

September 29, 2017

Daniel P. Wolf
Executive Secretary
Minnesota Public Utilities Commission
121 7th Place East, Suite 350
St. Paul, Minnesota 55101-2147

RE: **Comments of Minnesota Department of Commerce, Division of Energy Resources**
Docket No. E,G002/D-17-581

Dear Mr. Wolf:

Attached are the Comments of the Minnesota Department of Commerce, Division of Energy Resources (Department) in the following matter:

Northern States Power Company's 2017 Five-Year Transmission, Distribution, and General Depreciation Study.

The petition was filed on July 31, 2017 by:

Lisa Perkett
Principal Financial Consultant
Xcel Energy
414 Nicollet Mall, 4th Floor
Minneapolis, MN 55401

The Department recommends that the Commission **approve** the Petition. The Department is available to answer any questions the Minnesota Public Utilities Commission may have.

Sincerely,

/s/ CHARLES AMEVO
Financial Analyst
651-539-1819

CA/lt
Attachment



Before the Minnesota Public Utilities Commission

Comments of the Minnesota Department of Commerce Division of Energy Resources

Docket No. E,G002/D-17-581

I. BACKGROUND AND SUMMARY OF THE FILING

On July 31, 2017, Northern States Power Company, doing business as Xcel Energy (Xcel or the Company) filed a petition for approval of their five-year depreciation certification for transmission, distribution and general plan for the Company's electric, gas, and common utilities pursuant to Minn. Stat. section 216B.11 and Minn. R. 7825.0500 through 7825.0900. The Company engaged Alliance Consulting Group to review the depreciation statistics of these assets and is proposing new depreciation lives and rates to better reflect the expected useful lives and expected salvage values of their assets based on their 2017 Comprehensive Depreciation Study (Study).

The Company is also proposing to change from an Average Service Life (ASL) depreciation method to an effective Average Remaining Life (ARL) method in order to spread the depreciation imbalance between the theoretical and actual reserves¹ over the future remaining life lives of the assets. In order to implement this effective ARL method, the Company is requesting approval of remaining lives for each of the accounts included in the study. The Company is proposing to amortize the difference between each account's actual and theoretical depreciation reserves over the account's remaining life. Additionally, Xcel is proposing to redistribute its existing depreciation reserves by functional class to better align with each account's theoretical reserve with the new, proposed depreciation parameters (*i.e.*, the new average service lives, remaining lives and salvage rates).

The Minnesota Department of Commerce, Division of Energy Resources (Department) notes that the ARL method the Company is proposing in this depreciation certification filing was approved in the previous depreciation study in Docket No. E,G002/D-12-858 but the Company did not adopt the change. Xcel states that the approved ARL method was not adopted because of the treatment afforded to the theoretical surplus in its 2012 and 2013 electric rate cases.

¹ As noted on page 8 of the Petition, "Actual reserves are based on historical rates and lives, whereas the theoretical reserve is based on the current assumptions applied as if they had been in place from the beginning of an asset's useful life."

For each proposed change, the Company provides an explanation of the effect of the change on the depreciation accrual. Additionally, Xcel provides Schedules A through J including a comparison of present and proposed depreciation rates and accruals as of January 1, 2017, its simulated plant record and net salvage analysis, and a comparison of the actual and theoretical depreciation reserves. Further, the Company states, "The analysis included interviews with operating personnel responsible for purchase, maintenance, and utilization of the equipment.

The Company presented the impact of the aggregate change in depreciation expense as of January 1, 2017 after allocation of common utilities and shows that there will be a total combined reduction of \$6,903,045 in depreciation expense if the change is approved. The electric utility depreciation expense will be reduced by \$116,945 and the gas utility depreciation expense will be reduced by \$6,786,100. The Company proposed that if the change is approved, the reduction in the electric utility depreciation expense will be reflected in the capital true-up in the Company's multi-year rate plan as approved in Docket No. E002/GR-15-826; the reduction in gas utility depreciation expense is proposed to be reflected in a future rate proceeding.

Xcel notes that, depending on its use, common utility plant is allocated to the separate utilities based on direct assignment, customer numbers, or employee labor. Table 1 below summarizes the depreciation impact of the proposed change, including common utility plant allocation. This table is presented in more detail, and by FERC account, on schedule C of Xcel's 2017 depreciation study.

Table 1
Depreciation Expense Impact of the Proposed Change

	Estimated Change to Depreciation before Allocations	Common Utility Allocations	Estimated Change to Depreciation after Allocations
Electric Utility	3,683,630	(3,800,575)	(116,945)
Gas Utility	(6,588,601)	(197,499)	(6,786,100)
Common Utility	(3,998,074)	3,998,074	-
Total Estimated Impact	(6,903,045)	-	(6,903,045)

The Company proposes an effective date of January 1, 2018 for these changes. Xcel indicates that it would include the resulting decrease in electric utility depreciation expense in the

Company's 2018 capital true-up filing in Docket No. E002/GR-15-826², and will work with parties on addressing the gas utility depreciation expense decrease in a future rate proceeding.

II. DETAILS OF XCEL'S PROPOSAL

A. BACKGROUND

The Company filed a petition for five-year depreciation certification and presented a comprehensive study of the transmission, distribution, and general assets for the electric, gas, and common utilities performed by Alliance Consulting Group (the Study). The Study reviewed the current depreciation lives, net salvage values and depreciation rates for the electric, gas, and common assets and the assets' lives were adjusted if factors such as market forces, manufacturer expected life, technological obsolescence, business planning, known causes of retirement, and changes in expected future utilization affected the useful life of the assets.

The Company currently uses two basic depreciation methods: the remaining service life method for generation facilities; and the Average Service Life (ASL) method for transmission, distribution, and general property; Xcel is proposing in this petition to replace the ASL method with an average life group, remaining-life depreciation method to calculate annual and accrued depreciation for transmission, distribution and general properties.

The depreciation rates currently in effect were approved by the Commission in the Company's last five-year depreciation filing in Docket No. E,G002/D-12-858.

Table 2 compares the depreciation expense produced by applying the approved 2012 ASL depreciation rates and the proposed ARL depreciation rates to the Company's January 1, 2017 plant and redistributed reserve balances.

² Minn. Stat. § 216B.16, subd. 19(e) authorizes the Commission to examine the reasonableness of rates during the term of a multi-year rate plan and to adjust those rates as necessary. The Commission's June 12, 2017 *Findings of Fact, Conclusions, and Order* in Docket No. E002/GR-15-826 included the following Order Point: "Xcel shall work with Commission and Department staff to develop a capital-projects true-up compliance reporting tool that meets the regulatory needs of the agencies, to be filed annually."

Table 2
Comparison of Annual Depreciation Expense Under
Current, and Proposed Depreciation Rates
(\$)

	Adjusted Plant Balance 1/1/2017	Annual Accrual at Present Rate (ASL)	Annual Accrual at Proposed Rate (ARL)	Difference
Total Electric Utility	7,191,013,074	216,815,238	220,498,868	3,683,630
Total Gas Utility	1,064,352,800	34,004,220	27,415,620	(6,588,600)
Total Common Utility	492,251,957	59,821,738	55,823,664	(3,998,074)
	<u>8,747,617,831</u>	<u>310,641,196</u>	<u>303,738,152</u>	<u>(6,903,045)</u>

Source: Schedule C of the Petition (See pages 24 - 29 for more detail by FERC account of this analysis)

Table 2 compares the depreciation expense produced by applying the depreciation rates (ASL) approved in Docket No. E,G002/D-12-858 in the 2012 Depreciation Study to the depreciation expense produced by the proposed rates using the ARL depreciation method. The difference column represents the impact of the change to an effective ARL depreciation method, from the ASL Depreciation method.

B. UPDATES TO DEPRECIATION PARAMETERS

Xcel states that it is proposing certain changes to currently approved service lives and salvage rates after Alliance Consulting Group (their outside consultants)'s review.

Schedule B of the Petition (pages 19 – 23) shows the details of the proposed depreciation parameters and associated rates and compares them to the parameters and rates approved in the previous depreciation study (the 2012 Depreciation Study). The changes in service life of the accounts affected are presented in Table 4 in Section III below.

1. Average Service Lives and Remaining Lives

Xcel applied retirement rate actuarial analysis³ method to assets with sufficient aged data in the Company in Minnesota to re-estimate the average service lives of the assets. Using a combination of factors including dispersion curves analysis (to smooth out the result of the analysis), total company data and trends, and the Company's employees' anticipation, new service lives were assigned to assets by their FERC Account. Based on the depreciation study, Xcel proposes extensions of average service lives for the majority of accounts, although some are left unchanged, and other were assigned a shorter life.

After the appropriate average service life was determined for each account within a functional group, remaining life was computed using engineering judgment together with retirement rate actuarial methods and retirement dispersion. The Department requested and received additional information and workpapers from the Company to verify the reasonableness of the determinations made by the Study in the lives analysis and computation. The Department, upon review of various computations and the assertions made by the Study, concludes that the results from the study were reasonable based on the circumstances.

The method and the results of the life analysis are discussed and presented in 2017 Depreciation Study performed by Alliance Consulting Group (Petition Schedule D, pages 26-67).

