |           | 21,781,947    |
| Scrap Credit   | (1,418,437) | (1,418,437) | (1,846,014) | (115,711) | -         | (4,798,599)   |
| Project Total  |             |             |             |           |           | 16,983,348    |

**TABLE 5.1h**  
**INVER HILLS STATION**  
**SUMMARY OF ACTIVITY COSTS**  
(2019 Dollars)

| Activities   | Unit 1    | Unit 2    | Unit 3    | Unit 4    | Unit 5    | Unit 6    | Common   | Station   | Station Total |
|--|-----------|-----------|-----------|-----------|-----------|-----------|----------|-----------|---------------|
| Inver Hills Unit Rating (MWe)  | 62        | 62        | 62        | 62        | 61        | 62        |          |           | 371           |
| Characterization / Temporary Services                                    | 8,833     | 8,833     | 8,833     | 8,833     | 8,833     | 8,833     | 8,833    | 201,606   | 263,439       |
| Pre-Demolition Cleaning (Tanks)  | -         | -         | -         | -         | -         | -         | 342,500  |           | 342,500       |
| Equipment Removal  | 696,798   | 696,798   | 696,798   | 696,798   | 696,798   | 696,798   | 259,531  |           | 4,440,318     |
| Boiler(s)  | -         | -         | -         | -         | -         | -         | -        |           | 0             |
| Structures Demolition  | 232,167   | 232,167   | 232,167   | 232,167   | 232,167   | 232,167   | 140,023  |           | 1,533,028     |
| Backfill / Grade / Landscaping   | 192,205   | 192,205   | 192,205   | 192,205   | 192,205   | 192,205   | 189,786  | -         | 1,343,018     |
| Utility Management / Oversight   |           |           |           |           |           |           |          | 1,333,298 | 1,333,298     |
| Demolition Contractor Management / Supervisory / Safety Staff            |           |           |           |           |           |           |          | 971,065   | 971,065       |
| Security   |           |           |           |           |           |           |          | 131,103   | 131,103       |
| Property Taxes   | -         | -         | -         | -         | -         | -         | -        | -         | 0             |
| <b>Project Expenses</b>  |           |           |           |           |           |           |          |           |               |
| Shared Heavy Equipment / Operating Engineers                             |           |           |           |           |           |           |          | 886,484   | 886,484       |
| Small Tool Allowance   | 22,600    | 22,600    | 22,600    | 22,600    | 22,600    | 22,600    | 11,963   | n/a       | 147,564       |
| Utilities Allowance (Office Equip & supplies / Telephone, Electric etc.) |           |           |           |           |           |           |          | 20,135    | 20,135        |
| Permits  |           |           |           |           |           |           |          | 124,344   | 124,344       |
| Demolition Contractors Insurance   |           |           |           |           |           |           |          | 292,589   | 292,589       |
| Demolition Contractors Fee   |           |           |           |           |           |           |          | 1,174,177 | 1,174,177     |
| Sub-Total  |           |           |           |           |           |           |          |           | 13,003,063    |
| Contingency  |           |           |           |           |           |           |          |           | 1,950,459     |
| Project Total (before scrap credit)                                      |           |           |           |           |           |           |          |           | 14,953,523    |
| Scrap Credit   | (517,223) | (517,223) | (517,223) | (517,223) | (517,223) | (517,223) | (73,541) | -         | (3,176,879)   |
| Project Total  |           |           |           |           |           |           |          |           | 11,776,644    |

**TABLE 5.1i**  
**KEY CITY STATION**  
**SUMMARY OF ACTIVITY COSTS**  
(2019 Dollars)

| Activities   | Unit 1    | Unit 2    | Unit 3    | Unit 4    | Common    | Station | Station Total |
|--|-----------|-----------|-----------|-----------|-----------|---------|---------------|
| Key City Unit Rating (MWe)   | 0         | 0         | 0         | 0         |           |         | 0             |
| Characterization / Temporary Services                                    | 9,500     | 9,500     | 9,500     | 9,500     | -         | 201,606 | 239,606       |
| Equipment Removal  | 218,554   | 218,554   | 218,554   | 218,554   | -         |         | 874,216       |
| Structures Demolition  | 107,785   | 107,785   | 107,785   | 107,785   | 370,968   |         | 802,108       |
| Backfill / Grade / Landscaping   | 50,591    | 50,591    | 50,591    | 50,591    | 40,982    | -       | 243,348       |
| Utility Management / Oversight   |           |           |           |           |           | 781,800 | 781,800       |
| Demolition Contractor Management / Supervisory / Safety Staff            |           |           |           |           |           | 482,147 | 482,147       |
| Security   |           |           |           |           |           | 114,394 | 114,394       |
| Property Taxes   | -         | -         | -         | -         | -         | -       | 0             |
| <b>Project Expenses</b>  |           |           |           |           |           |         |               |
| Shared Heavy Equipment / Operating Engineers                             |           |           |           |           |           | 470,350 | 470,350       |
| Small Tool Allowance   | 7,729     | 7,729     | 7,729     | 7,729     | 8,239     | n/a     | 39,153        |
| Utilities Allowance (Office Equip & supplies / Telephone, Electric etc.) |           |           |           |           |           | 17,569  | 17,569        |
| Permits  |           |           |           |           |           | 39,606  | 39,606        |
| Demolition Contractors Insurance   |           |           |           |           |           | 93,195  | 93,195        |
| Demolition Contractors Fee   |           |           |           |           |           | 352,394 | 352,394       |
| Sub-Total  |           |           |           |           |           |         | 4,549,886     |
| Contingency  |           |           |           |           |           |         | 682,483       |
| Project Total (before scrap credit)                                      |           |           |           |           |           |         | 5,232,369     |
| Scrap Credit   | (144,885) | (144,885) | (144,885) | (144,885) | (122,482) | -       | (702,022)     |
| Project Total  |           |           |           |           |           |         | 4,530,347     |



**TABLE 5.1j**  
**MAPLEWOOD GAS PLANT**  
**SUMMARY OF ACTIVITY COSTS**  
(2019 Dollars)

| Activities   | Unit 1    | Station | Station Total |
|--|-----------|---------|---------------|
| Maplewood Unit Rating (MVe)  | 0         |         | 0             |
| Characterization / Temporary Services                                    | 25,000    | 100,803 | 125,803       |
| Equipment Removal  | 1,362,397 |         | 1,362,397     |
| Structures Demolition  | 116,305   |         | 116,305       |
| Grade / Landscaping  | 161,005   | -       | 161,005       |
| Utility Management / Oversight   |           | 871,780 | 871,780       |
| Demolition Contractor Management / Supervisory / Safety Staff            |           | 550,634 | 550,634       |
| Security   |           | 194,084 | 194,084       |
| Property Taxes   | -         | -       | 0             |
| <b>Project Expenses</b>  |           |         |               |
| Shared Heavy Equipment / Operating Engineers                             |           | 863,495 | 863,495       |
| Small Tool Allowance   | 33,294    | n/a     | 33,294        |
| Utilities Allowance (Office Equip & supplies / Telephone, Electric etc.) |           | 29,807  | 29,807        |
| Permits  |           | 40,534  | 40,534        |
| Demolition Contractors Insurance   |           | 95,379  | 95,379        |
| Demolition Contractors Fee   |           | 353,503 | 353,503       |
| Sub-Total  |           |         | 4,798,021     |
| Contingency  |           |         | 719,703       |
| Project Total (before scrap credit)                                      |           |         | 5,517,724     |
| Scrap Credit   | (404,310) | -       | (404,310)     |
| Project Total  |           |         | 5,113,414     |

**TABLE 5.1k**  
**MINNESOTA VALLEY STATION**  
**SUMMARY OF ACTIVITY COSTS**  
(2019 Dollars)

| <b>Activities</b>  | <b>Unit 1</b> | <b>Unit 2</b> | <b>Unit 3</b> | <b>Common</b> | <b>Station</b> | <b>Station Total</b> |
|--|---------------|---------------|---------------|---------------|----------------|----------------------|
| Minnesota Valley Unit Rating (MVe)                                       | 0             | 0             | 0             |               |                | 0                    |
| Characterization / Temporary Services                                    | 34,000        | 34,000        | 48,000        |               | 403,212        | 519,212              |
| Worker Access  | -             | -             | 187,086       | -             |                | 187,086              |
| Pre-Demolition Cleaning (Boiler / Precipitator / Tanks)                  | 166,967       | 166,967       | 166,967       | -             |                | 500,900              |
| Asbestos / Lead Paint Remediation  | 124,640       | 124,640       | 3,326,742     | -             |                | 3,576,022            |
| Equipment Removal  | 353,302       | 353,302       | 2,157,358     | -             |                | 2,863,962            |
| Boiler(s)  | 255,835       | 255,835       | 681,615       | -             |                | 1,193,285            |
| Structures Demolition  | 756,380       | 756,380       | 2,059,095     | 300,078       |                | 3,871,934            |
| Backfill / Grade / Landscaping / Well Closure                            | 415,645       | 415,645       | 396,692       | 104,790       | 100,000        | 1,432,771            |
| Utility Management / Oversight   |               |               |               |               | 1,979,405      | 1,979,405            |
| Demolition Contractor Management / Supervisory / Safety Staff            |               |               |               |               | 2,196,028      | 2,196,028            |
| Security   |               |               |               |               | 298,195        | 298,195              |
| Property Taxes   | -             | -             | -             | -             | -              | 0                    |
| <b>Project Expenses</b>  |               |               |               |               |                |                      |
| Shared Heavy Equipment / Operating Engineers                             |               |               |               |               | 2,010,686      | 2,010,686            |
| Small Tool Allowance   | 38,796        | 38,796        | 177,132       | 8,097         | n/a            | 262,821              |
| Utilities Allowance (Office Equip & supplies / Telephone, Electric etc.) |               |               |               |               | 45,797         | 45,797               |
| Permits  |               |               |               |               | 233,256        | 233,256              |
| Demolition Contractors Insurance   |               |               |               |               | 548,864        | 548,864              |
| Demolition Contractors Fee   |               |               |               |               | 2,155,825      | 2,155,825            |
| Sub-Total  |               |               |               |               |                | 23,876,048           |
| Contingency  |               |               |               |               |                | 3,939,009            |
| Project Total (before scrap credit)                                      |               |               |               |               |                | 27,815,058           |
| Scrap Credit   | (1,232,488)   | (1,232,488)   | (2,840,688)   | (1,738)       | -              | (5,307,403)          |
| Project Total  |               |               |               |               |                | 22,507,655           |

**TABLE 5.11**  
**RED WING STATION**  
**SUMMARY OF ACTIVITY COSTS**  
(2019 Dollars)

| Activities   | Unit 1    | Unit 2    | Common    | Station   | Station Total |
|--|-----------|-----------|-----------|-----------|---------------|
| Red Wing Unit Rating (MWe)   | 9         | 9         |           |           | 18            |
| Characterization / Temporary Services                                    | 34,000    | 34,000    | -         | 403,212   | 471,212       |
| Worker Access  | 61,694    | 61,694    | -         |           | 123,388       |
| Pre-Demolition Cleaning (Boiler / Precipitator / Tanks)                  | 257,800   | 257,800   | -         |           | 515,600       |
| Asbestos / Lead Paint Remediation  | 721,939   | 721,939   | -         |           | 1,443,877     |
| Equipment Removal  | 780,906   | 780,906   | 468,918   |           | 2,030,731     |
| Boiler(s)  | 270,092   | 270,092   | -         |           | 540,184       |
| Structures Demolition  | 731,187   | 731,187   | 1,042,878 |           | 2,505,253     |
| Backfill / Grade / Landscaping / Well Closure                            | 215,931   | 215,931   | 547,677   | 100,000   | 1,079,539     |
| Ash Landfills / Ash Ponds & Landfills Including Evaporation Ponds        |           |           | 457,152   |           | 457,152       |
| Utility Management / Oversight   |           |           |           | 1,119,169 | 1,119,169     |
| Demolition Contractor Management / Supervisory / Safety Staff            |           |           |           | 1,130,906 | 1,130,906     |
| Security   |           |           |           | 272,488   | 272,488       |
| Property Taxes   | -         | -         | -         | -         | 0             |
| <b>Project Expenses</b>  |           |           |           |           |               |
| Shared Heavy Equipment / Operating Engineers                             |           |           |           | 1,209,872 | 1,209,872     |
| Small Tool Allowance   | 56,315    | 56,315    | 41,189    | n/a       | 153,819       |
| Utilities Allowance (Office Equip & supplies / Telephone, Electric etc.) |           |           |           | 41,849    | 41,849        |
| Permits  |           |           |           | 146,292   | 146,292       |
| Demolition Contractors Insurance   |           |           |           | 344,233   | 344,233       |
| Demolition Contractors Fee   |           |           |           | 1,382,875 | 1,382,875     |
| Sub-Total  |           |           |           |           | 14,968,441    |
| Contingency  |           |           |           |           | 2,389,654     |
| Project Total (before scrap credit)                                      |           |           |           |           | 17,358,094    |
| Scrap Credit   | (662,363) | (662,363) | (484,203) | -         | (1,808,929)   |
| Project Total  |           |           |           |           | 15,549,165    |

**TABLE 5.1m**  
**RIVERSIDE STATION**  
**SUMMARY OF ACTIVITY COSTS**  
(2019 Dollars)

| Activities   | Unit 6<br>Boiler | Unit 7<br>Boiler | Unit 7<br>Turbine | Unit 8      | Unit 9      | Unit 10     | Commom    | Station   | Station Total |
|--|------------------|------------------|-------------------|-------------|-------------|-------------|-----------|-----------|---------------|
| Riverside Unit Rating (MWe)  | 44               | 44               | 160               | 0           | 171         | 171         |           |           | 590           |
| Characterization / Temporary Services                                    | 48,000           | 48,000           | 80,000            | 93,000      | 81,000      | 81,000      | -         | 604,818   | 1,035,818     |
| Pre-Demolition Cleaning (Boiler / Precipitator / Tanks)                  | 170,600          | 170,600          | -                 | 170,600     | -           | -           | 15,000    |           | 526,800       |
| Asbestos Remediation   | 1,025,353        | 1,025,353        | -                 | 1,117,201   | -           | -           | -         |           | 3,167,908     |
| Equipment Removal  | -                | -                | 987,364           | 473,484     | 1,377,540   | 1,377,540   | 18,220    |           | 4,234,148     |
| Boiler(s)  | 875,389          | 875,389          | -                 | 942,798     | -           | -           | -         |           | 2,693,576     |
| Structures Demolition  | 1,041,505        | 1,041,505        | 574,865           | 2,627,561   | 952,584     | 952,584     | 2,221,292 |           | 9,411,897     |
| Backfill / Grade / Landscaping / Well Closure                            | 197,838          | 197,838          | 364,420           | 590,917     | 246,508     | 246,508     | 554,174   | 100,000   | 2,498,203     |
| Utility Management / Oversight   |                  |                  |                   |             |             |             |           | 3,482,165 | 3,482,165     |
| Demolition Contractor Management / Supervisory / Safety Staff            |                  |                  |                   |             |             |             |           | 4,775,533 | 4,775,533     |
| Security   |                  |                  |                   |             |             |             |           | 965,867   | 965,867       |
| Property Taxes   |                  |                  | -                 |             | -           |             | -         | -         | 0             |
| <b>Project Expenses</b>  |                  |                  |                   |             |             |             |           |           |               |
| Shared Heavy Equipment / Operating Engineers                             |                  |                  |                   |             |             |             |           | 4,169,727 | 4,169,727     |
| Small Tool Allowance   | 63,762           | 63,762           | 40,133            | 116,899     | 33,220      | 33,220      | 55,874    | n/a       | 406,870       |
| Utilities Allowance (Office Equip & supplies / Telephone, Electric etc.) |                  |                  |                   |             |             |             |           | 65,339    | 65,339        |
| Permits  |                  |                  |                   |             |             |             |           | 412,323   | 412,323       |
| Demolition Contractors Insurance   |                  |                  |                   |             |             |             |           | 970,216   | 970,216       |
| Demolition Contractors Fee   |                  |                  |                   |             |             |             |           | 3,699,103 | 3,699,103     |
| Sub-Total  |                  |                  |                   |             |             |             |           |           | 42,515,494    |
| Contingency  |                  |                  |                   |             |             |             |           |           | 6,694,115     |
| Project Total (before scrap credit)                                      |                  |                  |                   |             |             |             |           |           | 49,209,609    |
| Scrap Credit   | (1,202,298)      | (1,202,298)      | (1,141,914)       | (2,432,111) | (1,179,549) | (1,179,549) | (146,430) | -         | (8,484,150)   |
| Project Total  |                  |                  |                   |             |             |             |           |           | 40,725,459    |

**TABLE 5.1n**  
**SHERBURNE COUNTY STATION**  
**SUMMARY OF ACTIVITY COSTS**  
(2019 Dollars)

| Activities  | Unit 1      | Unit 2      | Unit 3       | Common      | Station    | Station Total |
|---|-------------|-------------|--------------|-------------|------------|---------------|
| Sherburne County Unit Rating (MWe)  | 680         | 682         | 876          |             |            | 2238          |
| Characterization / Temporary Services   | 171,000     | 171,000     | 190,000      | -           | 604,818    | 1,136,818     |
| Worker Access   | 642,334     | 642,334     | 703,642      | -           |            | 1,988,310     |
| Pre-Demolition Cleaning (Boiler / Precipitator / Tanks)                                 | 1,081,050   | 1,081,050   | 1,081,050    | -           |            | 3,243,150     |
| Asbestos Remediation  | 2,508,884   | 2,508,884   | -            | 500,000     |            | 5,517,768     |
| Equipment Removal   | 5,699,637   | 5,547,162   | 6,568,928    | 4,670,760   |            | 22,486,487    |
| Boiler(s)   | 4,182,168   | 4,182,168   | 4,619,900    | -           |            | 12,984,236    |
| Turbine Generator & Condensor   | 609,899     | 609,899     | 686,634      |             |            | 1,906,432     |
| Exhaust Gas Treatment Equipment and Structures  | 4,245,955   | 4,398,430   | 4,741,985    |             |            | 13,386,370    |
| Structures Demolition   | 7,038,228   | 7,038,228   | 7,657,026    | 6,378,958   |            | 28,112,441    |
| Backfill / Grade / Landscaping / Well Closure   | 1,656,105   | 1,656,105   | 1,814,172    | 4,761,063   | 100,000    | 9,987,445     |
| Coal Yard Closure   |             |             |              | 8,264,365   |            | 8,264,365     |
| Ash Landfills / Ash Ponds & Landfills Including Evaporation Ponds / Ash Pond Dewatering |             |             | 3,169,905    | 20,754,000  |            | 23,923,905    |
| Utility Management / Oversight  | 1,079,289   | 1,079,289   | 1,208,276    | 494,016     |            | 3,860,869     |
| Demolition Contractor Management / Supervisory / Safety Staff                           | 1,713,520   | 1,713,520   | 1,918,305    | 784,319     |            | 6,129,664     |
| Security  | 317,316     | 317,316     | 355,239      | 145,243     |            | 1,135,113     |
| Property Taxes  | -           | -           | -            | -           | -          | 0             |
| <b>Project Expenses</b>   |             |             |              |             |            |               |
| Shared Heavy Equipment / Operating Engineers  | 1,544,579   | 1,544,579   | 1,729,174    | 706,991     |            | 5,525,323     |
| Small Tool Allowance  | 535,084     | 535,084     | 539,646      | 326,216     | n/a        | 1,936,030     |
| Utilities Allowance (Office Equip & supplies / Telephone, Electric etc.)                |             |             |              |             | 76,789     | 76,789        |
| Permits   |             |             |              |             | 1,832,569  | 1,832,569     |
| Demolition Contractors Insurance  |             |             |              |             | 4,312,127  | 4,312,127     |
| Demolition Contractors Fee  |             |             |              |             | 18,327,570 | 18,327,570    |
| Sub-Total   |             |             |              |             |            | 176,073,780   |
| Contingency   |             |             |              |             |            | 26,962,844    |
| Project Total (before scrap credit)   |             |             |              |             |            | 203,036,624   |
| Scrap Credit  | (9,982,485) | (9,982,485) | (12,096,244) | (2,619,893) | -          | (34,681,107)  |
| Project Total   |             |             |              |             |            | 168,355,517   |