2. Salvage Rates

To evaluate the accuracy of the accounts' net salvage, the Company's consultants (Alliance Consulting Group) considered the history of the individual accounts to estimate the future net salvage that Xcel can expect in its operations, and removed reimbursements for relocations that may have been booked to gross salvage. The Study uses various salvage characteristics to evaluate the future net salvage and concludes that:

"For most accounts, data for retirements, gross salvage, and cost of removal for each account is available from 1950-2016. Some accounts have shorter periods with available data. Moving averages, which remove timing differences between retirement and salvage and removal cost, were analyzed over periods varying from 2 to 10 years," These salvage characteristics were incorporated in an account-by-account analysis to reach results summarized in Table 5 below in Section III.

³ Petition Schedule D, page 13.

C. PROPOSAL TO SWITCH TO AN AVERAGE REMAINING LIFE DEPRECIATION METHOD

The most important consideration in deciding to switch from the Average Service Life depreciation method to the Average Remaining Life depreciation method is the concerns with the size of Xcel’s overall depreciation surplus. As noted earlier, the Department recommended and the Commission approved the change in depreciation method to address this concern in the Company’s most recent depreciation study in Docket No. E,G002/D-12-858; but the switch was not adopted by the Company to date. Table 3 shows that as of January 1, 2017, the Company’s transmission, distribution and general property accounts’ total actual depreciation reserve exceeds the same accounts’ total theoretical reserve by \$65.5 million dollars. However, the theoretical reserve is calculated based on the unrealistic assumption that the Company had a perfect view of the future and its initial estimates of average service lives and salvage rates were exactly correct. In other words, had the Company’s proposed depreciation parameters been in place all along, the total actual depreciation reserve would be \$65.5 million less than it is currently, and the accounts, in this limited sense, are 19.25 percent over-depreciated from the original values.

**Table 3
Comparison of Xcel’s
Actual and Theoretical Depreciation Reserves as of 1/1/2017
(\$)**

	Theoretical Reserve	Actual Reserve	Difference	Difference by Utility Group	Difference as % of Theoretical
Total Electric Utility	1,701,452,404	1,667,449,165	(34,003,239)	(20,569,866)	-0.98%
Total Electric Utility (Amortized Accounts)	392,522,307	405,955,680	13,433,373		
Total Gas Utility	298,734,887	375,408,846	76,673,959	92,462,382	24.51%
Total Gas Utility (Amortized Accounts)	78,456,252	94,244,675	15,788,423		
Total Common Utility	28,588,515	22,706,717	(5,881,798)	(6,410,674)	-4.28%
Total Common Utility (Amortized Accounts)	121,255,842	120,726,966	(528,876)		
	2,621,010,206	2,686,492,048	65,481,840	65,481,840	19.25%

Source: Summarized from Appendix D of 2017 Depreciation study

Depreciation expense should be accrued evenly over the life of an asset as ratepayers consume the usefulness of the asset. Xcel’s over-accrual of depreciation expense raises issues of possible generational inequity as rates paid by ratepayers in the past reflected inappropriately high levels of depreciation expense which did not match those ratepayers’ consumption of the usefulness of the assets. Conversely, rates in the future will reflect inappropriately low levels of depreciation expense. In other words, past ratepayers have subsidized future ratepayers.

To correct this actual/theoretical reserve difference, Xcel proposes to switch from its current ASL depreciation method, which does not consider or correct the difference, to an effective ARL

method, which continually corrects for actual/theoretical reserve differences, and eliminates any differences over an asset's (or account's) remaining life.

With an ASL method, depreciation expense is calculated as follows:

$$\text{Depreciation Expense} = \frac{\text{Plant Balance} \times (1 - \text{Salvage Rate})}{\text{Average Service Life}}$$

The size of an account's actual depreciation reserve is not reflected in this calculation, and thus depreciation expense will be the same whether the account is under-depreciated or over-depreciated.

With a remaining life depreciation method, annual depreciation expense is calculated as follows:

$$\text{Depreciation Expense} = \frac{\text{Plant Balance} \times (1 - \text{Salvage Rate}) - \text{Actual Depreciation Reserve}}{\text{Remaining Life}}$$

If an account's actual depreciation reserve is higher (lower) than its theoretical reserve, the numerator in the fraction above will be smaller (larger), and depreciation expense will be lower (higher).

D. PROPOSAL TO SPREAD THE RESERVE SURPLUS OVER THE AVERAGE REMAINING LIFE

Xcel is proposing that the reserve surplus be spread over the average remaining life of the accounts through the use of the proposed remaining life depreciation rate since the ARL depreciation rate systematically allocates the actual to theoretical reserve difference over the asset's average remaining life. Schedule J of the 2017 Depreciation Study presents the comparison of ASL to the proposed ARL both in summary and in detail by FERC account. While use of the ASL depreciation method adds to the increase in the difference between actual and theoretical reserves from year to year, the use of remaining life method effectively spreads any actual to theoretical reserve variance over the expected remaining life of the account or asset; the two formulae above confirm that difference in the treatment of the difference between the actual versus theoretical reserve.

The average remaining life depreciation is different from average service life depreciation in that the average remaining life method adds a self-correcting mechanism, which accounts for any difference between theoretical and book depreciation reserve over the remaining life of each depreciable group. The remaining life method does not leave a surplus or deficit undistributed as the average service life method does.

The calculation under the average remaining life method preserves the Company's total actual depreciation reserves, but resets each individual account's actual reserve in proportion to the account's theoretical reserve.

III. DEPARTMENT ANALYSIS

The Department examined Xcel's 2017 Depreciation Study for compliance with filing requirements and previous Commission Orders, and for reasonableness of the proposed ARL depreciation method, average service lives adjustments, remaining lives, salvage rates, and overall depreciation expense.

A. COMPLIANCE WITH FILING REQUIREMENTS

The filing requirements for depreciation studies are set by Minnesota Statutes Section 216B.11 and Minnesota Rules, parts 7825.0500-7825.0900. Public utilities are required to seek Commission approval of their depreciation rates and methods, and include certain information (e.g. plant balances, analyses of reserves, summaries of annual accruals, etc.) in their depreciation studies. Utilities must file depreciation studies at least once every five years, and must use straight-line depreciation unless a different method can be justified. When utilities use the average service life technique to depreciate group property accounts, the life and salvage factors, as well as the resulting depreciation rates, remain unchanged between studies. When companies choose the remaining-life technique for depreciating group property accounts, the underlying life and salvage factors may not change, but depreciation rates are adjusted annually to reflect the passage of time on remaining lives, as well as the impact of plant additions and retirements. Annual depreciation study updates are required when the remaining life technique is employed to allow the Commission the opportunity to approve changes in depreciation rates.

The Department concludes that Xcel's 2017 Depreciation Study meets all filing requirements.

B. REASONABLENESS OF PROPOSED AVERAGE SERVICE LIVES, AND SALVAGE RATES

1. Average Service Lives

The Department notes that in Xcel's 2012 depreciation study, the Company proposed changes to many of the assets' average service lives and the Commission approved those changes. In the 2017 depreciation study, Xcel is again revising slightly the average service lives of the assets based on current and new analysis of events affecting the assets' remaining lives. Only a few the average service lives are proposed to be slightly increased or decreased while most would

remain unchanged. Table 4 summarizes the accounts with proposed increases or decreases to average service lives.

Table 4
Comparison of Current and Proposed
Average Service Lives for those Accounts Proposed to be Changed

FERC Account #	Account Description	Average Service Life (ASL)		
		Approved Current	2017 Proposed	Difference
Electricity Utility				
Transmission				
352	Structures & Improvements	68	70	2
354	Towers & Fixtures	70	75	5
356	Overhead Conductor & Devices	63	67	4
358	Underground Conductor & Devices	55	50	-5
Distribution - Minnesota Only				
361	Structures & Improvements	60	63	3
362	Station Equipment	55	53	-2
364	Poles, Towers & Fixtures	44	47	3
366	Underground Conduit	52	56	4
367	Underground Conductor & Devices	45	49	4
369	Services - Overhead	40	42	2
369	Services - Underground	41	49	8
General				
390	Structures & Improvements	57	55	-2
391	Network Equipment	4	6	2
392	Transportation Equipment - Light Trucks	12	10	-2
392	Transportation Equipment - Trailers	15	12	-3
392	Transportation Equipment - Heavy Trucks	14	12	-2
397	Communication Equipment	9	10	1
397	Communication Equipment - Two Way	9	10	1
Gas Utility				
Transmission				
366	Structures & Improvements	52	65	13
368	Measure & Regulating Station Equipment	33	40	7
Distribution - Minnesota Only				
375	Structures & Improvements	41	50	9
376	Mains - Metallic	51	63	12
376	Mains - Plastic	45	54	9
380	Services - Metallic	40	51	11
General				
391	Network Equipment	4	6	2
392	Transportation Equipment - Light Trucks	12	10	-2
392	Transportation Equipment - Trailers	15	12	-3
392	Transportation Equipment - Heavy Trucks	14	12	-2
397	Communication Equipment	9	10	1
397	Communication Equipment - Two Way	9	10	1
Common Utility				
General				
390	Structures & Improvements	55	50	-5
391	Network Equipment	4	5	1
392	Transportation Equipment - Light Trucks	12	10	-2
392	Transportation Equipment - Trailers	15	12	-3
392	Transportation Equipment - Heavy Trucks	14	12	-2
397	Communication Equipment	9	10	1
397	Communication Equipment - Two Way	9	10	1

Source: 2017 Depreciation Study, Schedule B

The Department reviewed the service life analyses included in the 2017 Depreciation Study, which include actuarial analysis, simulated plan record method analysis, survivor curve modeling to smooth out the results of the analysis, and engineers' judgement. Eight of the new proposed average service lives changes were an increase of more than 5 years over the 2012 approved average service lives. For example, Xcel proposed an increases average service life of 8 years over the 2012 approved average service life for account 369 Services- Underground (electric utility). In gas utility plant, accounts 366 Structures & Improvements (transmission), 368 Measure & Regulating Station Equipment, 375 Structures & Improvements (Distribution), 376 Mains – Metallic, 376 Mains – Plastic, and 380 Services – Metallic have, respectively, 13-, 7-, 9-, 12-, 9- and 11-year increases over their 2012 approved average service lives. Some of the accounts have no variation in average service lives while still other variations were within plus or minus 5 years.

The Department concludes that the Company's Depreciation Study has the appropriate information to adequately support the proposed changes in average service lives and that the changes are reasonable.

2. Average Remaining Lives

The Department requested and obtained additional information through Department Information Request (IR) No. 1⁴ to evaluate various parameters used by the Company in determining the proposed remaining lives over which the group of assets included in each account will be depreciated.

The remaining life calculation is discussed on page 24 of Schedule D (2017 Depreciation Study). The Company's workpapers supporting the computation were obtained in response to IR No. 1 as an attachment A. The Department was able to replicate the results of the average remaining life computation using various assumptions made the Company and the Company's accounting information received. The Department concludes that the Company's 2017 summary of annual depreciation accruals, average remaining life and proposed depreciation rate as reported in Appendix A of Schedule D of the 2017 Depreciation Study are reasonable.

3. Salvage Values

In the 2017 Depreciation Study, the Company reviewed the annual salvage experiences of each property account and analyzed the trend in each account over periods ranging from two to ten years. Table 5 below summarizes the proposed salvage rate changes for the accounts affected.

⁴ See Attachment 1.

The Department has reviewed the Company's salvage analysis and the proposed salvage rates, and notes that many of the proposed changes are quite large. Nonetheless, the Department concludes that the salvage analyses support Xcel's proposed changes. The Department concludes that the Company's proposed salvage rates are reasonable.

Table 5
Comparison of Current and Proposed
Salvage Rates for Accounts affected by the change

FERC Account #	Account Description	Current Net	Proposed Net	Difference
		Salvage Rate	Salvage Rate	
Electricity Utility				
Transmission				
352	Structures & Improvements	0	-5	-5
353	Station Equipment	-10	-15	-5
355	Poles & Fixtures	-35	-50	-15
356	Overhead Conductor & Devices	-30	-35	-5
358	Underground Conductor & Devices	0	-5	-5
Distribution - Minnesota Only				
362	Station Equipment	-20	-25	-5
364	Poles, Towers & Fixtures	-100	-120	-20
365	Overhead Conductor & Devices	-20	-25	-5
366	Underground Conduit	-10	-20	-10
367	Underground Conductor & Devices	0	-10	-10
368	Line Transformers	-5	-5	0
368	Line Capacitors	-10	-7	3
369	Services - Overhead	-70	-85	-15
370	Meters	0	-5	-5
373	Street Light & Signal Systems	-35	-40	-5
General				
392	Transportation Equipment - Automobiles	0	5	5
392	Transportation Equipment - Light Trucks	0	10	10
392	Transportation Equipment - Trailers	0	20	20
392	Transportation Equipment - Heavy Trucks	0	15	15
396	Power Operated Equipment	0	15	15
Gas Utility				
Distribution - Minnesota Only				
375	Structures & Improvements	0	-5	-5
376	Mains - Metallic	-20	-25	-5
376	Mains - Plastic	-15	-20	-5
379	Measure & Regulating Station Equipment - City Gate	-2	-5	-3
380	Services - Plastic	-30	-25	5
381	Meters	-3	-5	-2
383	House Regulators	0	-1	-1
General				
390	Structures & Improvements	-20	-14	6
392	Transportation Equipment - Automobiles	0	5	5
392	Transportation Equipment - Light Trucks	0	10	10
392	Transportation Equipment - Trailers	0	20	20
392	Transportation Equipment - Heavy Trucks	0	15	15
396	Power Operated Equipment	0	15	15
Common Utility				
General				
390	Structures & Improvements	-20	-25	-5
392	Transportation Equipment - Automobiles	0	5	5
392	Transportation Equipment - Light Trucks	0	10	10
392	Transportation Equipment - Trailers	0	20	20
392	Transportation Equipment - Heavy Trucks	0	15	15
396	Power Operated Equipment	0	15	15

Source: 2017 Depreciation Study, Schedule B

C. PROPOSAL TO SWITCH TO AN AVERAGE REMAINING LIFE DEPRECIATION METHOD

As discussed earlier, the Department agrees that switching from an ASL method to an effective ARL method is an appropriate way to correct the difference between Xcel's actual and theoretical depreciation reserves and restore generational equity. The Department recommends that the Commission approve the Company's proposed change.

The Department notes that, as discussed above, Minnesota Rules part 7825.0700 require utilities employing an ARL depreciation method to file comprehensive depreciation certification studies at least once every five years, and update remaining lives with depreciation study updates annually. To comply with this requirement, Xcel has proposed to begin filing annual transmission, distribution and general plant depreciation studies beginning on July 31, 2018. Xcel has requested an effective date of January 1, 2018 for the depreciation rates proposed in this Petition, and expects to propose an effective date of January 1, 2019 in its next depreciation study. The Company has also proposed to conduct and file a comprehensive depreciation certification study every five years, the next coming in 2022. The Department concludes that this proposal reasonably satisfies Minnesota Rules 7825.0500-7825.0900.

D. PROPOSAL TO SPREAD THE RESERVE SURPLUS OVER THE AVERAGE REMAINING LIVES

The Department notes that if the Company's proposed switch from ASL depreciation method to ARL method is approved as recommended, the difference between an account's actual depreciation reserve and its theoretical reserve will be amortized over the account's remaining life. But, the existing net surplus of \$65.4 million in Table 3 above will remain an issue if not addressed in this 2017 depreciation certification. The Department therefore agrees with the Company that this existing surplus be spread over the average remaining life of the accounts through the use of the proposed remaining life depreciation rates. The Company states that it recommends a reallocation of the depreciation reserve within each functional class as presented in Schedule H of the Petition to effectively spread the surpluses or deficits within the functional class based on a reserve reallocation determined by calculating a factor by dividing the actual reserve as of January 1, 2017 for a functional class by the total theoretical reserve for that functional class.

From Company's additional information obtained through IR No. 1, the Department reviewed the computations and assumptions made by the Company and found the reserve reallocation adjustment as proposed by the Company on Schedule H, pages 255 to 257 of the Petition to be reasonable.

IV. RECOMMENDATIONS

Based on its review of Xcel's 2017 Depreciation Study, the Department recommends that the Commission:

- **Approve** Xcel's proposed depreciation lives and rates in the 2017 Depreciation Study, effective January 1, 2018;
- **Approve** Xcel's request to change from an Average Service Life (ASL) depreciation method to an Average Remaining Life (ARL) depreciation method;
- **Require** Xcel to file a comprehensive five-year depreciation study for its transmission, distribution, and general accounts by July 31, 2022; and
- **Require** Xcel to return the net decrease in depreciation expense due to the change in the depreciation method to ratepayers in the 2018 capital true-up filing in Docket No. E002/GR-15-826.

/lt

- Not Public Document – Not For Public Disclosure
 Public Document – Not Public (Or Privileged) Data Has Been Excised
 Public Document

Xcel Energy

Docket No.: E,G002/M-17-581

Response To: MN Department of Commerce Information Request No. 1

Requestor: Charles Amevo / Angela Byrne

Date Received: September 12, 2017

Question:

Topic: 5-Year Depreciation Certification

Reference(s): Depreciation Study

Request:

- (a) On Page 24 of the depreciation study (page 53 of the filing), a brief comment was made on the calculation of Remaining Life by account and the comment referenced workpapers containing the computation of Remaining Life by account, but those workpapers were not filed with the depreciation study. Please provide in Excel format the workpapers containing the computation of the Remaining Life.
- (b) For Xcel's Schedule B (Proposed Lives, Net Salvage Rates, and Depreciation Rates), the Department can confirm the calculations for column (d) but cannot confirm the calculations for column (i), please explain the differences in these calculations and assumptions. Please explain and provide supporting calculations how the depreciation rate for the proposed Average Remaining Life was calculated using the dispersion curve, Net Salvage Rate, and the Average Remaining Life.
- (c) For Xcel's Schedule B, please provide a quick simple summary in a table format showing the comparison of the results of the study for the following:
- The current Average Service Life to the Proposed Average Remaining Life;
 - The Current Salvage Value to the Salvage Value based on the proposed change;

- Please include the percent change information of the current to proposed change.