**TABLE 5.1o**  
**SIBLEY GAS PLANT**  
**SUMMARY OF ACTIVITY COSTS**  
(2019 Dollars)

| Activities   | Unit 1    | Station | Station Total |
|--|-----------|---------|---------------|
| Sibley Unit Rating (MW <sub>e</sub> )                                    | 0         |         | 0             |
| Characterization / Temporary Services                                    | 25,000    | 100,803 | 125,803       |
| Equipment Removal  | 1,129,907 |         | 1,129,907     |
| Structures Demolition  | 84,384    |         | 84,384        |
| Grade / Landscaping  | 164,731   | -       | 164,731       |
| Utility Management / Oversight   |           | 839,852 | 839,852       |
| Demolition Contractor Management / Supervisory / Safety Staff            |           | 499,554 | 499,554       |
| Security   |           | 177,374 | 177,374       |
| Property Taxes   | -         | -       | 0             |
| <b>Project Expenses</b>  |           |         |               |
| Shared Heavy Equipment / Operating Engineers                             |           | 781,061 | 781,061       |
| Small Tool Allowance   | 28,080    | n/a     | 28,080        |
| Utilities Allowance (Office Equip & supplies / Telephone, Electric etc.) |           | 27,241  | 27,241        |
| Permits  |           | 35,510  | 35,510        |
| Demolition Contractors Insurance   |           | 83,556  | 83,556        |
| Demolition Contractors Fee   |           | 307,534 | 307,534       |
| Sub-Total  |           |         | 4,284,587     |
| Contingency  |           |         | 642,688       |
| Project Total (before scrap credit)                                      |           |         | 4,927,275     |
| Scrap Credit   | (338,307) | -       | (338,307)     |
| Project Total  |           |         | 4,588,968     |

**TABLE 5.1p**  
**WESCOTT GAS PLANT**  
**SUMMARY OF ACTIVITY COSTS**  
(2019 Dollars)

| Activities   | Unit 1      | Station   | Station Total |
|--|-------------|-----------|---------------|
| Wescott Unit Rating (MWe)  | 0           |           | 0             |
| Characterization / Temporary Services                                    | 25,000      | 134,404   | 159,404       |
| Equipment Removal  | 4,647,516   |           | 4,647,516     |
| Structures Demolition  | 763,648     |           | 763,648       |
| Grade / Landscaping  | 756,289     | -         | 756,289       |
| Utility Management / Oversight   |             | 1,003,663 | 1,003,663     |
| Demolition Contractor Management / Supervisory / Safety Staff            |             | 1,028,973 | 1,028,973     |
| Security   |             | 227,502   | 227,502       |
| Property Taxes   | -           | -         | 0             |
| <b>Project Expenses</b>  |             |           |               |
| Shared Heavy Equipment / Operating Engineers                             |             | 1,028,362 | 1,028,362     |
| Small Tool Allowance   | 123,849     | n/a       | 123,849       |
| Utilities Allowance (Office Equip & supplies / Telephone, Electric etc.) |             | 34,940    | 34,940        |
| Permits  |             | 106,787   | 106,787       |
| Demolition Contractors Insurance   |             | 251,276   | 251,276       |
| Demolition Contractors Fee   |             | 984,009   | 984,009       |
| Sub-Total  |             |           | 11,116,217    |
| Contingency  |             |           | 1,667,433     |
| Project Total (before scrap credit)                                      |             |           | 12,783,650    |
| Scrap Credit   | (1,541,232) | -         | (1,541,232)   |
| Project Total  |             |           | 11,242,417    |

**TABLE 5.1q**  
**WILMARTH STATION**  
**SUMMARY OF ACTIVITY COSTS**  
(2019 Dollars)

| Activities   | Unit 1    | Unit 2    | Common    | Station   | Station Total |
|--|-----------|-----------|-----------|-----------|---------------|
| Wilmarth Unit Rating (MWe)   | 9         | 9         |           |           | 18            |
| Characterization / Temporary Services                                    | 34,000    | 34,000    | -         | 403,000   | 471,000       |
| Worker Access  | 61,694    | 61,694    | -         |           | 123,388       |
| Pre-Demolition Cleaning (Boiler / Precipitator / Tanks)                  | 257,800   | 257,800   | -         |           | 515,600       |
| Asbestos / Lead Paint Remediation  | 721,939   | 721,939   | -         |           | 1,443,877     |
| Equipment Removal  | 780,906   | 780,906   | 184,689   |           | 1,746,502     |
| Boiler(s)  | 420,643   | 420,643   | -         |           | 841,285       |
| Structures Demolition  | 626,917   | 626,917   | 745,744   |           | 1,999,579     |
| Backfill / Grade / Landscaping / Well Closure                            | 217,690   | 217,690   | 245,389   | 100,000   | 780,770       |
| Ash Landfills  |           |           | 1,400,239 |           | 1,400,239     |
| Utility Management / Oversight   |           |           |           | 1,119,169 | 1,119,169     |
| Demolition Contractor Management / Supervisory / Safety Staff            |           |           |           | 1,130,906 | 1,130,906     |
| Security   |           |           |           | 272,488   | 272,488       |
| Property Taxes   | -         | -         | -         | -         | 0             |
| <b>Project Expenses</b>  |           |           |           |           |               |
| Shared Heavy Equipment / Operating Engineers                             |           |           |           | 1,209,872 | 1,209,872     |
| Small Tool Allowance   | 57,276    | 57,276    | 23,516    | n/a       | 138,068       |
| Utilities Allowance (Office Equip & supplies / Telephone, Electric etc.) |           |           |           | 41,849    | 41,849        |
| Permits  |           |           |           | 148,037   | 148,037       |
| Demolition Contractors Insurance   |           |           |           | 348,338   | 348,338       |
| Demolition Contractors Fee   |           |           |           | 1,401,050 | 1,401,050     |
| Sub-Total  |           |           |           |           | 15,132,016    |
| Contingency  |           |           |           |           | 2,414,190     |
| Project Total (before scrap credit)                                      |           |           |           |           | 17,546,206    |
| Scrap Credit   | (737,645) | (737,645) | (167,478) | -         | (1,642,767)   |
| Project Total  |           |           |           |           | 15,903,439    |



## 5.2 WIND FARMS

An estimate for dismantling each of the Xcel Energy wind farm generating stations in Minnesota and North Dakota was developed by applying the system and structures inventories against the associated unit cost factors and accounting for program support costs. A summary of each wind farm's major cost categories is presented in Table 5.2. Breakdowns of the major cost categories by wind farm are provided in Tables 5.2a through 5.2p. Note that columns may not total due to rounding.

The following is an explanation of the contents of each line item in these tables:

### *TURBINE SITE REMOVAL*

*Dismantle Wind Turbine Generators* – The cost associated with removal of the nacelle, hub, blades and tower. Also included is a percentage of the utility, DOC, and security staffing, miscellaneous expenses, and site characterization costs.

*Haul Off of Materials (Trucking/Rail)* – The cost associated with the transportation of the scrap material.

*Foundation Removal* – The cost of removal of the WTG concrete foundation or in the 48-inch scenario, the pedestal removal.

*Crane Mobilization & Demobilization* – All heavy equipment costs.

### *SITE CIVIL WORK REMOVAL*

*Balance of Site Civil Work Removals* – The cost associated with backfilling below grade voids, and grading and landscaping the grounds to preclude erosion of soils. Also included is a percentage of the utility, DOC, and security staffing, miscellaneous expenses and site characterization costs.

### *COLLECTION SYSTEM REMOVAL*

*Remove Collection Cable, Remove Junction Boxes & Turbine Switchgears* – The cost associated with excavation of the cable and back-fill of the trench. Also included is a percentage of the utility, DOC, and security staffing, miscellaneous expenses and site characterization costs.

*Contingency (15%)* - The cost to cover expenses for unforeseen events that are likely to occur.

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*Approximate scrap value of components* – A credit to the project for the recovery of scrap metals. This corresponds to value shown in Table 4.3b through 4.3c.

**TABLE 5.2**  
**SUMMARY OF ACTIVITY COSTS – WIND FARMS**  
(2019 Dollars)

| ITEM | DESCRIPTION                                 | Blazing Star I      | Blazing Star I (48 in.) | Border Winds Project | Border Winds Project (48 in.) | Courtenay           | Courtenay (48 in.)  | Foxtail             | Foxtail (48 in.)    | Grand Meadow        | Grand Meadow (48 in.) | Lake Benton II      | Lake Benton II (48 in.) | Nobles              | Nobles (48 in.)     | Pleasant Valley     | Pleasant Valley (48 in.) | Complete Removal     | Removal (to to 48" depth) |
|------|---|---------------------|-------------------------|----------------------|-------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-----------------------|---------------------|-------------------------|---------------------|---------------------|---------------------|--------------------------|----------------------|---------------------------|
|      |   | AMOUNT              | AMOUNT                  | AMOUNT               | AMOUNT                        | AMOUNT              | AMOUNT              | AMOUNT              | AMOUNT              | AMOUNT              | AMOUNT                | AMOUNT              | AMOUNT                  | AMOUNT              | AMOUNT              | AMOUNT              | AMOUNT                   | AMOUNT               | ITEM                      |
| 1    | TURBINE SITE REMOVAL                        |                     |                         |                      |                               |                     |                     |                     |                     |                     |                       |                     |                         |                     |                     |                     |                          |                      |                           |
| 1a   | Dismantle Wind Turbine Generators - Model 1 | \$1,392,653         | \$1,437,495             | \$11,136,713         | \$11,604,079                  | \$13,597,829        | \$13,970,467        | \$993,756           | \$1,025,000         | \$10,279,573        | \$10,906,263          | \$804,060           | \$837,777               | \$18,641,078        | \$19,146,628        | \$15,900,269        | \$16,381,957             | \$72,745,929         | \$75,309,687              |
|      | Dismantle Wind Turbine Generators - Model 2 | \$12,625,322        | \$13,028,894            | \$0                  | \$0                           | \$0                 | \$0                 | \$9,723,737         | \$10,027,257        | \$0                 | \$0                   | \$6,529,184         | \$6,792,178             | \$0                 | \$0                 | \$0                 | \$0                      | \$28,878,242         | \$29,848,328              |
| 1b   | Haul Off of Materials (Trucking/Rail)       | \$3,053,850         | \$2,643,300             | \$1,769,707          | \$1,462,533                   | \$2,568,667         | \$2,158,116         | \$2,353,658         | \$1,987,602         | \$2,336,369         | \$2,072,402           | \$1,608,528         | \$1,391,969             | \$4,017,223         | \$3,339,613         | \$2,713,931         | \$2,285,819              | \$20,421,933         | \$17,341,355              |
| 1c   | Foundation Removal - Model 1                | \$609,370           | \$73,272                | \$5,263,779          | \$585,008                     | \$6,704,742         | \$801,686           | \$465,755           | \$54,629            | \$3,416,996         | \$525,128             | \$302,318           | \$37,728                | \$7,736,964         | \$1,012,965         | \$6,787,708         | \$792,287                | \$31,287,631         | \$3,882,702               |
|      | Foundation Removal - Model 2                | \$5,484,331         | \$659,444               | \$0                  | \$0                           | \$0                 | \$0                 | \$4,524,475         | \$530,685           | \$0                 | \$0                   | \$2,358,079         | \$294,280               | \$0                 | \$0                 | \$0                 | \$0                      | \$12,366,885         | \$1,484,409               |
| 1d   | Crane Mobilization & Demobilization         | \$1,998,541         | \$1,903,425             | \$2,417,050          | \$2,263,888                   | \$1,954,154         | \$1,846,356         | \$1,522,963         | \$1,453,212         | \$2,201,454         | \$2,138,044           | \$1,015,680         | \$977,633               | \$1,947,813         | \$1,871,720         | \$2,150,726         | \$2,061,951              | \$15,208,380         | \$14,536,230              |
|      | <b>SUBTOTAL</b>                             | <b>\$25,164,068</b> | <b>\$19,745,830</b>     | <b>\$20,687,249</b>  | <b>\$16,935,608</b>           | <b>\$24,826,391</b> | <b>\$18,776,626</b> | <b>\$19,584,343</b> | <b>\$16,078,386</b> | <b>\$18,234,392</b> | <b>\$16,641,868</b>   | <b>\$12,617,848</b> | <b>\$10,331,665</b>     | <b>\$32,343,078</b> | <b>\$26,370,926</b> | <b>\$27,662,633</b> | <b>\$21,622,014</b>      | <b>\$180,909,001</b> | <b>\$142,402,711</b>      |
| 2    | SITE CIVIL WORK REMOVAL                     |                     |                         |                      |                               |                     |                     |                     |                     |                     |                       |                     |                         |                     |                     |                     |                          |                      |                           |
| 2a   | Balance of Site Civil Work Removals         | \$10,397,806        | \$10,084,299            | \$8,909,810          | \$8,622,688                   | \$11,048,476        | \$10,695,312        | \$8,406,384         | \$8,171,092         | \$7,490,034         | \$7,343,033           | \$4,848,790         | \$4,759,976             | \$13,434,084        | \$13,038,736        | \$10,584,412        | \$10,237,618             | \$75,119,796         | \$72,952,756              |
|      | <b>SUBTOTAL</b>                             | <b>\$10,397,806</b> | <b>\$10,084,299</b>     | <b>\$8,909,810</b>   | <b>\$8,622,688</b>            | <b>\$11,048,476</b> | <b>\$10,695,312</b> | <b>\$8,406,384</b>  | <b>\$8,171,092</b>  | <b>\$7,490,034</b>  | <b>\$7,343,033</b>    | <b>\$4,848,790</b>  | <b>\$4,759,976</b>      | <b>\$13,434,084</b> | <b>\$13,038,736</b> | <b>\$10,584,412</b> | <b>\$10,237,618</b>      | <b>\$75,119,796</b>  | <b>\$72,952,756</b>       |
| 3    | COLLECTION SYSTEM REMOVAL                   |                     |                         |                      |                               |                     |                     |                     |                     |                     |                       |                     |                         |                     |                     |                     |                          |                      |                           |
| 3a   | Remove MV Collection Cable                  | \$2,023,676         | \$408,958               | \$1,933,366          | \$397,071                     | \$2,050,705         | \$407,251           | \$1,609,155         | \$324,523           | \$1,697,809         | \$366,382             | \$1,054,685         | \$221,763               | \$2,399,425         | \$479,044           | \$2,165,432         | \$438,778                | \$14,934,254         | \$3,043,769               |
| 3b   | Remove Junction Boxes & Turbine Switchgears | \$313,937           | \$31,394                | \$248,574            | \$24,857                      | \$331,432           | \$33,143            | \$248,574           | \$24,857            | \$210,338           | \$21,034              | \$138,132           | \$13,813                | \$420,675           | \$42,068            | \$313,937           | \$31,394                 | \$2,225,597          | \$222,560                 |
|      | <b>SUBTOTAL</b>                             | <b>\$2,337,613</b>  | <b>\$440,352</b>        | <b>\$2,181,939</b>   | <b>\$421,928</b>              | <b>\$2,382,137</b>  | <b>\$440,394</b>    | <b>\$1,857,729</b>  | <b>\$349,380</b>    | <b>\$1,908,147</b>  | <b>\$387,416</b>      | <b>\$1,192,817</b>  | <b>\$235,676</b>        | <b>\$2,820,100</b>  | <b>\$521,112</b>    | <b>\$2,479,368</b>  | <b>\$470,172</b>         | <b>\$17,159,851</b>  | <b>\$3,266,329</b>        |
|      | <b>SITE SUBTOTAL</b>                        | <b>\$37,899,487</b> | <b>\$30,270,481</b>     | <b>\$31,678,997</b>  | <b>\$24,980,125</b>           | <b>\$38,256,004</b> | <b>\$29,912,331</b> | <b>\$29,848,456</b> | <b>\$23,698,866</b> | <b>\$27,632,572</b> | <b>\$23,372,307</b>   | <b>\$18,659,455</b> | <b>\$16,327,118</b>     | <b>\$48,597,262</b> | <b>\$38,930,775</b> | <b>\$40,616,414</b> | <b>\$32,229,804</b>      | <b>\$273,188,648</b> | <b>\$218,621,796</b>      |
|      | CONTINGENCY (15%)                           | \$5,684,923         | \$4,540,572             | \$4,751,850          | \$3,747,019                   | \$5,738,401         | \$4,486,850         | \$4,477,268         | \$3,539,828         | \$4,144,886         | \$3,505,846           | \$2,798,918         | \$2,299,068             | \$7,289,589         | \$5,839,616         | \$6,092,462         | \$4,834,471              | \$40,978,297         | \$32,793,269              |
|      | Project Total (before scrap credit)         | \$43,584,410        | \$34,811,053            | \$36,430,847         | \$28,727,143                  | \$43,994,405        | \$34,399,181        | \$34,325,724        | \$27,138,685        | \$31,777,458        | \$26,878,153          | \$21,458,374        | \$17,626,185            | \$55,886,851        | \$44,770,391        | \$46,708,876        | \$37,064,275             | \$314,166,945        | \$251,415,066             |
|      | APPROXIMATE SCRAP VALUE OF COMPONENTS       | (\$8,818,650)       | (\$6,449,499)           | (\$5,456,601)        | (\$3,681,527)                 | (\$7,680,961)       | (\$5,311,810)       | (\$6,767,995)       | (\$4,850,452)       | (\$6,741,262)       | (\$5,180,812)         | (\$4,628,964)       | (\$3,429,286)           | (\$12,298,196)      | (\$8,815,111)       | (\$7,970,541)       | (\$5,558,899)            | (\$60,363,190)       | (\$43,277,397)            |
|      | <b>TOTAL PRICE</b>                          | <b>\$34,765,760</b> | <b>\$28,361,555</b>     | <b>\$30,974,246</b>  | <b>\$25,046,616</b>           | <b>\$36,313,443</b> | <b>\$29,087,370</b> | <b>\$27,557,729</b> | <b>\$22,288,232</b> | <b>\$25,036,176</b> | <b>\$21,697,340</b>   | <b>\$16,829,410</b> | <b>\$14,196,899</b>     | <b>\$43,588,656</b> | <b>\$36,966,280</b> | <b>\$38,738,336</b> | <b>\$31,605,376</b>      | <b>\$253,803,755</b> | <b>\$208,137,669</b>      |

Note: Model 1 and Model 2 designate the two Models of WTG at Blazing Star I, Foxtail, and Lake Benton II.

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**TABLE 5.2a**  
**Blazing Star I Wind Farm**

**SUMMARY OF ACTIVITY COSTS**  
**(2019 Dollars)**

| Blazing Star I |   |                      |      |              |                     |
|----------------|---|----------------------|------|--------------|---------------------|
| ITEM           | DESCRIPTION                                 | QUANTITY             | UNIT | UNIT PRICE   | AMOUNT              |
| 1              | TURBINE SITE REMOVAL                        |                      |      |              |                     |
|                |   |                      |      |              |                     |
| 1a             | Dismantle Wind Turbine Generators - V110    | 10                   | EA   | \$139,265    | \$1,392,653         |
|                | Dismantle Wind Turbine Generators - V120    | 90                   | EA   | \$140,281    | \$12,625,322        |
|                |   |                      |      |              |                     |
| 1b             | Haul Off of Materials (Trucking/Rail)       | 100                  | EA   | 30,539       | \$3,053,850         |
|                |   |                      |      |              |                     |
|                |   |                      |      |              |                     |
| 1c             | Foundation Removal - V110                   | 10                   | EA   | \$60,937     | \$609,370           |
|                | Foundation Removal - V120                   | 90                   | EA   | \$60,937     | \$5,484,331         |
|                |   |                      |      |              |                     |
| 1d             | Crane Mobilization & Demobilization         | 1                    | LS   | \$1,998,541  | \$1,998,541         |
|                |   | <b>SUBTOTAL</b>      |      |              | <b>\$25,164,068</b> |
| 2              | SITE CIVIL WORK REMOVAL                     |                      |      |              |                     |
|                |   |                      |      |              |                     |
| 2a             | Balance of Site Civil Work Removals         | 1                    | LS   | \$10,397,806 | \$10,397,806        |
|                |   |                      |      |              |                     |
|                |   | <b>SUBTOTAL</b>      |      |              | <b>\$10,397,806</b> |
| 3              | COLLECTION SYSTEM REMOVAL                   |                      |      |              |                     |
|                |   |                      |      |              |                     |
| 3a             | Remove MV Collection Cable                  | 1                    | LS   | \$2,023,676  | \$2,023,676         |
| 3b             | Remove Junction Boxes & Turbine Switchgears | 1                    | LS   | \$313,937    | \$313,937           |
|                |   |                      |      |              |                     |
|                |   | <b>SUBTOTAL</b>      |      |              | <b>\$2,337,613</b>  |
|                |   | <b>SITE SUBTOTAL</b> |      |              | <b>\$37,899,487</b> |
|                | CONTINGENCY (15%)                           |                      |      |              | \$5,684,923         |
|                | Project Total (before scrap credit)         |                      |      |              | \$43,584,410        |
|                | APPROXIMATE SCRAP VALUE OF COMPONENTS       |                      |      |              | (\$8,818,650)       |
|                |   | <b>TOTAL PRICE</b>   |      |              | <b>\$34,765,760</b> |

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**TABLE 5.2b**  
**Blazing Star I Wind Farm**  
 (Removal to 48 inches)  
**SUMMARY OF ACTIVITY COSTS**  
 (2019 Dollars)