Response:

- (a) The workpapers have been provided as Attachment A to this request.
- (b) The calculation for the Average Remaining Life depreciation rate (column (i) of Schedule B) can be calculated using Schedule D, Appendix A and A-1. Take the Total Amortization (Appendix A-1) or Annual Accrual (Appendix A) and divide by the Plant Balance as of 1/1/2017. We have provided these appendices in Microsoft Excel with the formulas intact as Attachment B to this request for your convenience.
- (c) Please refer to Attachment C, Columns T-W. This is the Excel file with formulas intact for Schedule B of our initial filing with Columns T-W added to respond to the question. For the request asking for comparison of “Salvage Value,” we provided a comparison of the total expected final net salvage costs calculated by taking the change in the net salvage rate times the adjusted plant balance.

Preparer: Courtney Young
Title: Financial Consultant
Department: Capital Asset Accounting
Telephone: 612-330-5897
Date: September 19, 2017

CERTIFICATE OF SERVICE

I, Linda Chavez, hereby certify that I have this day served copies of the following document on the attached list of persons by electronic filing, e-mail, or by depositing a true and correct copy thereof properly enveloped with postage paid in the United States Mail at St. Paul, Minnesota.

MINNESOTA DEPARTMENT OF COMMERCE – COMMENTS

Docket Nos. **E,G002/D-17-581**

Dated this **29th** day of **September, 2017**.

/s/Linda Chavez

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
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Xcel Energy

2017 Summary of Annual Depreciation Accruals

Average Service Life

Utility Accounts

FERC Account	Account Description	Remaining Life (Yrs)
Electric		
	352 Transmission Structure & Improve	58.75
	353 Transmission Station Equipment	44.63
	354 Transmission Towers & Fixtures	42.73
	355 Transmission Poles & Fixtures	55.94
	356 Transmission OH Conductor & Device	58.38
	357 Transmission Underground Conduit	62.13
	358 Transmission UG Conductor & Device	39.20
	361 Distribution Structure & Improve	47.26
	362 Distribution Station Equipment	37.99
	364 Distribution Poles, Towers & Fixtures	34.83
	365 Distribution OH Conductor & Device	30.40
	366 Distribution Underground Conduit	42.12
	367 Distribution UG Conductor & Device	36.62
	369 Distribution Services- OH	24.76
	369 Distribution Services- UG	25.07
	373 Distribution Street Light & SG Sys	22.19
	390 General Structures & Improve	36.29
	390 Leasehold Improvements	0.00

Xcel Energy

2017 Summary of Annual Depreciation Accruals

Average Service Life

Utility Accounts

FERC Account	Account Description	Remaining Life (Yrs)
Gas		
	366.2 Transmission Structure & Improve	42.90
	367 Transmission Mains	60.44
	369 Transmission Measure & Reg Station Eq	31.13
	375 Distribution Structure & Improve	45.78
	376 Distribution Mains- Metallic	48.59
	376 Distribution Mains- Plastic	40.84
	378 Distribution Measure & Reg Station Eq- Gen	33.10
	379 Distribution Measure & Reg Station Eq- City Gate	31.61

380 Distribution Service- Metallic	24.13
380 Distribution Service- Plastic	25.82
390 General Structures & Improve	46.31

Xcel Energy

2017 Summary of Annual Depreciation Accruals

Average Service Life

Utility Accounts

FERC Account	Account Description	Remaining Life (Yrs)
<hr/>		
Common		
	390 General Structures & Improve	42.93
	390 General Structures & Improve- Leased	9.04

Xcel Energy

Computation of Amortization Rate

Vintage Group

Electric Utility

FERC Account	Account Description	Remaining Life (Yrs)
	368 Line Transformers	18.27
	368 Line Capacitors	12.71
	370 Meters	8.64

Xcel Energy

Computation of Amortization Rate

Vintage Group

Gas Utility

FERC Account	Account Description	Remaining Life (Yrs)
	381 Meters	9.76
	381 Telemetry (Fully Amortized)	NA
	383 House Regulators (Old)	0.00

XCEL ENERGY
COMPUTATION OF AMORTIZATION AMOUNT
FOR AMORTIZED PROPERTY
AT DECEMBER 31, 2016

Electric Plant

	<u>Description</u>	<u>Remaining Life</u>
Intangible Plant		
	303 Computer Software- 5 Years	2.14
General Plant		
	391 Office Furniture and Equipment	10.22
	391 Network Equipment	4.00
	392 Automobiles	6.65
	392 Light Trucks	5.03
	392 Trailers	7.71
	392 Heavy Trucks	7.50
	393 Stores Equipment	11.33
	394 Tools, Shop, and Garage Equipment	9.38
	395 Laboratory Equipment	5.36
	396 Power Operated Equipment	7.52
	397 General Communication Equipment	3.73
	397 Communication Equipment - Two Way	9.08
	397 Comm. & Telecomm. Equipment - AES	7.39
	397 Comm. & Telecomm. Equipment - EMR	12.66
	398 Miscellaneous	4.06

Gas Utility Plant

	<u>Description</u>	<u>Remaining Life</u>
Intangible Plant		
	303 Computer Software 5 yr	2.58
	303 Computer Software 10 yr	6.50
General Plant		
	391 Office Furniture and Equipment	13.39
	391 Network Equipment	3.50

Attachment A - Amortization Rates

392 Automobiles	8.82
392 Light Trucks	5.49
392 Trailers	6.84
392 Heavy Trucks	6.39
393 Stores Equipment	14.50
394 Tools, Shop, and Garage Equipment	10.40
396 Power Operated Equipment	8.93
397 Communication Equipment	2.30
397 Communication Equipment - Two Way	9.17
397 Comm. & Telecomm. Equipment - AES	11.02
397 Comm. & Telecomm. Equipment - EMR	10.62
398 Miscellaneous	5.09

Common Plant

FERC Account	Account Description	Remaining Life
Intangible Plant		
303.004	Computer Software- 3 Year	-
303.004	Computer Software- 5 Year	2.70
303.004	Computer Software- 7 Year	-
303.004	Computer Software- 10 Year	6.14
303.005	Computer Software- 15 Year	14.05
General Plant		
391	Office Furniture and Equipment	10.44
391	Network Equipment	2.83
392	Automobiles	6.55
392	Light Trucks	3.81
392	Trailers	4.20
392	Heavy Trucks	4.17
393	Stores Equipment	16.67
394	Tools, Shop, and Garage Equipment	9.87
395	Laboratory Equipment	-
396	Power Operated Equipment	6.74
397	Comm. & Telecomm. Equipment	2.43
397	Two Way	9.50
398	Miscellaneous Equipment	4.68

descriptor	Plant Balance	Retirements	survive balance	average service life	remain life	Net Salv %	Theo Res	Alloc Factor	Alloc Res	S x RL	ARE	Theo Resw Diff	ASL Dscr	ARL Dscr	Diff Dscr	Theo Diff Amort	ARL Ratio
10132000 Total	101,086,366.16		101,086,366.16	70.00		-5.00%	17,398,079.37		16,798,241.79	6,056,177,671.19	58,74654	(6,610,137.59)	1,346,295.40	1,356,679.17	10,381.88	10,381.88	1.51%
10133000 Total	1,181,449,209.90		1,181,449,209.90	56.00		-5.00%	275,895,262.49		266,221,408.48	52,726,256,015.61	44,62846	(9,673,854.01)	24,261,903.42	24,478,667.66	216,764.25	216,764.25	2.07%
10134000 Total	118,611,858.48		118,611,858.48	75.00		-35.00%	68,909,593.21		66,493,381.57	5,049,078,651.94	42,72949	(2,416,211.64)	2,135,373.45	2,191,920.15	56,546.70	56,546.70	1.85%
10135000 Total	1,370,556,061.48	0.00	1,370,556,061.48	62.00		-50.00%	195,211,294.54		188,366,502.98	74,457,742,601.95	55,91842	(6,844,795.56)	32,190,872.46	32,131,241.21	122,308.67	122,308.67	2.43%
10136000 Total	532,704,101.52	0.00	532,704,101.52	67.00		-35.00%	92,484,303.91		89,241,480.36	31,101,213,052.25	58,38366	(1,242,823.55)	10,733,590.11	10,789,133.45	55,543.34	55,543.34	2.03%
10137000 Total	25,910,137.71		25,910,137.71	73.00		0.00%	1,857,478.59		1,722,221.88	1,609,844,116.01	62,13182	(131,246.71)	354,933.39	357,110.32	2,178.93	2,178.93	1.98%
10138000 Total	30,710,378.42	0.00	30,710,378.42	30.00		5.00%	6,963,124.95		6,723,991.08	1,201,703,673.11	39,19009	(244,133.87)	644,922.04	651,155.83	6,233.79	6,233.79	2.12%
Grand Total	3,323,048,308.67	0.00	3,323,048,308.67				660,724,337.07		637,557,028.14	172,192,011,486.30							

0.964936498
 Allocation (MN Book Reserve/Theo Reserve) 0.96493650

Financial	Sum of End Bal	Sum of End Theo Bal	Sum of Net End Bal
10132000	17,366,276.54	(3,298,916.35)	14,066,360.19
10132010	4,705,377.51	(1,478,860.80)	3,226,516.71
10132045	204,150.82	-	204,150.82
10133000	317,367,114.72	(72,827,543.47)	244,539,571.25
10133010	24,476,009.96	(55,130,511.59)	-30,654,501.63
10133045	1,240,817.46	-	1,240,817.46
10134000	102,128,975.93	(28,700,611.14)	73,428,364.79
10134010	17,499.81	24,599.05	42,098.86
10134045	375,120.27	-	375,120.27
10135000	216,215,278.62	(44,761,589.46)	171,453,689.16
10135010	329,139.71	118,564.41	447,704.12
10135045	56,025.11	-	56,025.11
10136000	105,913,744.62	(31,642,647.14)	74,271,097.48
10136010	158,661.71	55,579.02	214,240.73
10136045	17,042.31	-	17,042.31
10137000	4,957,313.08	(1,176,451.98)	3,780,861.10
10138000	7,395,340.37	(1,636,484.73)	5,758,855.64
Grand Total	637,557,028.14	0.00	637,557,028.14

Theo Resw Diff	ASL Dscr	ARL Dscr	Diff Dscr	Theo Diff Amort	ARL Ratio
(6,610,137.59)	1,346,295.40	1,356,679.17	10,381.88	10,381.88	1.51%
(9,673,854.01)	24,261,903.42	24,478,667.66	216,764.25	216,764.25	2.07%
(2,416,211.64)	2,135,373.45	2,191,920.15	56,546.70	56,546.70	1.85%
(6,844,795.56)	32,190,872.46	32,131,241.21	122,308.67	122,308.67	2.43%
(1,242,823.55)	10,733,590.11	10,789,133.45	55,543.34	55,543.34	2.03%
(131,246.71)	354,933.39	357,110.32	2,178.93	2,178.93	1.98%
(244,133.87)	644,922.04	651,155.83	6,233.79	6,233.79	2.12%

1.510072987 1.51%
 2.071918747 2.07%
 1.847665696 1.85%
 2.428551645 2.43%
 2.025350521 2.03%
 1.378264865 1.38%
 2.120298507 2.12%

description	vintage	age	surviving_balance	average_sr	remaining_	Net Salv %	Theo Res	Alloc Factor	Alloc Res	\$ x RL	RL	
10361000	Total		43,721,596.39				14,204,039.42		14,082,032.43		2,066,110,969.75	47.26
10362000	Total		552,978,032.41				195,739,417.92		194,058,094.89		21,008,484,397.99	37.99
10364000	Total		343,536,904.60				195,767,724.53		194,086,158.36		11,963,924,037.55	34.83
10365000	Total		373,235,852.32				102,847,355.64		101,963,938.14		11,347,360,744.43	30.40
10366000	Total		261,312,548.05				77,733,024.90		77,065,329.42		11,005,961,528.81	42.12
10367000	Total		967,850,932.77				269,040,527.42		266,729,577.28		35,440,163,120.60	36.62
10369010	Total		71,641,752.51				54,408,241.51		53,940,896.55		1,773,739,473.91	24.76
10369020	Total		185,773,118.73				83,922,749.12		83,201,886.39		4,657,254,404.04	25.07
10373000	Total		64,184,329.38				21,101,842.07		20,920,585.72		1,424,235,966.24	22.19

Grand Total			2,864,235,067.16				1,014,764,922.53		1,006,048,499.17		100,687,234,643.32	
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Proration	0.99
Book	1,006,048,499.17
Difference	0.00

	Sum of End Bal - Excl The	Sum of End Theo Ba	Sum of Net End Bal
10361000	16,067,959	-1,455,060	14,612,898
10361010	495,995	-31,723	464,272
10362000	176,886,668	-12,983,283	163,903,385
10362010	1,552,934	-239,142	1,313,791
10363000	0	0	0
10364000	216,864,859	-16,011,643	200,853,216
10365000	98,576,988	-8,431,224	90,145,764
10366000	77,926,104	-5,961,886	71,964,218
10367000	319,042,559	-24,504,662	294,537,897
10369010	58,290,782	-4,727,887	53,562,895
10369020	97,975,701	-7,456,052	90,519,649
10373000	25,866,405	-1,695,891	24,170,514

description	vintage	age	surviving_balance	Known Change Ret	Adjusted Bal	average_sx remaining_lifi	Net Salv %	Theo Res	Alloc Facto	Alloc Res	\$ x RL	RL
10368000 Total			372,629,099.53	0.00	372,629,099.53			167,927,992.10		171,239,942.10	6,806,325,711.58	18.27
10368010 Total			18,759,257.62	(3,570,694.95)	15,188,562.67			7,990,286.61		8,150,381.27	193,025,127.29	12.71
10370000 Total			96,316,591.40	(41,953,643.36)	54,362,948.04			24,217,648.56		24,702,877.22	469,477,812.65	8.64
Grand Total			487,704,948.55	(45,524,338.31)	442,180,610.24			200,135,927.26		204,093,200.59	7,468,828,651.51	

1.020036 Allocation Factor Revised (MN Set of Books Reserve/Theo Reserve both)

0.00 Difference

	Plant	Book Reserve
10368000	372629099.5	165,776,401.66
10368010	18759257.62	11,882,814.64
10370000	96,316,591.40	74,305,953.41
10370010	<u>0.00</u>	
	487,704,948.55	251,965,169.71
Known Ret	<u>(45,524,338.31)</u>	<u>(45,524,338.31)</u>
Net Res	442,180,610.24	206,440,831.40
Net Salvage 368		0
Net Salvage 3681		(249,949)
Net Salv 370		<u>(2,097,682)</u>
Total Distribution book	<u>442,180,610.24</u>	<u>204,093,200.59</u>

0.00

(47,871,969) Total Known Changes

description	vintage	age	surviving_bal	average_sc	remaining_Net Salv	Theo Res	Alloc Facto	Alloc Res	\$ x RL	RL	
10390000 Total			63,508,306.22				25,927,492.53		23,807,985.81	2,304,613,434.36	36.28838
10390007	1996	20.5	12,663.51	10.00	0.00	0.00	12,663.51	1	12,663.51		0.00
10390007	1981	35.5	568.75	10.00	0.00	0.00	568.75	1	568.75		0.00
10390007	1973	43.5	2,215.53	10.00	0.00	0.00	2,215.53	1	2,215.53		0.00
10390007	1972	44.5	8,827.68	10.00	0.00	0.00	8,827.68	1	8,827.68		0.00
10390007	1970	46.5	10,804.77	10.00	0.00	0.00	10,804.77	1	10,804.77		0.00
10390007	1964	52.5	571.28	10.00	0.00	0.00	571.28	1	571.28		0.00
103900007 Total			35,651.52				35,651.52		35,651.52		0.00
Grand Total			63,543,957.74				25,963,144.05		23,843,637.33	2,304,613,434.36	

23,843,637.33 Book
 0.00000000 Difference

0.918252538

10390000 23813643.58 Book
 10390007 29993.75 Book

description	vintage	age	surviving_balance	average_se	remaining_Net Salv	Plant to Retire	Depreiable Bal	Theo Res	Pro Factor	Alloc Res	RL x \$	RL
10303004 Total			115,172,554.53		0	27,811,170.06	87,361,384.47	49,893,597.14		44,632,340.52	187,338,936.66	2.14
			115,172,554.53			27,811,170.06		49,893,597.14		44,632,340.52	187,338,936.66	
									0.89 Proration			
									0.00 Difference			
								72,443,510.58	Allocated Reserve			
								72,443,510.58	Book Reserve			
10391000 Total			27,593,860.62			0.00	27,593,860.62	13,486,891.13		14,947,879.69	282,139,389.79	10.22
10391004 Total			32,398,060.71			0.00	32,398,060.71	10,809,105.73		11,957,884.10	129,533,729.91	4.00
10392010 Total			1,108,812.83			0.00	1,108,812.83	352,850.05		391,080.01	7,373,917.22	6.65
10392020 Total			32,832,469.73			6,239,706.36	26,592,763.37	11,901,913.08		13,147,405.85	133,684,154.99	5.03
10392030 Total			17,878,077.99			0.00	17,878,077.99	5,107,732.63		5,631,533.60	137,920,946.40	7.71
10392040 Total			97,589,360.91			4,119,784.60	93,469,576.31	29,802,341.18		32,963,430.86	700,895,981.45	7.50
10393000 Total			1,648,791.07			0.00	1,648,791.07	715,143.97		790,288.52	18,672,941.95	11.33
10394000 Total			81,301,137.40			187,887.81	81,113,249.59	30,368,647.91		33,506,944.29	761,169,025.27	9.38
10395000 Total			3,209,733.20			0.00	3,209,733.20	1,487,920.01		1,630,247.72	17,218,131.89	5.36
10396000 Total			45,134,816.83			0.00	45,134,816.83	14,318,885.38		15,825,286.09	339,468,831.85	7.52
10397000 Total			17,117,461.30			158,602.26	16,958,859.04	10,641,258.12		11,477,639.35	63,176,009.23	3.73
10397010 Total			6,532,362.47			0.00	6,532,362.47	603,790.82		669,209.26	59,285,716.53	9.08
10397020 Total			7,071,725.74			0.00	7,071,725.74	3,587,868.14		3,976,600.01	52,257,863.97	7.39
10397030 Total			47,275,857.53			0.00	47,275,857.53	7,370,852.62		8,169,456.48	598,575,073.60	12.66
10398000 Total			2,723,841.29			66,643.44	2,657,197.85	1,937,582.28		2,145,253.28	10,794,233.52	4.06
Grand Total			421,416,369.62			10,772,624.47	410,643,745.15	142,492,783.06		157,230,139.12	3,312,165,947.52	
										168,002,763.59	Book	
										168,002,763.59	Allocated Res	
										0.00	Difference	
												1.11
					Reserve							
					10391000		15,588,743.53					
					10391004		13,082,164.31					
					10392000		0.00					
					10392010		465,342.04					
					10392020		17,260,966.01					
					10392030		5,957,093.63					
					10392040		34,888,986.03					
					10393000		703,108.05					
					10394000		29,387,134.15					
					10394010		0.00					
					10395000		1,419,995.43					
					10396000		19,110,453.10					
					10397000		11,686,701.06					
					10397010		502,772.22					
					10397020		3,292,983.51					
					10397030		12,650,070.11					
					10397040		0.00					
					10398000		2,006,250.41					
							168,002,763.59					