**Blazing Star I (48 in.)**

| ITEM        | DESCRIPTION                                 | QUANTITY      | UNIT | UNIT PRICE   | AMOUNT        |
|-------------|---|---------------|------|--------------|---------------|
| 1           | TURBINE SITE REMOVAL                        |               |      |              |               |
|             |   |               |      |              |               |
| 1a          | Dismantle Wind Turbine Generators - V110    | 10            | EA   | \$143,749    | \$1,437,495   |
|             | Dismantle Wind Turbine Generators - V120    | 90            | EA   | \$144,765    | \$13,028,894  |
|             |   |               |      |              |               |
| 1b          | Haul Off of Materials (Trucking/Rail)       | 100           | EA   | 26,433       | \$2,643,300   |
|             |   |               |      |              |               |
|             |   |               |      |              |               |
| 1c          | Foundation Removal V110                     | 10            | EA   | \$7,327      | \$73,272      |
|             | Foundation Removal V120                     | 90            | EA   | \$7,327      | \$659,444     |
|             |   |               |      |              |               |
| 1d          | Crane Mobilization & Demobilization         | 1             | LS   | \$1,903,425  | \$1,903,425   |
|             |   | SUBTOTAL      |      |              | \$19,745,830  |
| 2           | SITE CIVIL WORK REMOVAL                     |               |      |              |               |
|             |   |               |      |              |               |
| 2a          | Balance of Site Civil Work Removals         | 1             | LS   | \$10,084,299 | \$10,084,299  |
|             |   |               |      |              |               |
|             |   | SUBTOTAL      |      |              | \$10,084,299  |
| 3           | COLLECTION SYSTEM REMOVAL                   |               |      |              |               |
|             |   |               |      |              |               |
| 3a          | Remove MV Collection Cable                  | 1             | LS   | \$408,958    | \$408,958     |
| 3b          | Remove Junction Boxes & Turbine Switchgears | 1             | LS   | \$31,394     | \$31,394      |
|             |   |               |      |              |               |
|             |   | SUBTOTAL      |      |              | \$440,352     |
|             |   |               |      |              |               |
|             |   | SITE SUBTOTAL |      |              | \$30,270,481  |
|             | CONTINGENGY (15%)                           |               |      |              | \$4,540,572   |
|             | Project Total (before scrap credit)         |               |      |              | \$34,811,053  |
|             | APPROXIMATE SCRAP VALUE OF COMPONENTS       |               |      |              | (\$6,449,499) |
|             |   |               |      |              |               |
| TOTAL PRICE |   |               |      |              | \$28,361,555  |

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**TABLE 5.2c**  
**Border Winds Project**

**SUMMARY OF ACTIVITY COSTS**  
**(2019 Dollars)**

| Border Winds Project |   |                      |      |             |                     |
|----------------------|---|----------------------|------|-------------|---------------------|
| ITEM                 | DESCRIPTION                                 | QUANTITY             | UNIT | UNIT PRICE  | AMOUNT              |
| 1                    | TURBINE SITE REMOVAL                        |                      |      |             |                     |
|                      |   |                      |      |             |                     |
| 1a                   | Dismantle Wind Turbine Generators V100.20   | 75                   | EA   | \$148,490   | \$11,136,713        |
|                      |   |                      |      |             |                     |
|                      |   |                      |      |             |                     |
| 1b                   | Haul Off of Materials (Trucking/Rail)       | 75                   | EA   | 23,596      | \$1,769,707         |
|                      |   |                      |      |             |                     |
|                      |   |                      |      |             |                     |
| 1c                   | Foundation Removal V100.20                  | 75                   | EA   | \$70,184    | \$5,263,779         |
|                      |   |                      |      |             |                     |
|                      |   |                      |      |             |                     |
| 1d                   | Crane Mobilization & Demobilization         | 1                    | LS   | \$2,417,050 | \$2,417,050         |
|                      |   | <b>SUBTOTAL</b>      |      |             | <b>\$20,587,249</b> |
| 2                    | SITE CIVIL WORK REMOVAL                     |                      |      |             |                     |
|                      |   |                      |      |             |                     |
| 2a                   | Balance of Site Civil Work Removals         | 1                    | LS   | \$8,909,810 | \$8,909,810         |
|                      |   |                      |      |             |                     |
|                      |   | <b>SUBTOTAL</b>      |      |             | <b>\$8,909,810</b>  |
| 3                    | COLLECTION SYSTEM REMOVAL                   |                      |      |             |                     |
|                      |   |                      |      |             |                     |
| 3a                   | Remove MV Collection Cable                  | 1                    | LS   | \$1,933,366 | \$1,933,366         |
| 3b                   | Remove Junction Boxes & Turbine Switchgears | 1                    | LS   | \$248,574   | \$248,574           |
|                      |   |                      |      |             |                     |
|                      |   | <b>SUBTOTAL</b>      |      |             | <b>\$2,181,939</b>  |
|                      |   | <b>SITE SUBTOTAL</b> |      |             | <b>\$31,678,997</b> |
|                      | CONTINGENCY (15%)                           |                      |      |             | \$4,751,850         |
|                      | Project Total (before scrap credit)         |                      |      |             | \$36,430,847        |
|                      | APPROXIMATE SCRAP VALUE OF COMPONENTS       |                      |      |             | (\$5,456,601)       |
|                      |   | <b>TOTAL PRICE</b>   |      |             | <b>\$30,974,246</b> |

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**TABLE 5.2d**  
**Border Winds Project**  
 (Removal to 48 inches)  
**SUMMARY OF ACTIVITY COSTS**  
 (2019 Dollars)

| Border Winds<br>Project (48 in.) |  |               |      |             |               |
|----------------------------------|--|---------------|------|-------------|---------------|
| ITEM                             | DESCRIPTION                                  | QUANTITY      | UNIT | UNIT PRICE  | AMOUNT        |
| 1                                | TURBINE SITE REMOVAL                         |               |      |             |               |
|                                  |  |               |      |             |               |
| 1a                               | Dismantle Wind Turbine Generators - V100-2.0 | 75            | EA   | \$154,721   | \$11,604,079  |
|                                  |  |               |      |             |               |
|                                  |  |               |      |             |               |
| 1b                               | Haul Off of Materials (Trucking/Rail)        | 75            | EA   | 19,500      | \$1,462,533   |
|                                  |  |               |      |             |               |
|                                  |  |               |      |             |               |
| 1c                               | Foundation Removal - V100-2.0                | 75            | EA   | \$7,800     | \$585,008     |
|                                  |  |               |      |             |               |
|                                  |  |               |      |             |               |
| 1d                               | Crane Mobilization & Demobilization          | 1             | LS   | \$2,283,888 | \$2,283,888   |
|                                  |  | SUBTOTAL      |      |             | \$15,935,508  |
| 2                                | SITE CIVIL WORK REMOVAL                      |               |      |             |               |
|                                  |  |               |      |             |               |
| 2a                               | Balance of Site Civil Work Removals          | 1             | LS   | \$8,622,688 | \$8,622,688   |
|                                  |  |               |      |             |               |
|                                  |  | SUBTOTAL      |      |             | \$8,622,688   |
| 3                                | COLLECTION SYSTEM REMOVAL                    |               |      |             |               |
|                                  |  |               |      |             |               |
| 3a                               | Remove MV Collection Cable                   | 1             | LS   | \$397,071   | \$397,071     |
| 3b                               | Remove Junction Boxes & Turbine Switchgears  | 1             | LS   | \$24,857    | \$24,857      |
|                                  |  |               |      |             |               |
|                                  |  | SUBTOTAL      |      |             | \$421,928     |
|                                  |  |               |      |             |               |
|                                  |  | SITE SUBTOTAL |      |             | \$24,980,125  |
|                                  | CONTINGENGY (15%)                            |               |      |             | \$3,747,019   |
|                                  | Project Total (before scrap credit)          |               |      |             | \$28,727,143  |
|                                  | APPROXIMATE SCRAP VALUE OF COMPONENTS        |               |      |             | (\$3,681,527) |
|                                  |  |               |      |             |               |
| TOTAL PRICE                      |  |               |      |             | \$25,045,616  |

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**TABLE 5.2e**  
**Courtenay Wind Farm**

**SUMMARY OF ACTIVITY COSTS**  
**(2019 Dollars)**

| Courtenay          |  |                      |      |              |                     |
|--------------------|--|----------------------|------|--------------|---------------------|
| ITEM               | DESCRIPTION                                  | QUANTITY             | UNIT | UNIT PRICE   | AMOUNT              |
| 1                  | TURBINE SITE REMOVAL                         |                      |      |              |                     |
| 1a                 | Dismantle Wind Turbine Generators - V100-2.0 | 100                  | EA   | \$135,978    | \$13,597,829        |
| 1b                 | Haul Off of Materials (Trucking/Rail)        | 100                  | EA   | 25,687       | \$2,568,667         |
| 1c                 | Foundation Removal - V100-2.0                | 100                  | EA   | \$67,047     | \$6,704,742         |
| 1d                 | Crane Mobilization & Demobilization          | 1                    | LS   | \$1,954,154  | \$1,954,154         |
|                    |  | <b>SUBTOTAL</b>      |      |              | <b>\$24,825,391</b> |
| 2                  | SITE CIVIL WORK REMOVAL                      |                      |      |              |                     |
| 2a                 | Balance of Site Civil Work Removals          | 1                    | LS   | \$11,048,476 | \$11,048,476        |
|                    |  | <b>SUBTOTAL</b>      |      |              | <b>\$11,048,476</b> |
| 3                  | COLLECTION SYSTEM REMOVAL                    |                      |      |              |                     |
| 3a                 | Remove MV Collection Cable                   | 1                    | LS   | \$2,050,705  | \$2,050,705         |
| 3b                 | Remove Junction Boxes & Turbine Switchgears  | 1                    | LS   | \$331,432    | \$331,432           |
|                    |  | <b>SUBTOTAL</b>      |      |              | <b>\$2,382,137</b>  |
|                    |  | <b>SITE SUBTOTAL</b> |      |              | <b>\$38,256,004</b> |
|                    | CONTINGENCY (15%)                            |                      |      |              | \$5,738,401         |
|                    | Project Total (before scrap credit)          |                      |      |              | \$43,994,405        |
|                    | APPROXIMATE SCRAP VALUE OF COMPONENTS        |                      |      |              | (\$7,680,961)       |
| <b>TOTAL PRICE</b> |  |                      |      |              | <b>\$36,313,443</b> |



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**TABLE 5.2f**  
**Courtenay Wind Farm**  
 (Removal to 48 inches)  
**SUMMARY OF ACTIVITY COSTS**  
 (2019 Dollars)

| Courtenay (48 in.) |  |                      |      |              |                     |
|--------------------|--|----------------------|------|--------------|---------------------|
| ITEM               | DESCRIPTION                                  | QUANTITY             | UNIT | UNIT PRICE   | AMOUNT              |
| 1                  | TURBINE SITE REMOVAL                         |                      |      |              |                     |
|                    |  |                      |      |              |                     |
| 1a                 | Dismantle Wind Turbine Generators - V100-2.0 | 100                  | EA   | \$139,705    | \$13,970,467        |
|                    |  |                      |      |              |                     |
|                    |  |                      |      |              |                     |
| 1b                 | Haul Off of Materials (Trucking/Rail)        | 100                  | EA   | 21,581       | \$2,158,116         |
|                    |  |                      |      |              |                     |
|                    |  |                      |      |              |                     |
| 1c                 | Foundation Removal - V100-2.0                | 100                  | EA   | \$8,017      | \$801,686           |
|                    |  |                      |      |              |                     |
|                    |  |                      |      |              |                     |
| 1d                 | Crane Mobilization & Demobilization          | 1                    | LS   | \$1,846,356  | \$1,846,356         |
|                    |  | <b>SUBTOTAL</b>      |      |              | <b>\$18,776,625</b> |
| 2                  | SITE CIVIL WORK REMOVAL                      |                      |      |              |                     |
|                    |  |                      |      |              |                     |
| 2a                 | Balance of Site Civil Work Removals          | 1                    | LS   | \$10,695,312 | \$10,695,312        |
|                    |  |                      |      |              |                     |
|                    |  | <b>SUBTOTAL</b>      |      |              | <b>\$10,695,312</b> |
| 3                  | COLLECTION SYSTEM REMOVAL                    |                      |      |              |                     |
|                    |  |                      |      |              |                     |
| 3a                 | Remove MV Collection Cable                   | 1                    | LS   | \$407,251    | \$407,251           |
| 3b                 | Remove Junction Boxes & Turbine Switchgears  | 1                    | LS   | \$33,143     | \$33,143            |
|                    |  |                      |      |              |                     |
|                    |  | <b>SUBTOTAL</b>      |      |              | <b>\$440,394</b>    |
|                    |  |                      |      |              |                     |
|                    |  | <b>SITE SUBTOTAL</b> |      |              | <b>\$29,912,331</b> |
|                    | CONTINGENCY (15%)                            |                      |      |              | \$4,486,850         |
|                    | Project Total (before scrap credit)          |                      |      |              | \$34,399,181        |
|                    | APPROXIMATE SCRAP VALUE OF COMPONENTS        |                      |      |              | (\$5,311,810)       |
|                    |  |                      |      |              |                     |
| <b>TOTAL PRICE</b> |  |                      |      |              | <b>\$29,087,370</b> |

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**TABLE 5.2g**  
**Foxtail Wind Farm**

**SUMMARY OF ACTIVITY COSTS**  
**(2019 Dollars)**

|             |   |                      |             |                   | <b>Foxtail</b>      |
|-------------|---|----------------------|-------------|-------------------|---------------------|
| <b>ITEM</b> | <b>DESCRIPTION</b>                          | <b>QUANTITY</b>      | <b>UNIT</b> | <b>UNIT PRICE</b> | <b>AMOUNT</b>       |
| 1           | TURBINE SITE REMOVAL                        |                      |             |                   |                     |
|             |   |                      |             |                   |                     |
| 1a          | Dismantle Wind Turbine Generators - V110    | 7                    | EA          | \$141,965         | \$993,756           |
|             | Dismantle Wind Turbine Generators - V120    | 68                   | EA          | \$142,996         | \$9,723,737         |
|             |   |                      |             |                   |                     |
| 1b          | Haul Off of Materials (Trucking/Rail)       | 75                   | EA          | 31,382            | \$2,353,658         |
|             |   |                      |             |                   |                     |
|             |   |                      |             |                   |                     |
| 1c          | Foundation Removal - V110                   | 7                    | EA          | \$66,536          | \$465,755           |
|             | Foundation Removal - V120                   | 68                   | EA          | \$66,536          | \$4,524,475         |
|             |   |                      |             |                   |                     |
| 1d          | Crane Mobilization & Demobilization         | 1                    | LS          | \$1,522,963       | \$1,522,963         |
|             |   | <b>SUBTOTAL</b>      |             |                   | <b>\$19,584,343</b> |
| 2           | SITE CIVIL WORK REMOVAL                     |                      |             |                   |                     |
|             |   |                      |             |                   |                     |
| 2a          | Balance of Site Civil Work Removals         | 1                    | LS          | \$8,406,384       | \$8,406,384         |
|             |   |                      |             |                   |                     |
|             |   | <b>SUBTOTAL</b>      |             |                   | <b>\$8,406,384</b>  |
| 3           | COLLECTION SYSTEM REMOVAL                   |                      |             |                   |                     |
|             |   |                      |             |                   |                     |
| 3a          | Remove MV Collection Cable                  | 1                    | LS          | \$1,609,155       | \$1,609,155         |
| 3b          | Remove Junction Boxes & Turbine Switchgears | 1                    | LS          | \$248,574         | \$248,574           |
|             |   |                      |             |                   |                     |
|             |   | <b>SUBTOTAL</b>      |             |                   | <b>\$1,857,729</b>  |
|             |   | <b>SITE SUBTOTAL</b> |             |                   | <b>\$29,848,456</b> |
|             | CONTINGENCY (15%)                           |                      |             |                   | \$4,477,268         |
|             | Project Total (before scrap credit)         |                      |             |                   | \$34,325,724        |
|             | APPROXIMATE SCRAP VALUE OF COMPONENTS       |                      |             |                   | (\$6,767,995)       |
|             |   | <b>TOTAL PRICE</b>   |             |                   | <b>\$27,557,729</b> |

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**TABLE 5.2h**  
**Foxtail Wind Farm**  
 (Removal to 48 inches)  
**SUMMARY OF ACTIVITY COSTS**  
 (2019 Dollars)

| Foxtail (48 in.) |   |               |      |             |               |
|------------------|---|---------------|------|-------------|---------------|
| ITEM             | DESCRIPTION                                 | QUANTITY      | UNIT | UNIT PRICE  | AMOUNT        |
| 1                | TURBINE SITE REMOVAL                        |               |      |             |               |
|                  |   |               |      |             |               |
| 1a               | Dismantle Wind Turbine Generators - V110    | 7             | EA   | \$146,429   | \$1,025,000   |
|                  | Dismantle Wind Turbine Generators - V120    | 68            | EA   | \$147,460   | \$10,027,257  |
|                  |   |               |      |             |               |
| 1b               | Haul Off of Materials (Trucking/Rail)       | 75            | EA   | 26,501      | \$1,987,602   |
|                  |   |               |      |             |               |
|                  |   |               |      |             |               |
| 1c               | Foundation Removal - V110                   | 7             | EA   | \$7,804     | \$54,629      |
|                  | Foundation Removal - V120                   | 68            | EA   | \$7,804     | \$530,685     |
|                  |   |               |      |             |               |
| 1d               | Crane Mobilization & Demobilization         | 1             | LS   | \$1,453,212 | \$1,453,212   |
|                  |   | SUBTOTAL      |      |             | \$15,078,385  |
| 2                | SITE CIVIL WORK REMOVAL                     |               |      |             |               |
|                  |   |               |      |             |               |
| 2a               | Balance of Site Civil Work Removals         | 1             | LS   | \$8,171,092 | \$8,171,092   |
|                  |   |               |      |             |               |
|                  |   | SUBTOTAL      |      |             | \$8,171,092   |
| 3                | COLLECTION SYSTEM REMOVAL                   |               |      |             |               |
|                  |   |               |      |             |               |
| 3a               | Remove MV Collection Cable                  | 1             | LS   | \$324,523   | \$324,523     |
| 3b               | Remove Junction Boxes & Turbine Switchgears | 1             | LS   | \$24,857    | \$24,857      |
|                  |   |               |      |             |               |
|                  |   | SUBTOTAL      |      |             | \$349,380     |
|                  |   | SITE SUBTOTAL |      |             | \$23,598,856  |
|                  | CONTINGENCY (15%)                           |               |      |             | \$3,539,828   |
|                  | Project Total (before scrap credit)         |               |      |             | \$27,138,685  |
|                  | APPROXIMATE SCRAP VALUE OF COMPONENTS       |               |      |             | (\$4,850,452) |
|                  |   | TOTAL PRICE   |      |             | \$22,288,232  |

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**TABLE 5.2i**  
**Grand Meadow Wind**

**SUMMARY OF ACTIVITY COSTS**  
**(2019 Dollars)**

| Grand Meadow |  |               |      |             |               |
|--------------|--|---------------|------|-------------|---------------|
| ITEM         | DESCRIPTION                                  | QUANTITY      | UNIT | UNIT PRICE  | AMOUNT        |
| 1            | TURBINE SITE REMOVAL                         |               |      |             |               |
| 1a           | Dismantle Wind Turbine Generators - GE1.5-77 | 67            | EA   | \$153,426   | \$10,279,573  |
| 1b           | Haul Off of Materials (Trucking/Rail)        | 67            | EA   | 34,871      | \$2,336,369   |
| 1c           | Foundation Removal - GE1.5-77                | 67            | EA   | \$51,000    | \$3,416,996   |
| 1d           | Crane Mobilization & Demobilization          | 1             | LS   | \$2,201,454 | \$2,201,454   |
|              |  | SUBTOTAL      |      |             | \$18,234,392  |
| 2            | SITE CIVIL WORK REMOVAL                      |               |      |             |               |
| 2a           | Balance of Site Civil Work Removals          | 1             | LS   | \$7,490,034 | \$7,490,034   |
|              |  | SUBTOTAL      |      |             | \$7,490,034   |
| 3            | COLLECTION SYSTEM REMOVAL                    |               |      |             |               |
| 3a           | Remove MV Collection Cable                   | 1             | LS   | \$1,697,809 | \$1,697,809   |
| 3b           | Remove Junction Boxes & Turbine Switchgears  | 1             | LS   | \$210,338   | \$210,338     |
|              |  | SUBTOTAL      |      |             | \$1,908,147   |
|              |  | SITE SUBTOTAL |      |             | \$27,632,572  |
|              | CONTINGENCY (15%)                            |               |      |             | \$4,144,886   |
|              | Project Total (before scrap credit)          |               |      |             | \$31,777,458  |
|              | APPROXIMATE SCRAP VALUE OF COMPONENTS        |               |      |             | (\$6,741,282) |
| TOTAL PRICE  |  |               |      |             | \$25,036,176  |