description	vintage	age	surviving_balanc	average_se	remaining_life	Net Salv %	Theo Res	Alloc Facto	Alloc Res	\$ x RL	RL
20366000 Total			1,130,638.69				403,631.35		631,260.41	48,504,812.17	42.90036
20367000 Total			65,790,678.30				14,689,913.18		23,607,633.22	3,976,263,056.48	60.43809
20369000 Total			13,617,811.25				3,924,334.37		6,322,673.88	423,963,700.09	31.13303
Grand Total			80,539,128.24				19,017,878.90		30,561,567.51	4,448,731,568.74	

0.00 Difference

1.625735 Allocation Factor

	Plant	Reserve
20366000	1,130,638.69	613,614.06
20367000	65,790,678.30	24,626,970.02
20369000	13,617,811.25	5,320,983.43
	80,539,128.24	30,561,567.51 Total Book

description	vintage	age	surviving_balance	average_sr	remaining_Net Salv %	Theo Res	Alloc Factor	Alloc Res	\$ x RL	RL
20375000 Total			727,864.33			64,515.98		78,795.31	33,321,026.78	45.77917
20376010 Total			135,069,019.85			38,610,426.74		47,649,540.30	6,563,382,743.00	48.59281
20376020 Total			384,394,655.52			112,391,017.01		138,702,955.32	15,699,716,632.44	40.8427
20378000 Total			22,768,672.22			3,670,958.08		4,523,719.27	753,612,418.78	33.09865
20379000 Total			1,392,565.80			246,046.23		303,648.28	44,012,970.19	31.60567
20380010 Total			12,590,915.44			9,287,055.80		11,375,605.12	303,822,511.76	24.1303
20380020 Total			272,681,596.90			115,177,977.16		142,142,133.34	7,041,029,391.67	25.82143
Grand Total			829,625,290.06			279,447,997.01		344,776,396.94	30,438,896,694.61	36.68993

80,988,989.89 Allocated Gas Dist Amortized
 344,776,396.94 Allocated Gas Dist Depr
 425,765,386.83 Total Gas Dist
 425,765,386.83 Book Reserve
 - Diff

1.234110688 Alloc Factor

		Reserve
20375000	48,049.32	- 48,049.32
20376010	57,556,949.27	- 57,556,949.27
20376011	-	-
20376020	137,959,645.99	- 137,959,645.99
20376021	-	-
20378000	4,657,755.82	- 4,657,755.82
20378010	19,821.36	- 19,821.36
20379000	382,190.48	- 382,190.48
20380010	13,786,939.05	- 13,786,939.05
20380020	139,760,775.27	- 139,760,775.27
20381000	61,213,916.49	- 61,213,916.49
20381010	36,777.88	- 36,777.88
20383000	10,342,565.90	- 10,342,565.90
	425,765,386.83	- 425,765,386.83

378000 Total	23739039.77	4527000.9
378010 Total	54679.69	19821.36
379000 Total	1392565.8	375816.96
380010 Total	14100979.55	11664098
380020 Total	314148687.5	117614046
381000 Total	116603529.3	57146225
381010 Total	38103.22	38103.22

description	vintage	age	surviving_balance	Known Change R	Adjusted Bal	average_service	remaining_life	Net Salv %	Theo Res	Alloc Factor	Alloc Res	\$ x RL	RL
20381000	2016	0.5	508,497.80		508,497.80	20	19.5	-0.05	13,348.07	1.234110688	16,472.99		9,915,707.10
20381000	2015	1.5	13,714,656.33		13,714,656.33	20	18.5	-0.05	1,080,029.19	1.234110688	1,332,875.56	253,721,142.11	
20381000	2014	2.5	7,170,356.03		7,170,356.03	20	17.5	-0.05	941,109.23	1.234110688	1,161,432.96	125,481,230.53	
20381000	2013	3.5	4,614,296.07		4,614,296.07	20	16.5	-0.05	847,876.90	1.234110688	1,046,373.95	76,135,885.16	
20381000	2012	4.5	3,245,719.92		3,245,719.92	20	15.5	-0.05	766,801.33	1.234110688	946,317.72	50,308,658.76	
20381000	2011	5.5	2,749,054.83		2,749,054.83	20	14.5	-0.05	793,789.58	1.234110688	979,624.21	39,861,295.04	
20381000	2010	6.5	2,960,447.47		2,960,447.47	20	13.5	-0.05	1,010,252.70	1.234110688	1,246,763.65	39,966,040.85	
20381000	2009	7.5	4,223,787.02		4,223,787.02	20	12.5	-0.05	1,663,116.14	1.234110688	2,052,469.40	52,797,337.75	
20381000	2008	8.5	2,739,952.76		2,739,952.76	20	11.5	-0.05	1,222,703.92	1.234110688	1,508,951.97	31,509,456.74	
20381000	2007	9.5	2,578,462.23		2,578,462.23	20	10.5	-0.05	1,286,008.04	1.234110688	1,587,076.26	27,073,853.42	
20381000	2006	10.5	2,473,615.82		2,473,615.82	20	9.5	-0.05	1,363,580.72	1.234110688	1,682,809.54	23,499,350.29	
20381000	2005	11.5	2,550,407.18		2,550,407.18	20	8.5	-0.05	1,539,808.33	1.234110688	1,900,293.92	21,678,461.03	
20381000	2004	12.5	2,802,227.86		2,802,227.86	20	7.5	-0.05	1,838,962.03	1.234110688	2,269,482.70	21,016,708.95	
20381000	2003	13.5	4,111,103.36		4,111,103.36	20	6.5	-0.05	2,913,744.51	1.234110688	3,595,883.24	26,722,171.84	
20381000	2002	14.5	7,244,261.50		7,244,261.50	20	5.5	-0.05	5,514,694.07	1.234110688	6,805,742.89	39,843,438.25	
20381000	2001	15.5	3,447,246.87		3,447,246.87	20	4.5	-0.05	2,805,197.14	1.234110688	3,461,923.77	15,512,610.92	
20381000	2000	16.5	5,894,389.44		5,894,389.44	20	3.5	-0.05	5,106,014.85	1.234110688	6,189,108.91	20,630,363.04	
20381000	1999	17.5	4,835,316.70		4,835,316.70	20	2.5	-0.05	4,442,447.22	1.234110688	5,077,082.54	12,088,291.75	
20381000	1998	18.5	6,628,317.16		6,628,317.16	20	1.5	-0.05	6,437,753.04	1.234110688	6,959,733.02	9,942,475.74	
20381000	1997	19.5	3,439,724.99		3,439,724.99	20	0.5	-0.05	3,521,418.46	1.234110688	3,611,711.24	1,719,862.50	
20381000	1996	20.5	4,246,431.99		4,246,431.99	20	0	-0.05	4,458,753.59	1.234110688	4,458,753.59	0.00	
20381000	1995	21.5	3,438,210.41	(3,438,210.41)	0.00	20	0	-0.05	0.00	1.234110688	0.00	0.00	
20381000	1994	22.5	3,925,196.82	(3,925,196.82)	0.00	20	0	-0.05	0.00	1.234110688	0.00	0.00	
20381000	1993	23.5	2,815,146.70	(2,815,146.70)	0.00	20	0	-0.05	0.00	1.234110688	0.00	0.00	
20381000	1992	24.5	2,711,813.01	(2,711,813.01)	0.00	20	0	-0.05	0.00	1.234110688	0.00	0.00	
20381000 Total			105,068,640.27	(12,890,366.94)	92,178,273.33				49,567,409.06	1.234110688	57,890,884.04	899,424,341.73	9.757444018
20381010	2000	16.5	36,777.88	(36,777.88)	0.00	8	0	0	0.00	1.234110688	0.00	0.00	
20381010 Total			36,777.88	(36,777.88)	0.00				0.00	1.234110688	0.00	0.00	
20383000 Total			10,070,258.45		10,070,258.45			-0.01	10,170,961.03		39.49	10,170,961.03	0.00
Grand Total			115,175,676.60	(12,927,144.82)	102,248,531.78				59,738,370.09	74.04664127	68,061,845.07	899,424,341.73	9.757444018

1.234110688

description	vintage	age	surviving_balar	average_sr	remaining_	Net Salv %	Theo Res	Alloc Factor	Alloc Res	\$ x RL	RL
20390000	2016	0.5	19,994.72	55	54.58797	-0.14	170.76	0.263489708	44.99	1,091,471.18	
20390000	2014	2.5	28,233.01	55	52.95009	-0.14	1,199.59	0.263489708	316.08	1,494,940.42	
20390000	2011	5.5	304,591.31	55	50.52417	-0.14	28,257.47	0.263489708	7,445.55	15,389,223.13	
20390000	2010	6.5	248,522.98	55	49.72418	-0.14	27,176.82	0.263489708	7,160.81	12,357,601.39	
20390000	2009	7.5	496,806.63	55	48.92837	-0.14	62,522.29	0.263489708	16,473.98	24,307,938.61	
20390000	2004	12.5	37,863.97	55	45.01292	-0.14	7,838.03	0.263489708	2,065.24	1,704,367.85	
20390000	2000	16.5	5,245.87	55	41.95813	-0.14	1,418.08	0.263489708	373.65	220,106.90	
20390000	1999	17.5	78,089.17	55	41.20563	-0.14	22,327.23	0.263489708	5,883.00	3,217,713.45	
20390000	1998	18.5	2,456.73	55	40.45761	-0.14	740.52	0.263489708	195.12	99,393.42	
20390000	1997	19.5	108,040.88	55	39.71416	-0.14	34,231.00	0.263489708	9,019.52	4,290,752.79	
20390000	1992	24.5	119,586.52	55	36.07182	-0.14	46,917.33	0.263489708	12,362.23	4,313,703.42	
20390000	1980	36.5	452.29	55	27.94783	-0.14	253.61	0.263489708	66.82	12,640.52	
20390000	1976	40.5	5,487.84	55	25.47321	-0.14	3,358.61	0.263489708	884.96	139,792.90	
20390000	1975	41.5	1,647.75	55	24.87513	-0.14	1,028.87	0.263489708	271.10	40,988.00	
20390000	1968	48.5	879.50	55	20.93361	-0.14	621.02	0.263489708	163.63	18,411.11	
20390000	1966	50.5	1,812.75	55	19.88972	-0.14	1,319.21	0.263489708	347.60	36,055.09	
20390000	1965	51.5	132.42	55	19.38203	-0.14	97.76	0.263489708	25.76	2,566.57	
20390000	1962	54.5	316.43	55	17.91547	-0.14	243.23	0.263489708	64.09	5,668.99	
20390000	1959	57.5	1,494.94	55	16.53508	-0.14	1,191.88	0.263489708	314.05	24,718.95	
20390000	1954	62.5	210.55	55	14.42109	-0.14	177.09	0.263489708	46.66	3,036.36	
20390000	1952	64.5	38.02	55	13.63804	-0.14	32.60	0.263489708	8.59	518.52	
20390000	1951	65.5	305.23	55	13.2592	-0.14	264.08	0.263489708	69.58	4,047.11	
20390000	1950	66.5	141.40	55	12.8884	-0.14	123.42	0.263489708	32.52	1,822.42	
20390000	1947	69.5	30,727.62	55	11.82114	-0.14	27,500.61	0.263489708	7,246.13	363,235.50	
20390000 Total			1,493,078.53				269,011.08		70,881.65	69,140,714.60	46.30749
Grand Total			1,493,078.53				269,011.08		70,881.65	69,140,714.60	

0.263489708

0.000000000 Diff

20390000 70881.65
 70,881.65

descriptor	vintage	age	surviving_balance	average_sc	remaining	Net Salv %	Theo Res	Alloc Facto	Alloc Res	RL x \$	
40390000 Total			151,813,406.15				26,814,057.37		21,297,335.53	6,518,108,012.61	42.935
40390007 Total			0.00						0.00	0.00	0
40390083-	2012	4.5	489,533.20	10	5.5	0	220,289.94	0.79426	174,967.51	2,692,432.60	
40390083-	2007	9.5	712,706.32	10	0.5	0	677,071.00	0.79426	537,770.47	356,353.16	
40390083-	2014	2.5	58,682.22	10	7.5	0	14,670.56	0.79426	11,652.24	440,116.65	
40390083-	2016	0.5	17,248,527.25	10	9.5	0	862,426.36	0.79426	684,990.84	163,861,008.88	
40398000 Total			18,509,448.99				1,774,457.86		1,409,381.06	167,349,911.29	9.041323
Grand Total			170,322,855.14				28,588,515.23		22,706,716.59	6,685,457,923.90	

Book Res

40390000	20,791,898.24
40390007	0.00
40390083	1,914,818.35
Book	22,706,716.59
Diff	0.0000000
	0.794260087

utility_account_id	Vin Yr	Age	\$	ASL	RL	Net Salv	Plant to Retire	Depreciable Bal	Theo Res	Pro Factor	Alloc Res	RL x \$	RL
40391000 Total			27,141,560.37				2,929,082.71	24,212,477.66	11,576,009.91		12,392,643.32	252,729,355.08	10.43798
40391004 Total			100,446,164.48				(3,260.94)	100,449,425.42	43,563,950.84		46,846,249.48	284,427,372.88	2.831548
40392010 Total			823,465.08				0.00	823,465.08	270,044.23		290,390.54	5,392,079.98	6.548037
40392020 Total			3,431,468.91				25,251.77	3,406,217.14	1,899,105.82		1,924,475.24	12,960,995.64	3.8051
40392030 Total			1,099,687.00				104,348.64	995,338.36	517,724.22		556,731.83	4,178,197.04	4.197766
40392040 Total			5,505,442.47				1,252,353.18	4,253,089.29	2,360,144.97		2,504,270.52	17,717,377.81	4.165767
40393000 Total			246,162.28				0.00	246,162.28	41,046.95		44,139.61	4,102,306.55	16.66505
40394000 Total			4,041,708.25				10,891.81	4,030,816.44	1,378,370.46		1,481,774.05	39,786,689.69	9.870628
40395000 Total			0.00				0.00	0.00	0.00		0.00	0.00	0
40396000 Total			990,912.36				281,183.25	709,729.11	264,275.30		284,186.96	4,785,803.85	6.743142
40397000 Total			964,432.37				248,568.80	715,863.57	541,717.55		582,532.92	1,741,460.17	2.43267
40397010 Total			75,067.73				0.00	75,067.73	3,753.39		4,036.18	713,143.44	9.5
40398000 Total			582,227.01				0.00	582,227.01	400,574.04		420,759.58	2,724,794.60	4.679952
Total General			145,348,298.31				4,848,419.22	140,499,879.09	62,816,717.68		67,332,190.24	631,259,576.71	

Acct	Book Reserve
40391000	14254182.48
40391004	47312944.62
40392010	389704.33
40392020	2021512.08
40392030	761128.61
40392040	3921972.76
40393000	41608.54
40394000	1387903.49
40395000	1473.07
40396000	609156.03
40397000	859600.47
40397010	123224.00
40398000	496198.98
Total	72,180,609.46

Actual Reserve	72,180,609.46
Allocated Reserve	72,180,609.46
Difference	0.00
Proration	1.08

40303004 10 Yr Total			68,449,239.82				58,267,734.90	10,181,504.92	3,932,060.11		3,592,652.50	62,494,448.09	6.138036
40303004 3 yr Total			7,673,530.38				7,673,530.38	0.00	0.00		0.00	0.00	0
40303004 5 yr Total			197,541,348.78				87,309,050.49	110,232,298.29	50,650,960.95		46,278,870.74	297,906,686.70	2.702535
40303004 7 yr Total			44,140,612.23				44,140,612.23	0.00	0.00		0.00	0.00	0
40303005 15 Yr	2015	1.5	27333840.9	15	13.5		0.00	27,333,840.90	2,733,384.09		2,497,443.81	369,006,852.15	
	2016	0.5	33681577.42	15	14.5		0.00	33,681,577.42	1,122,719.25		1,025,808.35	488,382,872.59	
40303005 15 yr Total			61,015,418.32				0.00	61,015,418.32	3,856,103.34		3,523,252.17	857,389,724.74	14.05202
Grand Total			378,820,149.53				197,390,928.00	181,429,221.53	58,439,124.40		53,394,775.41	1,217,790,859.53	

0.913681989

Book	250785703.4
Allocated	250,785,703.41
Difference	0.00

Acct	Book Reserve
40303004	186022474
40303005	2495133.5
40303014	62268096
	250785703