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**TABLE 5.2j**  
**Grand Meadow Wind**  
 (Removal to 48 inches)  
**SUMMARY OF ACTIVITY COSTS**  
 (2019 Dollars)

| Grand Meadow<br>(48 in.) |  |               |      |             |               |
|--------------------------|--|---------------|------|-------------|---------------|
| ITEM                     | DESCRIPTION                                  | QUANTITY      | UNIT | UNIT PRICE  | AMOUNT        |
| 1                        | TURBINE SITE REMOVAL                         |               |      |             |               |
| 1a                       | Dismantle Wind Turbine Generators - GE1.5-77 | 67            | EA   | \$162,780   | \$10,906,283  |
| 1b                       | Haul Off of Materials (Trucking/Rail)        | 67            | EA   | 30,931      | \$2,072,402   |
| 1c                       | Foundation Removal - GE1.5-77                | 67            | EA   | \$7,838     | \$525,128     |
| 1d                       | Crane Mobilization & Demobilization          | 1             | LS   | \$2,138,044 | \$2,138,044   |
|                          |  | SUBTOTAL      |      |             | \$15,641,858  |
| 2                        | SITE CIVIL WORK REMOVAL                      |               |      |             |               |
| 2a                       | Balance of Site Civil Work Removals          | 1             | LS   | \$7,343,033 | \$7,343,033   |
|                          |  | SUBTOTAL      |      |             | \$7,343,033   |
| 3                        | COLLECTION SYSTEM REMOVAL                    |               |      |             |               |
| 3a                       | Remove MV Collection Cable                   | 1             | LS   | \$366,382   | \$366,382     |
| 3b                       | Remove Junction Boxes & Turbine Switchgears  | 1             | LS   | \$21,034    | \$21,034      |
|                          |  | SUBTOTAL      |      |             | \$387,416     |
|                          |  | SITE SUBTOTAL |      |             | \$23,372,307  |
|                          | CONTINGENCY (15%)                            |               |      |             | \$3,505,846   |
|                          | Project Total (before scrap credit)          |               |      |             | \$26,878,153  |
|                          | APPROXIMATE SCRAP VALUE OF COMPONENTS        |               |      |             | (\$5,180,812) |
| TOTAL PRICE              |  |               |      |             | \$21,697,340  |

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**TABLE 5.2k**  
**Lake Benton II Wind**

**SUMMARY OF ACTIVITY COSTS**  
**(2019 Dollars)**

| Lake Benton II |   |               |      |             |               |
|----------------|---|---------------|------|-------------|---------------|
| ITEM           | DESCRIPTION                                   | QUANTITY      | UNIT | UNIT PRICE  | AMOUNT        |
| 1              | TURBINE SITE REMOVAL                          |               |      |             |               |
|                |   |               |      |             |               |
| 1a             | Dismantle Wind Turbine Generators - GE2.1-116 | 5             | EA   | \$160,812   | \$804,060     |
|                | Dismantle Wind Turbine Generators - GE2.3-116 | 39            | EA   | \$167,415   | \$6,529,184   |
|                |   |               |      |             |               |
| 1b             | Haul Off of Materials (Trucking/Rail)         | 44            | EA   | 36,557      | \$1,608,528   |
|                |   |               |      |             |               |
|                |   |               |      |             |               |
| 1c             | Foundation Removal - GE2.1-116                | 5             | EA   | \$60,464    | \$302,318     |
|                | Foundation Removal - GE2.3-116                | 39            | EA   | \$60,464    | \$2,358,079   |
|                |   |               |      |             |               |
| 1d             | Crane Mobilization & Demobilization           | 1             | LS   | \$1,015,680 | \$1,015,680   |
|                |   | SUBTOTAL      |      |             | \$12,617,848  |
| 2              | SITE CIVIL WORK REMOVAL                       |               |      |             |               |
|                |   |               |      |             |               |
| 2a             | Balance of Site Civil Work Removals           | 1             | LS   | \$4,848,790 | \$4,848,790   |
|                |   |               |      |             |               |
|                |   | SUBTOTAL      |      |             | \$4,848,790   |
| 3              | COLLECTION SYSTEM REMOVAL                     |               |      |             |               |
|                |   |               |      |             |               |
| 3a             | Remove MV Collection Cable                    | 1             | LS   | \$1,054,685 | \$1,054,685   |
| 3b             | Remove Junction Boxes & Turbine Switchgears   | 1             | LS   | \$138,132   | \$138,132     |
|                |   |               |      |             |               |
|                |   | SUBTOTAL      |      |             | \$1,192,817   |
|                |   |               |      |             |               |
|                |   | SITE SUBTOTAL |      |             | \$18,659,455  |
|                | CONTINGENGY (15%)                             |               |      |             | \$2,798,918   |
|                | Project Total (before scrap credit)           |               |      |             | \$21,458,374  |
|                | APPROXIMATE SCRAP VALUE OF COMPONENTS         |               |      |             | (\$4,628,964) |
|                |   |               |      |             |               |
| TOTAL PRICE    |   |               |      |             | \$16,829,410  |

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**TABLE 5.2I**  
**Lake Benton II Wind**  
 (Removal to 48 inches)  
**SUMMARY OF ACTIVITY COSTS**  
 (2019 Dollars)

| Lake Benton II (48 in.) |   |               |      |             |               |
|-------------------------|---|---------------|------|-------------|---------------|
| ITEM                    | DESCRIPTION                                   | QUANTITY      | UNIT | UNIT PRICE  | AMOUNT        |
| 1                       | TURBINE SITE REMOVAL                          |               |      |             |               |
|                         |   |               |      |             |               |
| 1a                      | Dismantle Wind Turbine Generators - GE2.1-116 | 5             | EA   | \$167,555   | \$837,777     |
|                         | Dismantle Wind Turbine Generators - GE2.3-116 | 39            | EA   | \$174,158   | \$6,792,178   |
|                         |   |               |      |             |               |
| 1b                      | Haul Off of Materials (Trucking/Rail)         | 44            | EA   | 31,636      | \$1,391,969   |
|                         |   |               |      |             |               |
|                         |   |               |      |             |               |
| 1c                      | Foundation Removal - GE2.1-116                | 5             | EA   | \$7,546     | \$37,728      |
|                         | Foundation Removal - GE2.3-116                | 39            | EA   | \$7,546     | \$294,280     |
|                         |   |               |      |             |               |
| 1d                      | Crane Mobilization & Demobilization           | 1             | LS   | \$977,633   | \$977,633     |
|                         |   | SUBTOTAL      |      |             | \$10,331,565  |
| 2                       | SITE CIVIL WORK REMOVAL                       |               |      |             |               |
|                         |   |               |      |             |               |
| 2a                      | Balance of Site Civil Work Removals           | 1             | LS   | \$4,759,976 | \$4,759,976   |
|                         |   |               |      |             |               |
|                         |   | SUBTOTAL      |      |             | \$4,759,976   |
| 3                       | COLLECTION SYSTEM REMOVAL                     |               |      |             |               |
|                         |   |               |      |             |               |
| 3a                      | Remove MV Collection Cable                    | 1             | LS   | \$221,763   | \$221,763     |
| 3b                      | Remove Junction Boxes & Turbine Switchgears   | 1             | LS   | \$13,813    | \$13,813      |
|                         |   |               |      |             |               |
|                         |   | SUBTOTAL      |      |             | \$235,576     |
|                         |   |               |      |             |               |
|                         |   | SITE SUBTOTAL |      |             | \$15,327,118  |
|                         | CONTINGENGY (15%)                             |               |      |             | \$2,299,068   |
|                         | Project Total (before scrap credit)           |               |      |             | \$17,626,185  |
|                         | APPROXIMATE SCRAP VALUE OF COMPONENTS         |               |      |             | (\$3,429,286) |
|                         |   |               |      |             |               |
| TOTAL PRICE             |   |               |      |             | \$14,196,899  |

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**TABLE 5.2m**  
**Nobles Wind Farm**

**SUMMARY OF ACTIVITY COSTS**  
**(2019 Dollars)**

|                    |  |                      |      |              | Nobles              |
|--------------------|--|----------------------|------|--------------|---------------------|
| ITEM               | DESCRIPTION                                  | QUANTITY             | UNIT | UNIT PRICE   | AMOUNT              |
| 1                  | TURBINE SITE REMOVAL                         |                      |      |              |                     |
|                    |  |                      |      |              |                     |
| 1a                 | Dismantle Wind Turbine Generators - GE1.5-77 | 134                  | EA   | \$139,113    | \$18,641,078        |
|                    |  |                      |      |              |                     |
|                    |  |                      |      |              |                     |
| 1b                 | Haul Off of Materials (Trucking/Rail)        | 134                  | EA   | 29,979       | \$4,017,223         |
|                    |  |                      |      |              |                     |
|                    |  |                      |      |              |                     |
| 1c                 | Foundation Removal - GE1.5-77                | 134                  | EA   | \$57,739     | \$7,736,964         |
|                    |  |                      |      |              |                     |
|                    |  |                      |      |              |                     |
| 1d                 | Crane Mobilization & Demobilization          | 1                    | LS   | \$1,947,813  | \$1,947,813         |
|                    |  | <b>SUBTOTAL</b>      |      |              | <b>\$32,343,078</b> |
| 2                  | SITE CIVIL WORK REMOVAL                      |                      |      |              |                     |
|                    |  |                      |      |              |                     |
| 2a                 | Balance of Site Civil Work Removals          | 1                    | LS   | \$13,434,084 | \$13,434,084        |
|                    |  |                      |      |              |                     |
|                    |  | <b>SUBTOTAL</b>      |      |              | <b>\$13,434,084</b> |
| 3                  | COLLECTION SYSTEM REMOVAL                    |                      |      |              |                     |
|                    |  |                      |      |              |                     |
| 3a                 | Remove MV Collection Cable                   | 1                    | LS   | \$2,399,425  | \$2,399,425         |
| 3b                 | Remove Junction Boxes & Turbine Switchgears  | 1                    | LS   | \$420,675    | \$420,675           |
|                    |  |                      |      |              |                     |
|                    |  | <b>SUBTOTAL</b>      |      |              | <b>\$2,820,100</b>  |
|                    |  | <b>SITE SUBTOTAL</b> |      |              | <b>\$48,597,262</b> |
|                    | CONTINGENCY (15%)                            |                      |      |              | \$7,289,589         |
|                    | Project Total (before scrap credit)          |                      |      |              | \$55,886,851        |
|                    | APPROXIMATE SCRAP VALUE OF COMPONENTS        |                      |      |              | (\$12,298,196)      |
| <b>TOTAL PRICE</b> |  |                      |      |              | <b>\$43,588,656</b> |



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**TABLE 5.2n**  
**Nobles Wind Farm**  
**(Removal to 48 inches)**  
**SUMMARY OF ACTIVITY COSTS**  
**(2019 Dollars)**

|                    |  |                      |      |              |               | Nobles (48 in.)     |
|--------------------|--|----------------------|------|--------------|---------------|---------------------|
| ITEM               | DESCRIPTION                                  | QUANTITY             | UNIT | UNIT PRICE   | AMOUNT        |                     |
| 1                  | TURBINE SITE REMOVAL                         |                      |      |              |               |                     |
|                    |  |                      |      |              |               |                     |
| 1a                 | Dismantle Wind Turbine Generators - GE1.5-77 | 134                  | EA   | \$142,885    | \$19,146,628  |                     |
|                    |  |                      |      |              |               |                     |
|                    |  |                      |      |              |               |                     |
| 1b                 | Haul Off of Materials (Trucking/Rail)        | 134                  | EA   | 24,922       | \$3,339,613   |                     |
|                    |  |                      |      |              |               |                     |
|                    |  |                      |      |              |               |                     |
| 1c                 | Foundation Removal - GE1.5-77                | 134                  | EA   | \$7,559      | \$1,012,965   |                     |
|                    |  |                      |      |              |               |                     |
|                    |  |                      |      |              |               |                     |
| 1d                 | Crane Mobilization & Demobilization          | 1                    | LS   | \$1,871,720  | \$1,871,720   |                     |
|                    |  | <b>SUBTOTAL</b>      |      |              |               | <b>\$25,370,926</b> |
| 2                  | SITE CIVIL WORK REMOVAL                      |                      |      |              |               |                     |
|                    |  |                      |      |              |               |                     |
| 2a                 | Balance of Site Civil Work Removals          | 1                    | LS   | \$13,038,736 | \$13,038,736  |                     |
|                    |  |                      |      |              |               |                     |
|                    |  | <b>SUBTOTAL</b>      |      |              |               | <b>\$13,038,736</b> |
| 3                  | COLLECTION SYSTEM REMOVAL                    |                      |      |              |               |                     |
|                    |  |                      |      |              |               |                     |
| 3a                 | Remove MV Collection Cable                   | 1                    | LS   | \$479,044    | \$479,044     |                     |
| 3b                 | Remove Junction Boxes & Turbine Switchgears  | 1                    | LS   | \$42,068     | \$42,068      |                     |
|                    |  |                      |      |              |               |                     |
|                    |  | <b>SUBTOTAL</b>      |      |              |               | <b>\$521,112</b>    |
|                    |  | <b>SITE SUBTOTAL</b> |      |              |               | <b>\$38,930,775</b> |
|                    | CONTINGENCY (15%)                            |                      |      |              | \$5,839,616   |                     |
|                    | Project Total (before scrap credit)          |                      |      |              | \$44,770,391  |                     |
|                    | APPROXIMATE SCRAP VALUE OF COMPONENTS        |                      |      |              | (\$8,815,111) |                     |
| <b>TOTAL PRICE</b> |  |                      |      |              |               | <b>\$35,955,280</b> |

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**TABLE 5.2o**  
**Pleasant Valley Wind Farm**  
**SUMMARY OF ACTIVITY COSTS**  
**(2019 Dollars)**

| Pleasant Valley    |  |                      |      |              |                     |
|--------------------|--|----------------------|------|--------------|---------------------|
| ITEM               | DESCRIPTION                                  | QUANTITY             | UNIT | UNIT PRICE   | AMOUNT              |
| 1                  | TURBINE SITE REMOVAL                         |                      |      |              |                     |
|                    |  |                      |      |              |                     |
| 1a                 | Dismantle Wind Turbine Generators - V100-2.0 | 100                  | EA   | \$159,003    | \$15,900,269        |
|                    |  |                      |      |              |                     |
|                    |  |                      |      |              |                     |
| 1b                 | Haul Off of Materials (Trucking/Rail)        | 100                  | EA   | 27,139       | \$2,713,931         |
|                    |  |                      |      |              |                     |
|                    |  |                      |      |              |                     |
| 1c                 | Foundation Removal - V100-2.0                | 100                  | EA   | \$67,877     | \$6,787,708         |
|                    |  |                      |      |              |                     |
|                    |  |                      |      |              |                     |
| 1d                 | Crane Mobilization & Demobilization          | 1                    | LS   | \$2,150,726  | \$2,150,726         |
|                    |  | <b>SUBTOTAL</b>      |      |              | <b>\$27,552,633</b> |
| 2                  | SITE CIVIL WORK REMOVAL                      |                      |      |              |                     |
|                    |  |                      |      |              |                     |
| 2a                 | Balance of Site Civil Work Removals          | 1                    | LS   | \$10,584,412 | \$10,584,412        |
|                    |  |                      |      |              |                     |
|                    |  | <b>SUBTOTAL</b>      |      |              | <b>\$10,584,412</b> |
| 3                  | COLLECTION SYSTEM REMOVAL                    |                      |      |              |                     |
|                    |  |                      |      |              |                     |
| 3a                 | Remove MV Collection Cable                   | 1                    | LS   | \$2,165,432  | \$2,165,432         |
| 3b                 | Remove Junction Boxes & Turbine Switchgears  | 1                    | LS   | \$313,937    | \$313,937           |
|                    |  |                      |      |              |                     |
|                    |  | <b>SUBTOTAL</b>      |      |              | <b>\$2,479,368</b>  |
|                    |  | <b>SITE SUBTOTAL</b> |      |              | <b>\$40,616,414</b> |
|                    | CONTINGENCY (15%)                            |                      |      |              | \$6,092,462         |
|                    | Project Total (before scrap credit)          |                      |      |              | \$46,708,876        |
|                    | APPROXIMATE SCRAP VALUE OF COMPONENTS        |                      |      |              | (\$7,970,541)       |
|                    |  |                      |      |              |                     |
| <b>TOTAL PRICE</b> |  |                      |      |              | <b>\$38,738,336</b> |

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**TABLE 5.2p**  
**Pleasant Valley Wind Farm**  
 (Removal to 48 inches)  
**SUMMARY OF ACTIVITY COSTS**  
 (2019 Dollars)

|                    |  |                      |      |              | Pleasant Valley<br>(48 in.) |
|--------------------|--|----------------------|------|--------------|-----------------------------|
| ITEM               | DESCRIPTION                                  | QUANTITY             | UNIT | UNIT PRICE   | AMOUNT                      |
| 1                  | TURBINE SITE REMOVAL                         |                      |      |              |                             |
|                    |  |                      |      |              |                             |
| 1a                 | Dismantle Wind Turbine Generators - V100-2.0 | 100                  | EA   | \$163,820    | \$16,381,957                |
|                    |  |                      |      |              |                             |
|                    |  |                      |      |              |                             |
| 1b                 | Haul Off of Materials (Trucking/Rail)        | 100                  | EA   | 22,858       | \$2,285,819                 |
|                    |  |                      |      |              |                             |
|                    |  |                      |      |              |                             |
| 1c                 | Foundation Removal - V100-2.0                | 100                  | EA   | \$7,923      | \$792,287                   |
|                    |  |                      |      |              |                             |
|                    |  |                      |      |              |                             |
| 1d                 | Crane Mobilization & Demobilization          | 1                    | LS   | \$2,061,951  | \$2,061,951                 |
|                    |  | <b>SUBTOTAL</b>      |      |              | <b>\$21,522,014</b>         |
| 2                  | SITE CIVIL WORK REMOVAL                      |                      |      |              |                             |
|                    |  |                      |      |              |                             |
| 2a                 | Balance of Site Civil Work Removals          | 1                    | LS   | \$10,237,618 | \$10,237,618                |
|                    |  |                      |      |              |                             |
|                    |  | <b>SUBTOTAL</b>      |      |              | <b>\$10,237,618</b>         |
| 3                  | COLLECTION SYSTEM REMOVAL                    |                      |      |              |                             |
|                    |  |                      |      |              |                             |
| 3a                 | Remove MV Collection Cable                   | 1                    | LS   | \$438,778    | \$438,778                   |
| 3b                 | Remove Junction Boxes & Turbine Switchgears  | 1                    | LS   | \$31,394     | \$31,394                    |
|                    |  |                      |      |              |                             |
|                    |  | <b>SUBTOTAL</b>      |      |              | <b>\$470,172</b>            |
|                    |  | <b>SITE SUBTOTAL</b> |      |              | <b>\$32,229,804</b>         |
|                    | CONTINGENCY (15%)                            |                      |      |              | \$4,834,471                 |
|                    | Project Total (before scrap credit)          |                      |      |              | \$37,064,275                |
|                    | APPROXIMATE SCRAP VALUE OF COMPONENTS        |                      |      |              | (\$5,558,899)               |
| <b>TOTAL PRICE</b> |  |                      |      |              | <b>\$31,505,376</b>         |

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**APPENDIX A**  
**SUMMARY OF STATION SYSTEM AND STRUCTURES INVENTORIES**

TABLE A  
SUMMARY OF STATION SYSTEMS AND STRUCTURES INVENTORIES

| Index                | System/Structure Inventory Data Point            | Allen S .<br>King | Angus<br>Anson | Black Dog | Blue<br>Lake | Granite<br>City | Hennepin<br>Island | High<br>Bridge | Inver<br>Hills | Key<br>City | Maplewood | Minnesota<br>Valley | Red Wing | Riverside | Sherburne<br>County | Sibley | Wescott | Wilmarth |
|----------------------|--|-------------------|----------------|-----------|--------------|-----------------|--------------------|----------------|----------------|-------------|-----------|---------------------|----------|-----------|---------------------|--------|---------|----------|
| Station Rating (Mwe) |  | 511               | 386            | 409       | 545          | 0               | 14                 | 606            | 371            | 0           | 0         | 0                   | 178      | 502       | 2238                | 0      | 0       | 18       |
| 2                    | Piping 0.25 to 2 inches diameter, linear foot    | 79,850            | 31,521         | 11,835    | 20,178       | 1,501           | -                  | 24,690         | 3,268          | 1,501       | -         | 492                 | 4,919    | 24,046    | 233,790             | -      | -       | 4,919    |
| 3                    | Piping >2 to 4 inches diameter, linear foot      | 53,123            | 31,014         | 36,003    | 13,452       | 1,001           | -                  | 16,460         | 2,579          | 1,001       | 2,195     | 12,745              | 3,279    | 16,031    | 157,111             | 2,110  | -       | 3,279    |
| 4                    | Piping >4 to 8 inches diameter, linear foot      | 35,133            | 14,009         | 24,870    | 10,357       | 3,138           | -                  | 11,173         | 6,964          | 3,138       | 1,120     | 6,427               | 2,186    | 10,687    | 103,907             | 520    | 5,585   | 2,186    |
| 5                    | Piping >8 to 14 inches diameter, linear foot     | 30,662            | 8,006          | 16,782    | 6,229        | 445             | -                  | 8,015          | 1,348          | 445         | 330       | 4,778               | 1,457    | 7,125     | 89,271              | 385    | 2,265   | 1,457    |
| 6                    | Piping >14 to 20 inches diameter, linear foot    | 7,208             | 2,614          | 7,217     | 4,259        | 148             | -                  | 5,377          | 1,139          | 148         | 90        | 2,484               | 794      | 4,750     | 26,401              | 75     | 20      | 794      |
| 7                    | Piping >20 to 36 inches diameter, linear foot    | 9,734             | 1,886          | 4,260     | 2,419        | -               | -                  | 3,971          | -              | -           | 70        | 1,803               | 289      | 3,716     | 37,053              | 16     | -       | 289      |
| 8                    | Piping >36 inches diameter, linear foot          | 5,335             | 898            | 3,074     | 1,796        | -               | -                  | 2,420          | -              | -           | -         | 17                  | 173      | 2,126     | 15,991              | -      | 60      | 173      |
| 9                    | Valves <2 inches                                 | 1,373             | 1,308          | 20        | 144          | 108             | -                  | -              | 216            | 108         | -         | 54                  | 540      | 1,418     | 4,118               | -      | -       | 540      |
| 10                   | Valves >2 to 4 inches                            | 935               | 1,660          | 1,869     | 672          | 72              | -                  | 698            | 174            | 72          | 330       | 402                 | 360      | 698       | 2,805               | 346    | -       | 360      |
| 11                   | Valves >4 to 8 inches                            | 610               | 592            | 886       | 464          | 80              | -                  | 381            | 264            | 80          | 78        | 207                 | 240      | 369       | 1,830               | 47     | 104     | 240      |
| 12                   | Valves >8 to 14 inches                           | 1,519             | 272            | 531       | 142          | 24              | -                  | 159            | 62             | 24          | 44        | 134                 | 120      | 123       | 1,115               | 54     | 35      | 120      |
| 13                   | Valves >14 to 20 inches                          | 158               | 84             | 102       | 48           | -               | -                  | 78             | -              | -           | 2         | 29                  | 50       | 66        | 587                 | -      | 4       | 50       |
| 14                   | Valves >20 to 36 inches                          | 128               | 22             | 31        | 24           | -               | -                  | 36             | -              | -           | -         | 14                  | 16       | 36        | 476                 | -      | -       | 16       |
| 15                   | Valves >36 inches                                | 56                | 6              | 22        | 12           | -               | -                  | 26             | -              | -           | -         | 1                   | 14       | 18        | 104                 | -      | -       | 14       |
| 24                   | Pipe hangers for small bore piping, each         | 5,018             | 3,641          | 3,225     | 1,449        | 81              | -                  | 1,742          | 246            | 81          | 88        | 847                 | 909      | 1,742     | 14,975              | 84     | -       | 909      |
| 25                   | Pipe hangers for large bore piping, each         | 3,351             | 1,243          | 1,672     | 1,089        | 121             | -                  | 1,249          | 391            | 121         | 64        | 393                 | 543      | 1,237     | 9,618               | 40     | 317     | 543      |
| 26                   | Pump and motor set < 300 pounds                  | 77                | 17             | 62        | 72           | 16              | -                  | 13             | 108            | 16          | 6         | 32                  | 38       | 13        | 507                 | 3      | 7       | 38       |
| 27                   | Pumps, 300-1000 pound pump                       | 23                | 16             | 18        | 12           | -               | -                  | 13             | -              | -           | -         | 4                   | 8        | 13        | 73                  | -      | 7       | 8        |
| 28                   | Pumps, >1000-10,000 pound pump                   | 14                | 5              | 15        | -            | -               | -                  | 2              | -              | -           | -         | 4                   | 11       | 2         | 44                  | -      | -       | 11       |
| 29                   | Pumps, >10,000 pound pump                        | 13                | 5              | 14        | 4            | -               | -                  | 8              | -              | -           | -         | 5                   | 8        | 4         | 9                   | -      | -       | 8        |
| 32                   | Pump motors, 300-1000 pound pump                 | 23                | 32             | 18        | 12           | -               | -                  | 13             | -              | -           | -         | 4                   | 8        | 13        | 28                  | -      | 7       | 8        |
| 33                   | Pump motors, >1000-10,000 pound pump             | 13                | 5              | 12        | -            | -               | -                  | 3              | -              | -           | -         | 4                   | 11       | 3         | 68                  | 2      | -       | 11       |
| 34                   | Pump motors, >10,000 pound pump                  | 13                | 5              | 14        | 4            | -               | -                  | 8              | -              | -           | -         | 5                   | 4        | 4         | 18                  | -      | -       | 4        |
| 37                   | Turbine-driven pumps > 10,000 pounds             | 1                 | -              | -         | -            | -               | -                  | -              | -              | -           | -         | -                   | -        | -         | 6                   | -      | -       | -        |
| 38                   | Main turbine-generator (pounds per MW(e) input)  | 1                 | 1              | 2         | -            | -               | -                  | 1              | -              | -           | -         | 3                   | 2        | 2         | 3                   | -      | -       | 2        |
| 39                   | Heat exchanger <3000 pound                       | 16                | 12             | 30        | 101          | -               | -                  | 6              | 210            | -           | -         | 15                  | 12       | 6         | 60                  | -      | -       | 12       |
| 40                   | Heat exchanger >3000 pound                       | -                 | 27             | 12        | 48           | -               | -                  | 5              | 96             | -           | -         | 7                   | 14       | 5         | 21                  | -      | -       | 14       |
| 41                   | Feedwater heater/deaerator                       | 9                 | 6              | 25        | 2            | -               | -                  | 2              | -              | -           | -         | 7                   | 12       | 2         | 31                  | -      | -       | 12       |
| 49                   | Main condenser (pounds per MW(e) input)          | 1                 | 1              | 2         | -            | -               | -                  | 1              | -              | -           | -         | 3                   | 2        | 1         | 3                   | -      | -       | 2        |
| 51                   | Tanks, <300 gallons, filters, and ion exchangers | 38                | 33             | 41        | 20           | 16              | 3                  | 10             | 34             | 16          | 5         | 39                  | 12       | 10        | 66                  | 28     | 25      | 12       |
| 52                   | Tanks, 300-3000 gallons                          | 12                | 32             | 29        | 4            | 12              | -                  | 11             | 8              | 12          | 6         | 7                   | 2        | 6         | 132                 | 9      | 4       | 2        |
| 53                   | Tanks, >3000 gallons, square foot surface        | 27,566            | 75,184         | 4,933     | 62,690       | 2,847           | -                  | 23,259         | 7,069          | 2,847       | 101,764   | 87,790              | 33,585   | 1,859     | 162,458             | 81,889 | 374,754 | 6,871    |
| 54                   | Electrical equipment, <300 pound                 | 742               | 686            | 881       | 647          | 420             | 54                 | 150            | 846            | 420         | 21        | 222                 | 322      | 128       | 6,686               | 36     | -       | 322      |
| 55                   | Electrical equipment, 300-1000 pound             | 144               | 296            | 500       | 350          | 40              | 16                 | 289            | 184            | 40          | 17        | 51                  | 18       | 280       | 936                 | 13     | 15      | 18       |
| 56                   | Electrical equipment, 1000-10,000 pound          | 122               | 190            | 203       | 280          | 80              | 25                 | 207            | 175            | 80          | 7         | 39                  | 56       | 201       | 122                 | 2      | 32      | 56       |
| 57                   | Electrical equipment, >10,000 pound              | 19                | 99             | 18        | 128          | 28              | 36                 | 16             | 168            | 28          | 5         | 4                   | 16       | 16        | 30                  | 3      | 5       | 16       |
| 59                   | Electrical transformers < 30 tons                | 3                 | 13             | 22        | 14           | 2               | -                  | 4              | 18             | 2           | 2         | 10                  | -        | 4         | 6                   | 2      | 1       | -        |
| 60                   | Electrical transformers > 30 tons                | 3                 | 9              | 6         | 12           | 2               | -                  | 5              | 12             | 2           | -         | 4                   | 2        | 5         | 3                   | -      | -       | 2        |
| 61                   | Standby diesel-generator, <100 kW                | -                 | 2              | 1         | -            | -               | -                  | -              | -              | -           | -         | -                   | -        | -         | -                   | -      | -       | -        |
| 62                   | Standby diesel-generator, 100 kW to 1 MW         | -                 | -              | -         | -            | 8               | -                  | -              | -              | 8           | -         | -                   | -        | -         | -                   | -      | -       | -        |
| 63                   | Standby diesel-generator, >1 MW                  | 2                 | -              | -         | -            | 4               | -                  | -              | -              | 4           | -         | -                   | -        | 2         | 5                   | -      | -       | -        |
| 64                   | Fluorescent light fixture                        | 200               | 250            | 450       | 180          | 80              | 10                 | 200            | 100            | 80          | 30        | 163                 | 38       | 150       | 498                 | 30     | 24      | 38       |
| 65                   | Incandescent light fixture                       | 1,564             | 288            | 1,000     | 180          | 120             | 16                 | 200            | 170            | 120         | 30        | 327                 | 258      | 150       | 4,060               | 30     | 24      | 258      |
| 66                   | Electrical cable tray, linear foot               | 27,803            | 5,512          | 13,091    | 5,651        | 1,730           | 250                | 10,276         | -              | 1,730       | -         | 2,107               | 1,364    | 9,206     | 166,291             | -      | 820     | 1,364    |
| 67                   | Electrical conduit, linear foot                  | 41,992            | 7,922          | 45,448    | 8,631        | 2,471           | 4,790              | 13,688         | -              | 2,471       | 2,060     | 18,605              | 8,658    | 11,905    | 119,404             | 2,000  | 8,500   | 8,658    |
| 69                   | Mechanical equipment, <300 pound                 | 788               | 288            | 670       | 52           | 44              | 5                  | 31             | 78             | 44          | 8         | 258                 | 360      | 21        | 2,388               | 6      | 48      | 360      |
| 70                   | Mechanical equipment, 300-1000 pound             | 198               | 312            | 290       | 812          | 64              | 8                  | 274            | 30             | 64          | -         | 77                  | 14       | 274       | 457                 | 21     | 9       | 14       |
| 71                   | Mechanical equipment, 1000-10,000 pound          | 204               | 60             | 38        | 127          | -               | 38                 | 59             | 1,000          | -           | 3         | 23                  | 60       | 44        | 516                 | 17     | 28      | 60       |
| 72                   | Mechanical equipment, >10,000 pound              | 68                | 160            | 106       | 238          | 60              | 26                 | 141            | 219            | 60          | 20        | 5                   | 45       | 103       | 90                  | 8      | 62      | 45       |

TABLE A  
SUMMARY OF SYSTEMS AND STRUCTURES INVENTORIES  
(Continued)

| Index                | System/Structure Inventory Data Point                  | Allen S. King | Angus Anson | Black Dog  | Blue Lake | Granite City | Hennepin Island | High Bridge | Inver Hills | Key City | Maplewood | Minnesota Valley | Red Wing  | Riverside  | Sherburne County | Sibley  | Wescott | Wilmarth  |
|----------------------|--|---------------|-------------|------------|-----------|--------------|-----------------|-------------|-------------|----------|-----------|------------------|-----------|------------|------------------|---------|---------|-----------|
| Station Rating (Mwe) |  | 511           | 386         | 409        | 545       | 0            | 14              | 606         | 371         | 0        | 0         | 0                | 178       | 502        | 2238             | 0       | 0       | 18        |
| 76                   | HVAC equipment, <300 pound                             | 108           | 14          | -          | 16        | -            | -               | -           | 24          | -        | -         | 4                | 10        | -          | 328              | -       | -       | 10        |
| 77                   | HVAC equipment, 300-1000 pound                         | -             | 22          | 4          | -         | -            | -               | 36          | -           | -        | -         | -                | -         | 24         | 107              | -       | -       | -         |
| 78                   | HVAC equipment, 1000-10,000 pound                      | -             | 5           | -          | -         | -            | -               | 14          | -           | -        | -         | 2                | 4         | 10         | 6                | -       | -       | 4         |
| 79                   | HVAC equipment, >10,000 pound                          | -             | -           | -          | -         | -            | -               | -           | -           | -        | -         | -                | -         | -          | 15               | -       | -       | -         |
| 82                   | HVAC ductwork, pound                                   | 119,977       | 10,000      | 273,680    | -         | -            | 8,175           | 142,100     | -           | -        | -         | 96,406           | 18,295    | 38,202     | 439,440          | -       | -       | 18,295    |
| 201                  | Standard reinforced concrete, cubic yard               | 24,015        | 6,662       | 22,278     | 14,027    | 3,806        | 2,006           | 18,008      | 14,800      | 1,903    | 770       | 7,390            | 9,138     | 23,366     | 89,076           | 591     | 7,914   | 5,248     |
| 202                  | Grade slab concrete, cubic yard                        | 10,800        | 1,329       | 8,959      | 1,176     | 906          | -               | 372         | 1,384       | 906      | -         | 676              | 474       | 3,551      | -                | -       | -       | 474       |
| 206                  | Heavily rein concrete w/#9 rebar, cubic yard           | 7,824         | 1,110       | 7,007      | -         | -            | -               | -           | -           | -        | -         | 3,788            | 1,793     | 3,035      | 22,775           | -       | -       | 1,793     |
| 222                  | Hollow masonry block wall, cubic yard                  | -             | 1,103       | 374        | 58        | -            | -               | 425         | -           | -        | -         | -                | -         | 2,219      | -                | -       | -       | 109       |
| 224                  | Solid masonry block wall, cubic yard                   | 3,788         | -           | 4,114      | -         | -            | 458             | -           | -           | -        | -         | 8,809            | 663       | 3,011      | 14,335           | -       | -       | 663       |
| 229                  | Backfill of below grade voids, cubic yard              | 29,218        | 11,074      | 14,043     | 12,493    | 2,170        | 20,000          | 19,394      | 6,898       | 1,308    | -         | 32,816           | 17,556    | 12,325     | -                | -       | -       | 20,531    |
| 230                  | Excavation of clean material, cubic yard               | 8,747         | -           | 13,387     | -         | -            | -               | -           | -           | -        | -         | 7,307            | 5,760     | 18,507     | 34,560           | -       | -       | 5,760     |
| 235                  | Building by volume, cubic foot                         | 5,117,058     | 229,493     | 35,076     | 970,228   | 189,562      | -               | 318,816     | 247,411     | 189,562  | 159,000   | 155,740          | 321,500   | 597,793    | 9,863,100        | 107,000 | 390,842 | 321,500   |
| 236                  | Building metal siding, square foot                     | 217,256       | 42,789      | 56,780     | 19,901    | 37,278       | -               | 108,748     | 15,564      | 37,278   | -         | 73,964           | 32,498    | 93,913     | 669,467          | -       | -       | 32,498    |
| 242                  | Standard asphalt roofing, square foot                  | 47,897        | 22,500      | 32,544     | -         | -            | 9,375           | 110,000     | -           | -        | -         | 23,588           | 9,129     | 119,469    | 237,266          | -       | -       | 9,129     |
| 245                  | Placement of cofferdam, linear foot                    | 200           | -           | -          | -         | -            | -               | -           | -           | -        | -         | -                | -         | -          | -                | -       | -       | -         |
| 248                  | Lead paint removal from concrete surfaces, square foot | 373,064       | 54,000      | -          | -         | -            | 54,150          | -           | -           | -        | -         | 135,495          | 54,337    | -          | -                | -       | -       | 54,337    |
| 253                  | Overhead cranes/monorails < 10 ton capacity, each      | 14            | 5           | 2          | -         | -            | -               | -           | -           | -        | -         | -                | 1         | -          | 136              | -       | -       | 1         |
| 255                  | Overhead cranes/monorails > 10 - 50 ton capacity, each | 6             | 2           | -          | 4         | -            | 1               | 5           | -           | -        | -         | 2                | 2         | 7          | 21               | -       | 1       | 2         |
| 258                  | Gantry cranes > 50 ton capacity, each                  | 1             | -           | -          | 1         | -            | -               | 1           | -           | -        | -         | -                | -         | 5          | 6                | -       | -       | -         |
| 260                  | Structural steel, pounds                               | 24,541,699    | 2,731,615   | 13,947,804 | 1,748,139 | 310,648      | 299,854         | 6,981,323   | 662,931     | 310,648  | 12,000    | 6,612,141        | 2,429,526 | 17,879,987 | 83,653,565       | 10,000  | 77,000  | 2,429,526 |
| 262                  | Steel floor grating, square foot                       | 161,222       | 16,242      | 43,412     | 7,410     | 2,673        | 900             | 18,797      | -           | 2,673    | -         | 12,083           | 30,386    | 56,169     | 578,353          | -       | -       | 30,386    |
| 268                  | Placement of scaffolding in clean areas, square foot   | 66,680        | -           | 83,881     | -         | -            | -               | -           | -           | -        | -         | 19,777           | 13,043    | -          | 210,181          | -       | -       | 13,043    |
| 270                  | Landscaping with topsoil, acre                         | 3             | 4           | 4          | 1         | 0            | 2               | 1.9         | 2           | 0        | 3         | 1                | 4         | 3          | 33               | 2       | 4       | 2         |
| 271                  | Landscaping w/o topsoil, acre                          | 29            | 4           | 5          | 8         | 2            | -               | 4           | 9           | 2        | 3         | 7                | 3         | 8          | 239              | 2       | 4       | 4         |
| 272                  | Chain link fencing, linear foot                        | 3,372         | 6,800       | 3,000      | 2,880     | 995          | 550             | 3,144       | 2,800       | 995      | 2,460     | 3,859            | 8,372     | 5,016      | 20,000           | 3,680   | 3,450   | 995       |
| 273                  | Railroad track, linear foot                            | 3,000         | -           | 3,600      | -         | -            | -               | -           | -           | -        | -         | -                | -         | -          | 24,000           | -       | -       | -         |
| 274                  | Asphalt pavement, square foot                          | 220,880       | 91,000      | 122,500    | 78,300    | 12,000       | 17,650          | 75,171      | 51,000      | 12,000   | 17,750    | 38,225           | -         | 128,241    | 801,500          | 45,625  | 62,700  | 52,000    |
| 293                  | Carbon steel plate 3/8 inch thick, square foot         | -             | 8,200       | -          | -         | -            | -               | -           | -           | -        | -         | -                | -         | -          | -                | -       | -       | -         |
| 294                  | Carbon steel plate 1/2 inch thick, square foot         | 66,630        | 7,388       | 36,515     | 14,776    | 75,398       | 12,441          | 14,550      | -           | 75,398   | -         | 6,959            | 17,695    | 78,517     | 219,533          | -       | -       | 17,695    |
| 359                  | Steam drum removal (fossil)                            | 1             | 3           | 5          | 6         | -            | -               | 6           | -           | -        | -         | 3                | 2         | 9          | 6                | -       | -       | 2         |
| 360                  | Water drum removal (fossil)                            | -             | -           | -          | -         | -            | -               | -           | -           | -        | -         | 4                | 4         | -          | 12               | -       | -       | 4         |
| 361                  | Upper/lower waterwall headers (fossil)                 | 26            | -           | 22         | -         | -            | -               | -           | -           | -        | -         | 14               | 6         | 27         | 72               | -       | -       | 6         |
| 362                  | Top sup boiler waterwall (8'x8' section), inches cut   | 138,902       | -           | 75,985     | -         | -            | -               | -           | -           | -        | -         | 45,627           | 13,392    | 128,711    | 470,566          | -       | -       | 13,392    |
| 369                  | Boiler convective superheater platens                  | 307           | -           | 356        | -         | -            | -               | -           | -           | -        | -         | 256              | 116       | 459        | 1,344            | -       | -       | 116       |
| 370                  | Boiler radiant superheater platens                     | -             | -           | -          | -         | -            | -               | -           | -           | -        | -         | -                | -         | -          | 156              | -       | -       | -         |
| 371                  | Boiler reheat platens                                  | 140           | -           | 180        | -         | -            | -               | -           | -           | -        | -         | -                | -         | 90         | 666              | -       | -       | -         |
| 372                  | Boiler economizer platens                              | 420           | -           | 169        | -         | -            | -               | -           | -           | -        | -         | 39               | -         | 163        | 1,344            | -       | -       | -         |
| 374                  | Stationary soot blowers                                | 98            | -           | 64         | -         | -            | -               | -           | -           | -        | -         | 21               | -         | 32         | 315              | -       | -       | -         |
| 375                  | Retractable soot blowers                               | 70            | -           | 36         | -         | -            | -               | -           | -           | -        | -         | 7                | 16        | 18         | 144              | -       | -       | 16        |
| 376                  | Process ductwork (8'x8' section), inches cut           | 757,268       | 321,019     | 1,009,405  | 625,433   | 54,416       | -               | 446,315     | 307,617     | 54,416   | -         | 470,306          | 61,481    | 1,009,280  | 3,392,767        | -       | -       | 61,481    |
| 378                  | Non-asbestos insulated regenerative air preheaters     | 4             | -           | 9          | -         | -            | -               | -           | -           | -        | -         | 8                | 8         | 4          | 13               | -       | -       | 8         |
| 380                  | Non-asbestos insulated recuperative air preheaters     | -             | -           | -          | -         | -            | -               | -           | -           | -        | -         | 4                | -         | 8          | -                | -       | -       | -         |
| 382                  | Induced, forced, primary draft fans                    | 9             | -           | 11         | -         | -            | -               | -           | -           | -        | -         | 4                | 4         | -          | 42               | -       | -       | 4         |
| 383                  | Coal car dumpers                                       | 1             | -           | -          | -         | -            | -               | -           | -           | -        | -         | -                | -         | -          | 4                | -       | -       | -         |
| 384                  | Conveyors  | 5,528         | -           | -          | -         | -            | -               | -           | -           | -        | -         | -                | 625       | -          | 5,000            | -       | -       | 625       |
| 385                  | Transfer Towers  | 100,500       | -           | -          | -         | -            | -               | -           | -           | -        | -         | -                | -         | -          | 201,000          | -       | -       | -         |
| 386                  | Stacker-reclaimers                                     | 1             | -           | -          | -         | -            | -               | -           | -           | -        | -         | -                | -         | -          | 2                | -       | -       | -         |
| 389                  | Ball mills   | 12            | -           | 8          | -         | -            | -               | -           | -           | -        | -         | 4                | -         | -          | 43               | -       | -       | -         |
| 390                  | Coal feeders   | 120           | -           | 122        | -         | -            | -               | -           | -           | -        | -         | 40               | 86        | -          | 1,019            | -       | -       | 86        |

**TABLE A**  
**SUMMARY OF STATION SYSTEMS AND STRUCTURES INVENTORIES**  
**WIND FARMS ONLY**

| Index                | System/Structure Inventory Data Point          | Blazing Star I | Blazing Star I (48 in.) | Border Winds Project | Border Winds Project (48 in.) | Courtenay | Courtenay (48 in.) | Foxtail   | Foxtail (48 in.) | Grand Meadow | Grand Meadow (48 in.) | Lake Benton II | Lake Benton II (48 in.) | Nobles    | Nobles (48 in.) | Pleasant Valley | Pleasant Valley (48 in.) |
|----------------------|--|----------------|-------------------------|----------------------|-------------------------------|-----------|--------------------|-----------|------------------|--------------|-----------------------|----------------|-------------------------|-----------|-----------------|-----------------|--------------------------|
| Station Rating (Mwe) |  | 200            | 200                     | 148                  | 148                           | 190       | 190                | 150       | 150              | 99           | 99                    | 99             | 99                      | 197       | 197             | 196             | 196                      |
| 56                   | Electrical equipment, 1000-10,000 pound        | 100            | 100                     | 75                   | 75                            | 100       | 100                | 75        | 75               | 67           | 67                    | 44             | 44                      | 134       | 134             | 100             | 100                      |
| 57                   | Electrical equipment, >10,000 pound            | 300            | 300                     | 225                  | 225                           | 300       | 300                | 225       | 225              | 134          | 134                   | 132            | 132                     | 268       | 268             | 300             | 300                      |
| 67                   | Electrical conduit, linear foot                | 1,731,165      | -                       | 1,298,374            | -                             | 1,731,165 | -                  | 1,298,374 | -                | 1,159,881    | -                     | 513,184        | 0                       | 2,319,761 | -               | 1,731,165       | -                        |
| 72                   | Mechanical equipment, >10,000 pound            | 1,550          | 1,550                   | 1,163                | 1,163                         | 1,550     | 1,550              | 1,163     | 1,163            | 1,039        | 1,039                 | 770            | 770                     | 2211      | 2,211           | 1650            | 1650                     |
| 201                  | Standard reinforced concrete, cubic yard       | 36,220         | 4,067                   | 28,822               | 3,125                         | 36,182    | 4,029              | 28,397    | 3,086            | 18,865       | 2,765                 | 15854          | 1908                    | 43,432    | 5,336           | 38,082          | 3,997                    |
| 229                  | Backfill of below grade voids, cubic yard      | 207,034        | 174,881                 | 156,858              | 131,161                       | 207,034   | 174,881            | 156,471   | 131,161          | 133,270      | 117,170               | 90893          | 76948                   | 272,437   | 234,341         | 208,965         | 174,881                  |
| 230                  | Excavation of clean material, cubic yard       | 333,101        | 187,310                 | 249,826              | 140,483                       | 333,101   | 187,310            | 249,826   | 140,483          | 223,178      | 125,498               | 146565         | 82416                   | 446,356   | 250,996         | 333,101         | 187,310                  |
| 235                  | Building by volume, cubic foot                 | 132,000        | 132,000                 | 132,000              | 132,000                       | 108,000   | 108,000            | 108,000   | 108,000          | 95,625       | 95,625                | 102,000        | 102,000                 | 123,930   | 123,930.00      | 88,560          | 88,560                   |
| 270                  | Landscaping with topsoil, acre                 | 71             | 71                      | 53                   | 53                            | 71        | 71                 | 53        | 53               | 47           | 47                    | 31             | 31                      | 95        | 95              | 71              | 71                       |
| 271                  | Landscaping w/o topsoil, acre                  | 4              | 4                       | 3                    | 3                             | 4         | 4                  | 3         | 3                | 3            | 3                     | 3              | 3                       | 3         | 3               | 3               | 3                        |
| 294                  | Carbon steel plate 1/2 inch thick, square foot | 892,716        | 892,716                 | 588,123              | 588,123                       | 784,164   | 784,164            | 669,644   | 669,644          | 658,346      | 658,346               | 524316         | 524316                  | 1,316,693 | 1,316,692.58    | 1,156,983       | 1,156,983                |



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## **APPENDIX B**

### **UNIT COST FACTOR DEVELOPMENT**

## APPENDIX B

### UNIT COST FACTOR DEVELOPMENT (Using Minnesota-based labor rates)

Example: Unit Factor for Removal of Heat Exchanger < 3,000 pounds

#### 1. SCOPE

Heat exchangers weighing < 3,000 lb. will be removed in one piece using a crane or small hoist. They will be disconnected from the inlet and outlet piping. The heat exchanger will be sent to the laydown area.

#### 2. CALCULATIONS

| Act<br>ID | Activity<br>Description           | Activity<br>Duration | Critical<br>Duration |
|-----------|-----------------------------------|----------------------|----------------------|
| -----     |                                   |                      |                      |
| a         | Remove insulation                 | 20                   | (b)                  |
| b         | Mount pipe cutters                | 60                   | 60                   |
| c         | Disconnect inlet and outlet lines | 60                   | 60                   |
| d         | Rig for removal                   | 30                   | 30                   |
| e         | Unbolt from mounts                | 30                   | 30                   |
| f         | Remove, send to packing area      | <u>60</u>            | <u>60</u>            |
|           | Totals (Activity/Critical)        | 260                  | 240                  |

Duration adjustment(s):

|   |           |
|---|-----------|
| + Work break adjustment (8.33 % of productive duration) | <u>20</u> |
| Total work duration (minutes)                           | 260       |

**\*\*\* Total duration = 4.333 hours \*\*\***

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### 3. LABOR REQUIRED

| Crew             | Number | Duration<br>(hr) | Rate<br>(\$/hr) | Cost<br>(\$) |
|------------------|--------|------------------|-----------------|--------------|
| <hr/>            |        |                  |                 |              |
| Laborers         | 3.0    | 4.333            | 60.80           | 790.34       |
| Craftsmen        | 2.0    | 4.333            | 71.33           | 618.15       |
| Foreman          | 1.0    | 4.333            | 73.44           | 318.22       |
| General Foreman  | 0.25   | 4.333            | 74.44           | 80.64        |
| Fire Watch       | 0.05   | 4.333            | 60.80           | <u>13.17</u> |
| Total labor cost |        |                  |                 | 1,820.52     |

### 4. EQUIPMENT & CONSUMABLES COSTS

|   |                 |
|---|-----------------|
| Equipment Costs   | none            |
| Consumables/Materials Costs                                 |                 |
| Gas torch consumables 1 @ \$19.93/hr x 1 hr {1}             | <u>19.93</u>    |
| Subtotal cost of equipment and materials                    | 19.93           |
| Overhead & profit on equipment and materials @ 16.88%       | <u>3.36</u>     |
| Total costs, equipment & material                           | 23.29           |
| <b>TOTAL COST Removal of heat exchanger &lt;3000 pound:</b> | <b>1,843.81</b> |
| Total labor cost:   | 1,820.52        |
| Total equipment/material costs:                             | 23.29           |
| Total craft labor man-hours required per unit:              | 27.298          |

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**5. NOTES AND REFERENCES**

- Durations are shown in minutes. The integrated duration accounts for those activities that can be performed in conjunction with other activities, indicated by the alpha designator of the concurrent activity. This results in an overall decrease in the sequenced duration.
- Work difficulty factors were developed in conjunction with the AIF program to standardize decommissioning cost studies and are delineated in the "Guidelines" study (Reference 2, Vol. 1, Chapter 5).
- References for equipment and consumables costs:
  1. R.S. Means (2019) Division 01 54 33, Section 40-6360 Page 736

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## **APPENDIX C**

### **UNIT COST FACTOR LISTING**

|  |     |
|--|-----|
| Table C-1, Minnesota Stations Unit Cost Factors.....   | C-2 |
| Table C-2, North Dakota Station Unit Cost Factors..... | C-5 |
| Table C-3, South Dakota Station Unit Cost Factors..... | C-6 |

**TABLE C-1**  
**UNIT COST FACTOR LISTING**  
**Minnesota Stations**  
(Costs are in 2019 dollars/Scrap Weights in pounds)

| Unit Cost Factors |  |            |            |             | Scrap Weight |                    |             |           |              |             |              |             |
|-------------------|--|------------|------------|-------------|--------------|--------------------|-------------|-----------|--------------|-------------|--------------|-------------|
| UCF #             | Description                                      | Total Cost | Labor Cost | Labor Hours | Cast Iron    | Carbon Steel No. 1 | Mixed Scrap | SS-1      | Galv. Steel. | Insul Cable | No. 2 Copper | Large Motor |
| 2                 | Piping 0.25 to 2 inches diameter, linear foot    | 6.97       | 6.89       | 0.1         | -            | 4                  | -           | 0.5       | -            | -           | -            | -           |
| 3                 | Piping >2 to 4 inches diameter, linear foot      | 9.79       | 9.68       | 0.2         | -            | 7                  | -           | 0.9       | -            | -           | 0.4          | -           |
| 4                 | Piping >4 to 8 inches diameter, linear foot      | 18.72      | 18.56      | 0.3         | -            | 22                 | -           | -         | -            | -           | -            | -           |
| 5                 | Piping >8 to 14 inches diameter, linear foot     | 36.53      | 36.34      | 0.6         | -            | 57                 | -           | -         | -            | -           | -            | -           |
| 6                 | Piping >14 to 20 inches diameter, linear foot    | 47.51      | 46.93      | 0.7         | -            | -                  | 120         | -         | -            | -           | -            | -           |
| 7                 | Piping >20 to 36 inches diameter, linear foot    | 69.90      | 69.13      | 1.1         | -            | -                  | 221         | -         | -            | -           | -            | -           |
| 8                 | Piping >36 inches diameter, linear foot          | 83.05      | 82.27      | 1.3         | -            | -                  | 417         | -         | -            | -           | -            | -           |
| 9                 | Valves <2 inches                                 | 133.87     | 133.10     | 2.0         | -            | -                  | -           | -         | -            | -           | -            | -           |
| 10                | Valves >2 to 4 inches                            | 124.03     | 122.86     | 1.9         | 75           | -                  | -           | 8.8       | -            | -           | 4.4          | -           |
| 11                | Valves >4 to 8 inches                            | 187.18     | 185.61     | 2.8         | 510          | -                  | -           | -         | -            | -           | -            | -           |
| 12                | Valves >8 to 14 inches                           | 365.29     | 363.36     | 5.6         | 1,066        | -                  | -           | -         | -            | -           | -            | -           |
| 13                | Valves >14 to 20 inches                          | 475.15     | 469.33     | 7.3         | -            | -                  | 2,040       | -         | -            | -           | -            | -           |
| 14                | Valves >20 to 36 inches                          | 699.04     | 691.28     | 10.7        | -            | -                  | 3,334       | -         | -            | -           | -            | -           |
| 15                | Valves >36 inches                                | 830.45     | 822.69     | 12.7        | -            | -                  | 11,535      | -         | -            | -           | -            | -           |
| 24                | Pipe hangers for small bore piping, each         | 43.43      | 37.61      | 0.6         | -            | 10                 | -           | -         | -            | -           | -            | -           |
| 25                | Pipe hangers for large bore piping, each         | 156.79     | 145.14     | 2.3         | -            | 50                 | -           | -         | -            | -           | -            | -           |
| 26                | Pump and motor set < 300 pounds                  | 316.32     | 306.61     | 4.7         | -            | -                  | 50          | 12.5      | -            | -           | -            | 62.3        |
| 27                | Pumps, 300-1000 pound pump                       | 866.84     | 851.31     | 12.7        | 293          | -                  | 49          | 48.9      | -            | -           | -            | -           |
| 28                | Pumps, >1000-10,000 pound pump                   | 3,438.05   | 3,414.76   | 51.3        | 2,834        | -                  | 472         | 472.3     | -            | -           | -            | -           |
| 29                | Pumps, >10,000 pound pump                        | 6,651.40   | 6,581.52   | 98.9        | 43,693       | -                  | 7,282       | 7,282.1   | -            | -           | -            | -           |
| 32                | Pump motors, 300-1000 pound pump                 | 362.10     | 362.10     | 5.4         | -            | -                  | -           | -         | -            | -           | -            | 307.8       |
| 33                | Pump motors, >1000-10,000 pound pump             | 1,428.02   | 1,428.02   | 21.5        | -            | -                  | -           | -         | -            | -           | -            | 3,531.6     |
| 34                | Pump motors, >10,000 pound pump                  | 3,213.05   | 3,213.05   | 48.3        | -            | -                  | -           | -         | -            | -           | -            | 42,324.5    |
| 37                | Turbine-driven pumps > 10,000 pounds             | 8,904.73   | 8,827.09   | 132.7       | 20,000       | -                  | 20,000      | -         | -            | -           | -            | -           |
| 38                | Main turbine-generator (pounds per MW(e) input)  | 208,434.81 | 206,943.98 | 3,042.0     | -            | -                  | 851,500     | -         | -            | -           | -            | 851,500.0   |
| 39                | Heat exchanger <3000 pound                       | 1,843.81   | 1,820.52   | 27.3        | -            | -                  | 416         | 623.4     | -            | -           | -            | -           |
| 40                | Heat exchanger >3000 pound                       | 4,644.67   | 4,551.49   | 68.3        | -            | -                  | 5,599       | 8,397.9   | -            | -           | -            | -           |
| 41                | Feedwater heater/deaerator                       | 13,109.71  | 12,923.36  | 194.2       | -            | -                  | 12,000      | 18,000.0  | -            | -           | -            | -           |
| 49                | Main condenser (pounds per MW(e) input)          | 573,864.75 | 553,556.38 | 8,243.6     | 149,400      | -                  | 149,400     | 199,200.0 | -            | -           | -            | -           |
| 51                | Tanks, <300 gallons, filters, and ion exchangers | 406.82     | 395.17     | 6.0         | -            | -                  | 401         | 401.2     | -            | -           | -            | -           |
| 52                | Tanks, 300-3000 gallons                          | 1,281.67   | 1,258.38   | 19.1        | -            | -                  | 2,700       | 300.0     | -            | -           | -            | -           |
| 53                | Tanks, >3000 gallons, square foot surface        | 10.64      | 10.35      | 0.2         | -            | 21                 | -           | -         | -            | -           | -            | -           |
| 54                | Electrical equipment, <300 pound                 | 171.33     | 171.33     | 2.6         | -            | -                  | 56          | -         | -            | -           | 2.9          | -           |
| 55                | Electrical equipment, 300-1000 pound             | 589.54     | 589.54     | 8.8         | -            | -                  | 624         | -         | -            | -           | 32.8         | -           |

**TABLE C-1 (continued)**  
**UNIT COST FACTOR LISTING**  
**Minnesota Stations**  
(Costs are in 2019 dollars/Scrap Weights in pounds)

| Unit Cost Factors |  |            |            |             | Scrap Weight |                    |             |      |              |             |              |             |
|-------------------|--|------------|------------|-------------|--------------|--------------------|-------------|------|--------------|-------------|--------------|-------------|
| UCF #             | Description                                  | Total Cost | Labor Cost | Labor Hours | Cast Iron    | Carbon Steel No. 1 | Mixed Scrap | SS-1 | Galv. Steel. | Insul Cable | No. 2 Copper | Large Motor |
| 56                | Electrical equipment, 1000-10,000 pound      | 1,179.09   | 1,179.09   | 17.6        | -            | -                  | 2,212       | -    | -            | -           | 116.4        | -           |
| 57                | Electrical equipment, >10,000 pound          | 2,779.22   | 2,779.22   | 41.0        | -            | -                  | 19,950      | -    | -            | -           | 1,050.0      | -           |
| 59                | Electrical transformers < 30 tons            | 1,930.13   | 1,930.13   | 28.4        | -            | -                  | 11,250      | -    | -            | -           | 3,750.0      | -           |
| 60                | Electrical transformers > 30 tons            | 5,558.44   | 5,558.44   | 81.9        | -            | -                  | 375,000     | -    | -            | -           | 125,000.0    | -           |
| 61                | Standby diesel-generator, <100 kW            | 1,971.46   | 1,971.46   | 29.1        | 2,340        | -                  | -           | -    | -            | -           | -            | 260.0       |
| 62                | Standby diesel-generator, 100 kW to 1 MW     | 4,400.42   | 4,400.42   | 64.8        | 9,450        | -                  | -           | -    | -            | -           | -            | 1,050.0     |
| 63                | Standby diesel-generator, >1 MW              | 9,109.78   | 9,109.78   | 134.2       | 47,250       | -                  | -           | -    | -            | -           | -            | 5,250.0     |
| 64                | Fluorescent light fixture                    | 71.90      | 71.90      | 1.1         | -            | -                  | -           | -    | -            | -           | -            | -           |
| 65                | Incandescent light fixture                   | 36.05      | 36.05      | 0.6         | -            | -                  | -           | -    | -            | -           | -            | -           |
| 66                | Electrical cable tray, linear foot           | 16.12      | 15.73      | 0.2         | -            | -                  | -           | -    | 6.6          | 6.6         | -            | -           |
| 67                | Electrical conduit, linear foot              | 7.04       | 6.85       | 0.1         | -            | -                  | -           | -    | 3.4          | 3.4         | -            | -           |
| 69                | Mechanical equipment, <300 pound             | 171.33     | 171.33     | 2.6         | -            | -                  | 127         | -    | -            | -           | -            | -           |
| 70                | Mechanical equipment, 300-1000 pound         | 589.54     | 589.54     | 8.8         | -            | -                  | 641         | -    | -            | -           | -            | -           |
| 71                | Mechanical equipment, 1000-10,000 pound      | 1,179.09   | 1,179.09   | 17.6        | -            | -                  | 4,184       | -    | -            | -           | -            | -           |
| 72                | Mechanical equipment, >10,000 pound          | 2,779.22   | 2,779.22   | 41.0        | -            | -                  | 11,938      | -    | -            | -           | -            | -           |
| 76                | HVAC equipment, <300 pound                   | 207.18     | 207.18     | 3.1         | -            | -                  | 184         | -    | -            | -           | -            | -           |
| 77                | HVAC equipment, 300-1000 pound               | 708.37     | 708.37     | 10.6        | -            | -                  | 643         | -    | -            | -           | -            | -           |
| 78                | HVAC equipment, 1000-10,000 pound            | 1,411.80   | 1,411.80   | 21.0        | -            | -                  | 3,813       | -    | -            | -           | -            | -           |
| 79                | HVAC equipment, >10,000 pound                | 2,779.22   | 2,779.22   | 41.0        | -            | -                  | 19,391      | -    | -            | -           | -            | -           |
| 82                | HVAC ductwork, pound                         | 0.68       | 0.68       | 0.0         | -            | -                  | -           | -    | 1.0          | -           | -            | -           |
| 201               | Standard reinforced concrete, cubic yard     | 77.12      | 26.84      | 0.4         | -            | 183                | -           | -    | -            | -           | -            | -           |
| 202               | Grade slab concrete, cubic yard              | 87.72      | 30.65      | 0.5         | -            | 183                | -           | -    | -            | -           | -            | -           |
| 206               | Heavily rein concrete w/#9 rebar, cubic yard | 111.41     | 39.28      | 0.6         | -            | 730                | -           | -    | -            | -           | -            | -           |
| 222               | Hollow masonry block wall, cubic yard        | 26.45      | 10.27      | 0.1         | -            | 66                 | -           | -    | -            | -           | -            | -           |
| 224               | Solid masonry block wall, cubic yard         | 26.45      | 10.27      | 0.1         | -            | 66                 | -           | -    | -            | -           | -            | -           |
| 229               | Backfill of below grade voids, cubic yard    | 31.11      | 4.21       | 0.1         | -            | -                  | -           | -    | -            | -           | -            | -           |
| 230               | Excavation of clean material, cubic yard     | 3.23       | 1.49       | 0.0         | -            | -                  | -           | -    | -            | -           | -            | -           |
| 235               | Building by volume, cubic foot               | 0.34       | 0.21       | -           | -            | -                  | 1           | -    | -            | -           | -            | -           |
| 236               | Building metal siding, square foot           | 1.74       | 1.28       | 0.0         | -            | -                  | -           | -    | 2.4          | -           | -            | -           |
| 242               | Standard asphalt roofing, square foot        | 3.01       | 3.01       | 0.1         | -            | -                  | -           | -    | -            | -           | -            | -           |
| 243               | Galbestos panels, square foot                | 2.58       | 2.06       | 0.0         | -            | -                  | -           | -    | -            | -           | -            | -           |
| 245               | Placement of cofferdam, linear foot          | -          | -          | -           | -            | -                  | -           | -    | -            | -           | -            | -           |

**TABLE C-1 (continued)**  
**UNIT COST FACTOR LISTING**  
**Minnesota Stations**  
 (Costs are in 2019 dollars/Scrap Weights in pounds)

| Unit Cost Factors |  |            |            |             | Scrap Weight |                    |             |      |              |             |              |             |
|-------------------|--|------------|------------|-------------|--------------|--------------------|-------------|------|--------------|-------------|--------------|-------------|
| UCF #             | Description  | Total Cost | Labor Cost | Labor Hours | Cast Iron    | Carbon Steel No. 1 | Mixed Scrap | SS-1 | Galv. Steel. | Insul Cable | No. 2 Copper | Large Motor |
| 248               | Lead paint removal from concrete surfaces, square foot | 10.07      | 8.11       | 0.1         | -            | -                  | -           | -    | -            | -           | -            | -           |
| 253               | Overhead cranes/monorails < 10 ton capacity, each      | 810.83     | 810.83     | 11.8        | -            | 3,700              | -           | -    | -            | -           | -            | -           |
| 255               | Overhead cranes/monorails >10 - 50 ton capacity, each  | 1,945.99   | 1,945.99   | 28.3        | -            | -                  | 298,832     | -    | -            | -           | 3,018.5      | -           |
| 258               | Gantry cranes > 50 ton capacity, each                  | 31,034.60  | 31,034.60  | 457.3       | -            | -                  | 712,800     | -    | -            | -           | 7,200.0      | -           |
| 260               | Structural steel, pounds                               | 0.24       | 0.20       | -           | -            | 1                  | -           | -    | -            | -           | -            | -           |
| 262               | Steel floor grating, square foot                       | 5.73       | 5.32       | 0.1         | -            | -                  | 6           | -    | 1.1          | -           | -            | -           |
| 268               | Placement of scaffolding in clean areas, square foot   | 18.58      | 6.42       | 0.1         | -            | -                  | -           | -    | -            | -           | -            | -           |
| 270               | Landscaping with topsoil, acre                         | 24,287.33  | 3,567.37   | 52.6        | -            | -                  | -           | -    | -            | -           | -            | -           |
| 271               | Landscaping w/o topsoil, acre                          | 1,151.70   | 380.40     | 5.3         | -            | -                  | -           | -    | -            | -           | -            | -           |
| 272               | Chain link fencing, linear foot                        | 4.13       | 3.47       | 0.1         | -            | -                  | -           | -    | 10.0         | -           | -            | -           |
| 273               | Railroad track, linear foot                            | 28.23      | 14.43      | 0.2         | -            | 91                 | -           | -    | -            | -           | -            | -           |
| 274               | Asphalt pavement, square foot                          | 1.02       | 0.75       | 0.0         | -            | -                  | -           | -    | -            | -           | -            | -           |
| 291               | Carbon steel plate 1/4 inch thick, square foot         | 4.48       | 3.80       | 0.1         | -            | -                  | 10          | -    | -            | -           | -            | -           |
| 294               | Carbon steel plate 1/2 inch thick, square foot         | 4.73       | 4.00       | 0.1         | -            | -                  | 20          | -    | -            | -           | -            | -           |
| 359               | Steam drum removal (fossil)                            | 26,089.30  | 25,934.00  | 411.6       | -            | -                  | 480,000     | -    | -            | -           | -            | -           |
| 360               | Water drum removal (fossil)                            | 9,683.73   | 9,654.62   | 153.2       | -            | -                  | 320,000     | -    | -            | -           | -            | -           |
| 361               | Upper/lower waterwall headers (fossil)                 | 7,308.10   | 7,278.99   | 115.5       | -            | -                  | 120,000     | -    | -            | -           | -            | -           |
| 362               | Top sup boiler waterwall (8'x8' section), inches cut   | 0.87       | 0.83       | 0.0         | -            | -                  | 11          | -    | -            | -           | -            | -           |
| 369               | Boiler convective superheaater platens                 | 2,090.33   | 1,888.47   | 29.6        | -            | -                  | 19,501      | -    | -            | -           | -            | -           |
| 370               | Boiler radiant superheater platens                     | 884.30     | 798.91     | 12.5        | -            | -                  | 51,652      | -    | -            | -           | -            | -           |
| 371               | Boiler reheat platens                                  | 884.30     | 798.91     | 12.5        | -            | -                  | 19,501      | -    | -            | -           | -            | -           |
| 372               | Boiler economizer platens                              | 1,125.50   | 1,016.81   | 15.9        | -            | -                  | 11,703      | -    | -            | -           | -            | -           |
| 374               | Stationary soot blowers                                | 46.10      | 46.10      | 0.7         | -            | -                  | 500         | -    | -            | -           | -            | 50.0        |
| 375               | Retractable soot blowers                               | 435.82     | 435.82     | 6.8         | -            | -                  | 11,150      | -    | -            | -           | -            | 100.0       |
| 376               | Process ductwork (8'x8' section), inches cut           | 0.43       | 0.40       | 0.0         | -            | -                  | 0           | -    | -            | -           | -            | -           |
| 378               | Non-asbestos insulated regenerative air preheaters     | 13,695.05  | 11,878.10  | 188.5       | -            | -                  | 1,376,000   | -    | -            | -           | -            | -           |
| 380               | Non-asbestos insulated recuperative air preheaters     | 7,571.40   | 6,435.81   | 101.6       | -            | -                  | 1,376,000   | -    | -            | -           | -            | -           |
| 382               | Induced, forced, primary draft fans                    | 2,080.55   | 2,033.96   | 31.9        | -            | -                  | 30,000      | -    | -            | -           | -            | 3,531.6     |
| 383               | Coal car dumpers                                       | 18,719.68  | 15,924.38  | 249.4       | -            | -                  | 125,000     | -    | -            | -           | -            | 500.0       |
| 384               | Conveyors  | 17.64      | 16.48      | 0.3         | -            | -                  | 820         | -    | -            | -           | -            | -           |
| 385               | Transfer Towers  | 0.31       | 0.17       | -           | -            | -                  | 5           | -    | -            | -           | -            | -           |
| 386               | Stacker-reclaimers                                     | 190,631.94 | 190,631.94 | 3,008.3     | -            | -                  | 300,000     | -    | -            | -           | -            | 2,000.0     |
| 387               | Coal crushers  | 1,260.40   | 1,248.75   | 19.3        | -            | -                  | 36,000      | -    | -            | -           | -            | 250.0       |
| 389               | Ball mills   | 1,816.03   | 1,816.03   | 28.1        | -            | -                  | 360,000     | -    | -            | -           | -            | 7,063.1     |
| 390               | Coal feeders   | 457.07     | 445.42     | 7.1         | -            | -                  | 1,194       | -    | -            | -           | -            | -           |



**TABLE C-2**  
**UNIT COST FACTOR LISTING**  
**North Dakota Stations**  
 (Costs are in 2019 dollars/Scrap Weights in pounds)

| Unit Cost Factors |   |            |            |             | Scrap Weight       |             |              |             |          |
|-------------------|---|------------|------------|-------------|--------------------|-------------|--------------|-------------|----------|
| UCF #             | Description                               | Total Cost | Labor Cost | Labor Hours | Carbon Steel No. 1 | Mixed Scrap | No. 2 Copper | Large Motor | Aluminum |
| 56                | Electrical equipment, 1000-10,000 pound   | 1,179.09   | 1,179.09   | 17.6        | -                  | 2,212       | 116.4        | -           | -        |
| 57                | Electrical equipment, >10,000 pound       | 2,779.22   | 2,779.22   | 41.0        | -                  | 19,950      | -            | 75,610      | -        |
| 67                | Electrical conduit, linear foot           | 7.06       | 6.85       | 0.1         | -                  | -           | 0.3          | -           | 1.2      |
| 72                | Mechanical equipment, >10,000 pound       | 2,779.22   | 2,779.22   | 41.0        | -                  | 11,938      | -            | -           | -        |
| 201               | Standard reinforced concrete, cubic yard  | 82.15      | 26.84      | 0.4         | 183                | -           | -            | -           | -        |
| 229               | Backfill of below grade voids, cubic yard | 33.80      | 4.21       | 0.1         | -                  | -           | -            | -           | -        |
| 230               | Excavation of clean material, cubic yard  | 3.41       | 1.49       | 0.02        | -                  | -           | -            | -           | -        |
| 235               | Building by volume, cubic foot            | 0.35       | 0.21       | 0.003       | -                  | 1           | -            | -           | -        |

**TABLE C-3**  
**UNIT COST FACTOR LISTING**  
**South Dakota Station**  
(Costs are in 2019 dollars/Scrap Weights in pounds)

| Unit Cost Factors |  |            |            |             | Scrap Weight |                    |             |           |              |             |              |             |
|-------------------|--|------------|------------|-------------|--------------|--------------------|-------------|-----------|--------------|-------------|--------------|-------------|
| UCF #             | Description                                      | Total Cost | Labor Cost | Labor Hours | Cast Iron    | Carbon Steel No. 1 | Mixed Scrap | SS-1      | Galv. Steel. | Insul Cable | No. 2 Copper | Large Motor |
| 2                 | Piping 0.25 to 2 inches diameter, linear foot    | 6.97       | 6.89       | 0.1         | -            | 4                  | -           | 0.5       | -            | -           | -            | -           |
| 3                 | Piping >2 to 4 inches diameter, linear foot      | 9.79       | 9.68       | 0.2         | -            | 7                  | -           | 0.9       | -            | -           | 0.4          | -           |
| 4                 | Piping >4 to 8 inches diameter, linear foot      | 18.71      | 18.56      | 0.3         | -            | 22                 | -           | -         | -            | -           | -            | -           |
| 5                 | Piping >8 to 14 inches diameter, linear foot     | 36.52      | 36.34      | 0.6         | -            | 57                 | -           | -         | -            | -           | -            | -           |
| 6                 | Piping >14 to 20 inches diameter, linear foot    | 47.48      | 46.93      | 0.7         | -            | -                  | 120         | -         | -            | -           | -            | -           |
| 7                 | Piping >20 to 36 inches diameter, linear foot    | 69.86      | 69.13      | 1.1         | -            | -                  | 221         | -         | -            | -           | -            | -           |
| 8                 | Piping >36 inches diameter, linear foot          | 83.00      | 82.27      | 1.3         | -            | -                  | 417         | -         | -            | -           | -            | -           |
| 9                 | Valves <2 inches                                 | 133.82     | 133.10     | 2.0         | -            | -                  | -           | -         | -            | -           | -            | -           |
| 10                | Valves >2 to 4 inches                            | 123.95     | 122.86     | 1.9         | 75           | -                  | -           | 8.8       | -            | -           | 4.4          | -           |
| 11                | Valves >4 to 8 inches                            | 187.08     | 185.61     | 2.8         | 510          | -                  | -           | -         | -            | -           | -            | -           |
| 12                | Valves >8 to 14 inches                           | 365.17     | 363.36     | 5.6         | 1,066        | -                  | -           | -         | -            | -           | -            | -           |
| 13                | Valves >14 to 20 inches                          | 474.79     | 469.33     | 7.3         | -            | -                  | 2,040       | -         | -            | -           | -            | -           |
| 14                | Valves >20 to 36 inches                          | 698.56     | 691.28     | 10.7        | -            | -                  | 3,334       | -         | -            | -           | -            | -           |
| 15                | Valves >36 inches                                | 829.97     | 822.69     | 12.7        | -            | -                  | 11,535      | -         | -            | -           | -            | -           |
| 24                | Pipe hangers for small bore piping, each         | 43.07      | 37.61      | 0.6         | -            | 10                 | -           | -         | -            | -           | -            | -           |
| 25                | Pipe hangers for large bore piping, each         | 156.07     | 145.14     | 2.3         | -            | 50                 | -           | -         | -            | -           | -            | -           |
| 26                | Pump and motor set < 300 pounds                  | 315.72     | 306.61     | 4.7         | -            | -                  | 50          | 12.5      | -            | -           | -            | 62.3        |
| 27                | Pumps, 300-1000 pound pump                       | 865.89     | 851.31     | 12.7        | 293          | -                  | 49          | 48.9      | -            | -           | -            | -           |
| 28                | Pumps, >1000-10,000 pound pump                   | 3,436.62   | 3,414.76   | 51.3        | 2,834        | -                  | 472         | 472.3     | -            | -           | -            | -           |
| 29                | Pumps, >10,000 pound pump                        | 6,647.09   | 6,581.52   | 98.9        | 43,693       | -                  | 7,282       | 7,282.1   | -            | -           | -            | -           |
| 32                | Pump motors, 300-1000 pound pump                 | 362.10     | 362.10     | 5.4         | -            | -                  | -           | -         | -            | -           | -            | 307.8       |
| 33                | Pump motors, >1000-10,000 pound pump             | 1,428.02   | 1,428.02   | 21.5        | -            | -                  | -           | -         | -            | -           | -            | 3,531.6     |
| 34                | Pump motors, >10,000 pound pump                  | 3,213.05   | 3,213.05   | 48.3        | -            | -                  | -           | -         | -            | -           | -            | 42,324.5    |
| 38                | Main turbine-generator (pounds per MW(e) input)  | 208,342.91 | 206,943.98 | 3,042.0     | -            | -                  | 851,500     | -         | -            | -           | -            | 851,500.0   |
| 39                | Heat exchanger <3000 pound                       | 1,842.38   | 1,820.52   | 27.3        | -            | -                  | 416         | 623.4     | -            | -           | -            | -           |
| 40                | Heat exchanger >3000 pound                       | 4,638.92   | 4,551.49   | 68.3        | -            | -                  | 5,599       | 8,397.9   | -            | -           | -            | -           |
| 41                | Feedwater heater/deaerator                       | 13,098.22  | 12,923.36  | 194.2       | -            | -                  | 12,000      | 18,000.0  | -            | -           | -            | -           |
| 49                | Main condenser (pounds per MW(e) input)          | 572,617.94 | 553,556.38 | 8,243.6     | 149,400      | -                  | 149,400     | 199,200.0 | -            | -           | -            | -           |
| 51                | Tanks, <300 gallons, filters, and ion exchangers | 406.10     | 395.17     | 6.0         | -            | -                  | 401         | 401.2     | -            | -           | -            | -           |
| 52                | Tanks, 300-3000 gallons                          | 1,280.24   | 1,258.38   | 19.1        | -            | -                  | 2,700       | 300.0     | -            | -           | -            | -           |
| 53                | Tanks, >3000 gallons, square foot surface        | 10.63      | 10.35      | 0.2         | -            | 21                 | -           | -         | -            | -           | -            | -           |
| 54                | Electrical equipment, <300 pound                 | 171.33     | 171.33     | 2.6         | -            | -                  | 56          | -         | -            | -           | 2.9          | -           |
| 55                | Electrical equipment, 300-1000 pound             | 589.54     | 589.54     | 8.8         | -            | -                  | 624         | -         | -            | -           | 32.8         | -           |
| 56                | Electrical equipment, 1000-10,000 pound          | 1,179.09   | 1,179.09   | 17.6        | -            | -                  | 2,212       | -         | -            | -           | 116.4        | -           |
| 57                | Electrical equipment, >10,000 pound              | 2,779.22   | 2,779.22   | 41.0        | -            | -                  | 19,950      | -         | -            | -           | 1,050.0      | -           |
| 59                | Electrical transformers < 30 tons                | 1,930.13   | 1,930.13   | 28.4        | -            | -                  | 11,250      | -         | -            | -           | 3,750.0      | -           |
| 60                | Electrical transformers > 30 tons                | 5,558.44   | 5,558.44   | 81.9        | -            | -                  | 375,000     | -         | -            | -           | 125,000.0    | -           |

**TABLE C-3 (continued)**  
**UNIT COST FACTOR LISTING**  
**South Dakota Station**  
(Costs are in 2019 dollars/Scrap Weights in pounds)

| Unit Cost Factors |  |            |            |             | Scrap Weight |                    |             |      |              |             |              |             |
|-------------------|--|------------|------------|-------------|--------------|--------------------|-------------|------|--------------|-------------|--------------|-------------|
| UCF #             | Description  | Total Cost | Labor Cost | Labor Hours | Cast Iron    | Carbon Steel No. 1 | Mixed Scrap | SS-1 | Galv. Steel. | Insul Cable | No. 2 Copper | Large Motor |
| 61                | Standby diesel-generator, <100 kW                      | 1,971.46   | 1,971.46   | 29.1        | 2,340        | -                  | -           | -    | -            | -           | -            | 260.0       |
| 64                | Fluorescent light fixture                              | 71.90      | 71.90      | 1.1         | -            | -                  | -           | -    | -            | -           | -            | -           |
| 65                | Incandescent light fixture                             | 36.05      | 36.05      | 0.6         | -            | -                  | -           | -    | -            | -           | -            | -           |
| 66                | Electrical cable tray, linear foot                     | 16.09      | 15.73      | 0.2         | -            | -                  | -           | -    | 6.6          | 6.6         | -            | -           |
| 67                | Electrical conduit, linear foot                        | 7.03       | 6.85       | 0.1         | -            | -                  | -           | -    | 3.4          | 3.4         | -            | -           |
| 69                | Mechanical equipment, <300 pound                       | 171.33     | 171.33     | 2.6         | -            | -                  | 127         | -    | -            | -           | -            | -           |
| 70                | Mechanical equipment, 300-1000 pound                   | 589.54     | 589.54     | 8.8         | -            | -                  | 641         | -    | -            | -           | -            | -           |
| 71                | Mechanical equipment, 1000-10,000 pound                | 1,179.09   | 1,179.09   | 17.6        | -            | -                  | 4,184       | -    | -            | -           | -            | -           |
| 72                | Mechanical equipment, >10,000 pound                    | 2,779.22   | 2,779.22   | 41.0        | -            | -                  | 11,938      | -    | -            | -           | -            | -           |
| 76                | HVAC equipment, <300 pound                             | 207.18     | 207.18     | 3.1         | -            | -                  | 184         | -    | -            | -           | -            | -           |
| 77                | HVAC equipment, 300-1000 pound                         | 708.37     | 708.37     | 10.6        | -            | -                  | 643         | -    | -            | -           | -            | -           |
| 78                | HVAC equipment, 1000-10,000 pound                      | 1,411.80   | 1,411.80   | 21.0        | -            | -                  | 3,813       | -    | -            | -           | -            | -           |
| 82                | HVAC ductwork, pound                                   | 0.68       | 0.68       | 0.0         | -            | -                  | -           | -    | 1.0          | -           | -            | -           |
| 201               | Standard reinforced concrete, cubic yard               | 74.02      | 26.84      | 0.4         | -            | 183                | -           | -    | -            | -           | -            | -           |
| 202               | Grade slab concrete, cubic yard                        | 84.20      | 30.65      | 0.5         | -            | 183                | -           | -    | -            | -           | -            | -           |
| 206               | Heavily rein concrete w/#9 rebar, cubic yard           | 106.96     | 39.28      | 0.6         | -            | 730                | -           | -    | -            | -           | -            | -           |
| 222               | Hollow masonry block wall, cubic yard                  | 25.45      | 10.27      | 0.1         | -            | 66                 | -           | -    | -            | -           | -            | -           |
| 229               | Backfill of below grade voids, cubic yard              | 29.45      | 4.21       | 0.1         | -            | -                  | -           | -    | -            | -           | -            | -           |
| 235               | Building by volume, cubic foot                         | 0.33       | 0.21       | -           | -            | -                  | 1           | -    | -            | -           | -            | -           |
| 236               | Building metal siding, square foot                     | 1.71       | 1.28       | 0.0         | -            | -                  | -           | -    | 2.4          | -           | -            | -           |
| 242               | Standard asphalt roofing, square foot                  | 3.01       | 3.01       | 0.1         | -            | -                  | -           | -    | -            | -           | -            | -           |
| 248               | Lead paint removal from concrete surfaces, square foot | 9.80       | 7.96       | 0.1         | -            | -                  | -           | -    | -            | -           | -            | -           |
| 253               | Overhead cranes/monorails < 10 ton capacity, each      | 810.83     | 810.83     | 11.8        | -            | 3,700              | -           | -    | -            | -           | -            | -           |
| 255               | Overhead cranes/monorails >10 - 50 ton capacity, each  | 1,945.99   | 1,945.99   | 28.3        | -            | -                  | 298,832     | -    | -            | -           | 3,018.5      | -           |
| 260               | Structural steel, pounds                               | 0.23       | 0.20       | -           | -            | 1                  | -           | -    | -            | -           | -            | -           |
| 262               | Steel floor grating, square foot                       | 5.70       | 5.32       | 0.1         | -            | -                  | 6           | -    | 1.1          | -           | -            | -           |
| 270               | Landscaping with topsoil, acre                         | 23,009.82  | 3,567.37   | 52.6        | -            | -                  | -           | -    | -            | -           | -            | -           |
| 271               | Landscaping w/o topsoil, acre                          | 1,104.15   | 380.40     | 5.3         | -            | -                  | -           | -    | -            | -           | -            | -           |
| 272               | Chain link fencing, linear foot                        | 4.09       | 3.47       | 0.1         | -            | -                  | -           | -    | 10.0         | -           | -            | -           |
| 274               | Asphalt pavement, square foot                          | 1.01       | 0.75       | 0.0         | -            | -                  | -           | -    | -            | -           | -            | -           |
| 293               | Carbon steel plate 3/8 inch thick, square foot         | 4.56       | 3.90       | 0.1         | -            | -                  | 15          | -    | -            | -           | -            | -           |
| 294               | Carbon steel plate 1/2 inch thick, square foot         | 4.68       | 4.00       | 0.1         | -            | -                  | 20          | -    | -            | -           | -            | -           |
| 359               | Steam drum removal (fossil)                            | 26,079.72  | 25,934.00  | 411.6       | -            | -                  | 480,000     | -    | -            | -           | -            | -           |
| 376               | Process ductwork (8'x8' section), inches cut           | 0.43       | 0.40       | 0.01        | -            | -                  | 0.03        | -    | -            | -           | -            | -           |

| Function           | Plant                 | In-service date | Approved retirement date (1) | As of 1/1/2020 |                     | Total Service Life | Notes |
|--------------------|-----------------------|-----------------|------------------------------|----------------|---------------------|--------------------|-------|
|                    |                       |                 |                              | Current Age    | Years to retirement |                    |       |
| Steam Production   | Allen S. King         | 1968            | 2037                         | 51             | 18                  | 69                 |       |
| Steam Production   | Red Wing              | 1949            | 2027                         | 70             | 8                   | 78 (2)             |       |
| Steam Production   | Sherco Unit 1         | 1976            | 2025                         | 43             | 6                   | 49                 |       |
| Steam Production   | Sherco Unit 2         | 1977            | 2022                         | 42             | 3                   | 45                 |       |
| Steam Production   | Sherco Unit 3         | 1987            | 2034                         | 32             | 15                  | 47                 |       |
| Steam Production   | Wilmarth Unit 1       | 1948            | 2027                         | 71             | 8                   | 79 (3)             |       |
| Steam Production   | Wilmarth Unit 2       | 1951            | 2027                         | 68             | 8                   | 76 (3)             |       |
| Nuclear Production | Monticello            | 1971            | 2030                         | 48             | 11                  | 59 (4)             |       |
| Nuclear Production | Prairie Island Unit 1 | 1973            | 2033                         | 46             | 14                  | 60                 |       |
| Nuclear Production | Prairie Island Unit 2 | 1974            | 2034                         | 45             | 15                  | 60                 |       |
| Hydro Production   | Hennepin Island       | 1882            | 2034                         | 137            | 15                  | 152                |       |
| Hydro Production   | St. Croix Falls       | 1905            | 2027                         | 114            | 8                   | 122                |       |
| Hydro Production   | Upper Dam             | 2001            | 2034                         | 18             | 15                  | 33                 |       |
| Other Production   | Angus Anson Unit 2&3  | 1994            | 2035                         | 25             | 16                  | 41                 |       |
| Other Production   | Angus Anson Unit 4    | 2005            | 2045                         | 14             | 26                  | 40                 |       |
| Other Production   | Black Dog Unit 5      | 2002            | 2031                         | 17             | 12                  | 29                 |       |
| Other Production   | Black Dog Unit 6      | 2018            | 2058                         | 1              | 39                  | 40                 |       |
| Other Production   | Blue Lake Units 1-4   | 1974            | 2023                         | 45             | 4                   | 49                 |       |
| Other Production   | Blue Lake Unit 7&8    | 2005            | 2045                         | 14             | 26                  | 40                 |       |
| Other Production   | High Bridge           | 2008            | 2048                         | 11             | 29                  | 40                 |       |
| Other Production   | Inver Hills           | 1972            | 2026                         | 47             | 7                   | 54                 |       |
| Other Production   | Riverside             | 2009            | 2049                         | 10             | 30                  | 40                 |       |
| Other Production   | Wind2Battery          | 2009            | 2024                         | 10             | 5                   | 15                 |       |
| Other Production   | Border Wind           | 2015            | 2040                         | 4              | 21                  | 25                 |       |
| Other Production   | Courtenay Wind        | 2016            | 2041                         | 3              | 22                  | 25                 |       |
| Other Production   | Foxtail Wind          | 2019            | 2044                         | 0              | 25                  | 25                 |       |
| Other Production   | Grand Meadow Wind     | 2008            | 2033                         | 11             | 14                  | 25                 |       |
| Other Production   | Lake Benton II Wind   | 2019            | 2044                         | 0              | 25                  | 25                 |       |
| Other Production   | Nobles Wind Farm      | 2010            | 2035                         | 9              | 16                  | 25                 |       |
| Other Production   | Pleasant Valley Wind  | 2015            | 2040                         | 4              | 21                  | 25                 |       |
| Gas Production     | Maplewood             | 1957            | 2029                         | 62             | 10                  | 72                 |       |
| Gas Production     | Sibley                | 1953            | 2029                         | 66             | 10                  | 76                 |       |
| Gas Storage        | Wescott               | 1972            | 2023                         | 47             | 4                   | 51 (5)             |       |

(1) As approved in Minnesota Public Utilities Commission Docket No. E,G002/D-19-161.

(2) Units converted to burn refuse-derived fuels in 1986.

(3) Units converted to burn refuse-derived fuels in 1987.

(4) Monticello received its 40 year operating license in 1970 but did not start commercial operation until 1971.

(5) Most of the plant is currently approved to retire in 2023. FERC Account 363.2 Vaporizing Equipment is currently approved to retire in 2027 and FERC Account 363.3 Compressor Equipment is currently approved to retire in 2032.

## CERTIFICATE OF SERVICE

I, Paget Pengelly, hereby certify that I have this day served copies of the foregoing document on the attached list of persons.

xx by depositing a true and correct copy thereof, properly enveloped with postage paid in the United States mail at Minneapolis, Minnesota

xx electronic filing

**DOCKET No.      E,G002/D-19-723**

Dated this 18<sup>th</sup> day of August 2020

/s/

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Paget Pengelly  
Regulatory Administrator

| First Name     | Last Name          | Email                             | Company Name                       | Address   | Delivery Method    | View Trade Secret | Service List Name      |
|----------------|--------------------|-----------------------------------|------------------------------------|---|--------------------|-------------------|------------------------|
| David          | Aafedt             | daafedt@winthrop.com              | Winthrop & Weinstine, P.A.         | Suite 3500, 225 South Sixth Street<br><br>Minneapolis, MN 554024629           | Electronic Service | No                | OFF_SL_19-723_D-19-723 |
| Christopher    | Anderson           | canderson@allete.com              | Minnesota Power                    | 30 W Superior St<br><br>Duluth, MN 558022191                                  | Electronic Service | No                | OFF_SL_19-723_D-19-723 |
| Alison C       | Archer             | aarcher@misoenergy.org            | MISO                               | 2985 Ames Crossing Rd<br><br>Eagan, MN 55121                                  | Electronic Service | No                | OFF_SL_19-723_D-19-723 |
| James J.       | Bertrand           | james.bertrand@stinson.com        | STINSON LLP                        | 50 S 6th St Ste 2600<br><br>Minneapolis, MN 55402                             | Electronic Service | No                | OFF_SL_19-723_D-19-723 |
| James          | Canaday            | james.canaday@ag.state.mn.us      | Office of the Attorney General-RUD | Suite 1400<br>445 Minnesota St.<br>St. Paul, MN 55101                         | Electronic Service | No                | OFF_SL_19-723_D-19-723 |
| John           | Coffman            | john@johncoffman.net              | AARP                               | 871 Tuxedo Blvd.<br><br>St. Louis, MO 63119-2044                              | Electronic Service | No                | OFF_SL_19-723_D-19-723 |
| Generic Notice | Commerce Attorneys | commerce.attorneys@ag.state.mn.us | Office of the Attorney General-DOC | 445 Minnesota Street Suite 1400<br><br>St. Paul, MN 55101                     | Electronic Service | Yes               | OFF_SL_19-723_D-19-723 |
| Riley          | Conlin             | riley.conlin@stoel.com            | Stoel Rives LLP                    | 33 S. 6th Street<br>Suite 4200<br>Minneapolis, MN 55402                       | Electronic Service | No                | OFF_SL_19-723_D-19-723 |
| George         | Crocker            | gwillc@nawo.org                   | North American Water Office        | PO Box 174<br><br>Lake Elmo, MN 55042   | Electronic Service | No                | OFF_SL_19-723_D-19-723 |
| John           | Farrell            | jfarrell@ilsr.org                 | Institute for Local Self-Reliance  | 2720 E. 22nd St<br>Institute for Local Self-Reliance<br>Minneapolis, MN 55406 | Electronic Service | No                | OFF_SL_19-723_D-19-723 |

| First Name | Last Name        | Email                            | Company Name                | Address   | Delivery Method    | View Trade Secret | Service List Name      |
|------------|------------------|----------------------------------|-----------------------------|---|--------------------|-------------------|------------------------|
| Sharon     | Ferguson         | sharon.ferguson@state.mn.us      | Department of Commerce      | 85 7th Place E Ste 280<br><br>Saint Paul,<br>MN<br>551012198            | Electronic Service | No                | OFF_SL_19-723_D-19-723 |
| Edward     | Garvey           | edward.garvey@AESLconsulting.com | AESL Consulting             | 32 Lawton St<br><br>Saint Paul,<br>MN<br>55102-2617                     | Electronic Service | No                | OFF_SL_19-723_D-19-723 |
| Janet      | Gonzalez         | Janet.gonzalez@state.mn.us       | Public Utilities Commission | Suite 350<br>121 7th Place East<br>St. Paul,<br>MN<br>55101             | Electronic Service | No                | OFF_SL_19-723_D-19-723 |
| Todd J.    | Guerrero         | todd.guerrero@kutakrock.com      | Kutak Rock LLP              | Suite 1750<br>220 South Sixth Street<br>Minneapolis,<br>MN<br>554021425 | Electronic Service | No                | OFF_SL_19-723_D-19-723 |
| Annete     | Henkel           | mui@mutilityinvestors.org        | Minnesota Utility Investors | 413 Wacouta Street<br>#230<br>St. Paul,<br>MN<br>55101                  | Electronic Service | No                | OFF_SL_19-723_D-19-723 |
| Michael    | Hoppe            | il23@mtn.org                     | Local Union 23, I.B.E.W.    | 932 Payne Avenue<br><br>St. Paul,<br>MN<br>55130                        | Electronic Service | No                | OFF_SL_19-723_D-19-723 |
| Alan       | Jenkins          | aj@jenkinsatlaw.com              | Jenkins at Law              | 2950 Yellowtail Ave.<br><br>Marathon,<br>FL<br>33050                    | Electronic Service | No                | OFF_SL_19-723_D-19-723 |
| Richard    | Johnson          | Rick.Johnson@lawmoss.com         | Moss & Barnett              | 150 S. 5th Street<br>Suite 1200<br>Minneapolis,<br>MN<br>55402          | Electronic Service | No                | OFF_SL_19-723_D-19-723 |
| Sarah      | Johnson Phillips | sarah.phillips@stoel.com         | Stoel Rives LLP             | 33 South Sixth Street<br>Suite 4200<br>Minneapolis,<br>MN<br>55402      | Electronic Service | No                | OFF_SL_19-723_D-19-723 |
| Mark J.    | Kaufman          | mkaufman@ibewlocal949.org        | IBEW Local Union 949        | 12908 Nicollet Avenue<br>South<br><br>Burnsville,<br>MN<br>55337        | Electronic Service | No                | OFF_SL_19-723_D-19-723 |

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| Thomas     | Koehler   | TGK@IBEW160.org                    | Local Union #160, IBEW                  | 2909 Anthony Ln<br>St Anthony Village,<br>MN<br>55418-3238                       | Electronic Service | No                | OFF_SL_19-723_D-19-723 |
| Michael    | Krikava   | mkrikava@taftlaw.com               | Taft Stettinius & Hollister<br>LLP      | 2200 IDS Center<br>80 S 8th St<br>Minneapolis,<br>MN<br>55402                    | Electronic Service | No                | OFF_SL_19-723_D-19-723 |
| Peder      | Larson    | plarson@larkinhoffman.co<br>m      | Larkin Hoffman Daly &<br>Lindgren, Ltd. | 8300 Norman Center Drive<br>Suite 1000<br>Bloomington,<br>MN<br>55437            | Electronic Service | No                | OFF_SL_19-723_D-19-723 |
| Douglas    | Larson    | dlarson@dakotaelectric.co<br>m     | Dakota Electric Association             | 4300 220th St W<br><br>Farmington,<br>MN<br>55024                                | Electronic Service | No                | OFF_SL_19-723_D-19-723 |
| Eric       | Lipman    | eric.lipman@state.mn.us            | Office of Administrative<br>Hearings    | PO Box 64620<br><br>St. Paul,<br>MN<br>551640620                                 | Electronic Service | No                | OFF_SL_19-723_D-19-723 |
| Ryan       | Long      | ryan.j.long@xcelenergy.co<br>m     | Xcel Energy                             | 414 Nicollet Mall<br>401 8th Floor<br>Minneapolis,<br>MN<br>55401                | Electronic Service | No                | OFF_SL_19-723_D-19-723 |
| Kavita     | Maini     | kmairi@wi.rr.com                   | KM Energy Consulting,<br>LLC            | 961 N Lost Woods Rd<br><br>Oconomowoc,<br>WI<br>53066                            | Electronic Service | No                | OFF_SL_19-723_D-19-723 |
| Pam        | Marshall  | pam@energycents.org                | Energy CENTS Coalition                  | 823 7th St E<br><br>St. Paul,<br>MN<br>55106                                     | Electronic Service | No                | OFF_SL_19-723_D-19-723 |
| Joseph     | Meyer     | joseph.meyer@ag.state.mn<br>.us    | Office of the Attorney<br>General-RUD   | Bremer Tower, Suite 1400<br>445 Minnesota Street<br>St Paul,<br>MN<br>55101-2131 | Electronic Service | No                | OFF_SL_19-723_D-19-723 |
| Stacy      | Miller    | stacy.miller@minneapolism<br>n.gov | City of Minneapolis                     | 350 S. 5th Street<br>Room M 301<br>Minneapolis,<br>MN<br>55415                   | Electronic Service | No                | OFF_SL_19-723_D-19-723 |



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| David          | Moeller                        | dmoeller@allte.com                   | Minnesota Power                      | 30 W Superior St<br><br>Duluth,<br>MN<br>558022093                         | Electronic Service | No                | OFF_SL_19-723_D-19-723 |
| Andrew         | Moratzka                       | andrew.moratzka@stoel.com            | Stoel Rives LLP                      | 33 South Sixth St Ste 4200<br><br>Minneapolis,<br>MN<br>55402              | Electronic Service | No                | OFF_SL_19-723_D-19-723 |
| David          | Niles                          | david.niles@avantenergy.com          | Minnesota Municipal Power Agency     | 220 South Sixth Street<br>Suite 1300<br>Minneapolis,<br>Minnesota<br>55402 | Electronic Service | No                | OFF_SL_19-723_D-19-723 |
| Carol A.       | Overland                       | overland@legalelectric.org           | Legalelectric - Overland Law Office  | 1110 West Avenue<br><br>Red Wing,<br>MN<br>55066                           | Electronic Service | No                | OFF_SL_19-723_D-19-723 |
| Generic Notice | Residential Utilities Division | residential.utilities@ag.state.mn.us | Office of the Attorney General-RUD   | 1400 BRM Tower<br>445 Minnesota St<br>St. Paul,<br>MN<br>551012131         | Electronic Service | Yes               | OFF_SL_19-723_D-19-723 |
| Kevin          | Reuther                        | kreuther@mncenter.org                | MN Center for Environmental Advocacy | 26 E Exchange St, Ste 206<br><br>St. Paul,<br>MN<br>551011667              | Electronic Service | No                | OFF_SL_19-723_D-19-723 |
| Richard        | Savelkoul                      | rsavelkoul@martinsquires.com         | Martin & Squires, P.A.               | 332 Minnesota Street Ste W2750<br><br>St. Paul,<br>MN<br>55101             | Electronic Service | No                | OFF_SL_19-723_D-19-723 |
| Will           | Seuffert                       | Will.Seuffert@state.mn.us            | Public Utilities Commission          | 121 7th PI E Ste 350<br><br>Saint Paul,<br>MN<br>55101                     | Electronic Service | Yes               | OFF_SL_19-723_D-19-723 |
| Ken            | Smith                          | ken.smith@districtenergy.com         | District Energy St. Paul Inc.        | 76 W Kellogg Blvd<br><br>St. Paul,<br>MN<br>55102                          | Electronic Service | No                | OFF_SL_19-723_D-19-723 |
| Byron E.       | Starns                         | byron.starns@stinson.com             | STINSON LLP                          | 50 S 6th St Ste 2600<br><br>Minneapolis,<br>MN<br>55402                    | Electronic Service | No                | OFF_SL_19-723_D-19-723 |

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|------------|-----------|-------------------------------------|---|---|--------------------|-------------------|------------------------|
| James M    | Strommen  | jstrommen@kennedy-graven.com        | Kennedy & Graven, Chartered               | 200 S 6th St Ste 470<br><br>Minneapolis, MN 55402                           | Electronic Service | No                | OFF_SL_19-723_D-19-723 |
| Eric       | Swanson   | eswanson@winthrop.com               | Winthrop & Weinstine                      | 225 S 6th St Ste 3500<br>Capella Tower<br>Minneapolis, MN 554024629         | Electronic Service | No                | OFF_SL_19-723_D-19-723 |
| Lynnette   | Sweet     | Regulatory.records@xcelenergy.com   | Xcel Energy                               | 414 Nicollet Mall FL 7<br><br>Minneapolis, MN 554011993                     | Electronic Service | No                | OFF_SL_19-723_D-19-723 |
| Thomas     | Tynes     | jjazynka@energyfreedomcoalition.com | Energy Freedom Coalition of America       | 101 Constitution Ave NW<br>Ste 525 East<br><br>Washington, DC 20001         | Electronic Service | No                | OFF_SL_19-723_D-19-723 |
| Lisa       | Veith     | lisa.veith@ci.stpaul.mn.us          | City of St. Paul                          | 400 City Hall and Courthouse<br>15 West Kellogg Blvd.<br>St. Paul, MN 55102 | Electronic Service | No                | OFF_SL_19-723_D-19-723 |
| Samantha   | Williams  | swilliams@nrdc.org                  | Natural Resources Defense Council         | 20 N. Wacker Drive<br>Ste 1600<br>Chicago, IL 60606                         | Electronic Service | No                | OFF_SL_19-723_D-19-723 |
| Joseph     | Windler   | jwindler@winthrop.com               | Winthrop & Weinstine                      | 225 South Sixth Street,<br>Suite 3500<br><br>Minneapolis, MN 55402          | Electronic Service | No                | OFF_SL_19-723_D-19-723 |
| Patrick    | Zomer     | Patrick.Zomer@lawmoss.com           | Moss & Barnett a Professional Association | 150 S. 5th Street, #1200<br><br>Minneapolis, MN 55402                       | Electronic Service | No                | OFF_SL_19-723_D-19-723 |