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Xcel Energy

2017 Summary of Annual Depreciation Accruals

Average Service Life

Utility Accounts

FERC Account	Company Account	Account Description	Plant Balance 1/1/2017	Depreciation Reserve 1/1/2017	Est. Future Net Salvage % Amount	Unaccrued Balance	Remaining Life (Yrs)	Annual Accrual	Depr Rate	Reserve Ratio
Electric Utility										
Transmission										
352	10352000	Structures & Improvements	103,086,366	16,791,010	-5% (5,154,318)	91,449,675	58.75	1,556,629	1.51%	16.29%
353	10353000	Station Equipment	1,181,449,210	266,220,136	-15% (177,217,381)	1,092,446,456	44.63	24,478,696	2.07%	22.53%
354	10354000	Towers & Fixtures	118,631,858	66,493,064	-35% (41,521,150)	93,659,945	42.73	2,191,928	1.85%	56.05%
355	10355000	Poles & Fixtures	1,330,556,061	188,365,602	-50% (665,278,031)	1,807,468,490	55.94	32,313,257	2.43%	14.16%
356	10356000	Overhead Conductor & Devices	532,704,102	89,241,054	-35% (186,446,436)	629,909,483	58.38	10,789,141	2.03%	16.75%
357	10357000	Underground Conduit	25,910,138	3,722,204	0% -	22,187,934	62.13	357,111	1.38%	14.37%
358	10358000	Underground Conductor & Devices	30,710,573	6,723,959	-5% (1,535,529)	25,522,143	39.20	651,157	2.12%	21.89%
Total Transmission			3,323,048,309	637,557,028	(1,077,152,845)	3,762,644,126		72,337,918		
Distribution - Minnesota Only										
361	10361000	Structures & Improvements	43,721,596	14,082,032	-30% (13,116,479)	42,756,043	47.26	904,773	2.07%	32.21%
362	10362000	Station Equipment	552,978,032	194,058,095	-25% (138,244,508)	497,164,446	37.99	13,086,190	2.37%	35.09%
364	10364000	Poles, Towers & Fixtures	343,536,905	194,086,158	-120% (412,244,286)	561,695,032	34.83	16,128,736	4.69%	56.50%
365	10365000	Overhead Conductor & Devices	373,235,852	101,963,938	-25% (93,308,963)	364,580,877	30.40	11,991,745	3.21%	27.32%
366	10366000	Underground Conduit	261,312,548	77,065,329	-20% (52,262,510)	236,509,728	42.12	5,615,408	2.15%	29.49%
367	10367000	Underground Conductor & Devices	967,850,933	266,729,577	-10% (96,785,093)	797,906,449	36.62	21,790,377	2.25%	27.56%
369	10369010	Services - Overhead	71,641,753	53,940,897	-85% (60,895,490)	78,596,346	24.76	3,174,525	4.43%	75.29%
369	10369020	Services - Underground	185,773,119	83,201,886	-5% (9,288,656)	111,859,888	25.07	4,461,977	2.40%	44.79%
373	10373000	Street Lighting & Signal Systems	64,184,329	20,920,586	-40% (25,673,732)	68,937,475	22.19	3,106,722	4.84%	32.59%
Total Distribution			2,864,235,067	1,006,048,499	(901,819,716)	2,760,006,284		80,260,452		
General										
390	10390000	Structures & Improvements	63,508,306	23,807,986	-20% (12,701,661)	52,401,982	36.29	1,444,043	2.27%	37.49%
390	10390007	Leasehold Improvements*	35,652	35,652	0% -	-	0.00	-	0.00%	100.00%
Total General			63,543,958	23,843,637	(12,701,661)	52,401,982		1,444,043		
Total Electric Utility			6,250,827,334	1,667,449,165	(1,991,674,222)	6,575,052,391		154,042,413		

* Rate if plant added to group

Xcel Energy

2017 Summary of Annual Depreciation Accruals

Average Service Life

Utility Accounts

FERC Account	Company Account	Account Description	Plant Balance 1/1/2017	Depreciation Reserve 1/1/2017	Est. Future Net Salvage % Amount	Unaccrued Balance	Remaining Life (Yrs)	Annual Accrual	Depr Rate	Reserve Ratio
Gas Utility										
Transmission										
366	20366000	Structures & Improvements	1,130,639	631,260	-5% (56,532)	555,910	42.90	12,958	1.15%	55.83%
367	20367000	Mains	65,790,678	23,607,633	-15% (9,868,602)	52,051,647	60.44	861,239	1.31%	35.88%
369	20369000	Measure & Regulating Station Equipment	13,617,811	6,322,674	-30% (4,085,343)	11,380,481	31.13	365,544	2.68%	46.43%

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Total Transmission		80,539,128	30,561,568		(14,010,477)	63,988,038		1,239,741			
Distribution - Minnesota Only											
375	20375000	Structures & Improvements	727,864	78,795	-5%	(36,393)	685,462	45.78	14,973	2.06%	10.83%
376	20376010	Mains - Metallic	135,069,020	47,649,540	-25%	(33,767,255)	121,186,735	48.59	2,493,923	1.85%	35.28%
376	20376020	Mains - Plastic	384,394,656	138,702,955	-20%	(76,878,931)	322,570,631	40.84	7,897,877	2.05%	36.08%
378	20378000	Measure & Regulating Station Equipment - General	22,768,672	4,523,719	-25%	(5,692,168)	23,937,121	33.10	723,205	3.18%	19.87%
379	20379000	Measure & Regulating Station Equipment - City Gate	1,392,566	303,648	-5%	(69,628)	1,158,546	31.61	36,656	2.63%	21.80%
380	20380010	Services - Metallic	12,590,915	11,375,605	-40%	(5,036,366)	6,251,676	24.13	259,080	2.06%	90.35%
380	20380020	Services - Plastic	272,681,597	142,142,133	-25%	(68,170,399)	198,709,863	25.82	7,695,540	2.82%	52.13%
Total Distribution		829,625,290	344,776,397		(189,651,141)	674,500,034		19,121,255			
General											
390	20390000	Structures & Improvements	1,493,079	70,882	-14%	(209,031)	1,631,228	46.31	35,226	2.36%	4.75%
Total General		1,493,079	70,882		(209,031)	1,631,228		35,226			
Total Gas Utility		911,657,497	375,408,846		(203,870,649)	740,119,300		20,396,222			

Xcel Energy

2017 Summary of Annual Depreciation Accruals

Average Service Life

Utility Accounts

FERC Account	Company Account	Account Description	Plant Balance 1/1/2017	Depreciation Reserve 1/1/2017	Est. Future Net Salvage		Unaccrued Balance	Remaining Life (Yrs)	Annual Accrual	Depr Rate	Reserve Ratio
					%	Amount					
Common Utility											
General											
390	40390000	Structures & Improvements	151,813,406	21,297,336	-25%	(37,953,352)	168,469,422	42.93	3,923,825	2.58%	14.03%
390	40390007	Structures & Improvements - Leased	18,509,449	1,409,381	0%	-	17,100,068	9.04	1,891,324	10.22%	7.61%
Total General			170,322,855	22,706,717		(37,953,352)	185,569,490		5,815,149		
Total Common Utility			170,322,855	22,706,717		(37,953,352)	185,569,490		5,815,149		
Total ASL- All Utilities			7,332,807,686	2,065,564,727		(2,233,498,223)	7,500,741,181		180,253,784		

Xcel Energy

Computation of Amortization Rate

Vintage Group

Electric Utility

FERC Account	Company Account	Account Description	Plant Balance 1/1/2017	Depreciation Reserve 1/1/2017	Est. Future Net Salvage		Unaccrued Balance	Remaining Life (Yrs)	Annual Accrual	Depr Rate	Reserve Ratio
					%	Amount					
Distribution - Minnesota Only											
368	10368000	Line Transformers	372,629,100	171,239,942	-5%	(18,631,455)	220,020,612	18.27	12,045,571	3.23%	45.95%
368	10368010	Line Capacitors	15,188,563	8,150,381	-7%	(1,063,199)	8,101,381	12.71	637,473	4.20%	53.66%
370	10370000	Meters	54,362,948	24,702,877	-5%	(2,718,147)	32,378,218	8.64	3,749,220	6.90%	45.44%
Total Electric Vintage Group			442,180,610	204,093,201		(22,412,802)	260,500,211		16,432,264		

Note: Electric Amortized Accounts exclude known change retirements which will occur when the age of the asset is greater than average service life.

Xcel Energy

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Computation of Amortization Rate

Vintage Group

Gas Utility

FERC Account	Company Account	Account Description	Plant Balance 1/1/2017	Depreciation Reserve 1/1/2017	Est. Future Net Salvage		Unaccrued Balance	Remaining Life (Yrs)	Annual Accrual	Depr Rate	Reserve Ratio
					%	Amount					
Distribution- Minnesota Only											
381	20381000	Meters	92,178,273	57,890,884	-5%	(4,608,914)	38,896,303	9.76	3,986,321	4.32%	62.80%
381	20381010	Meters - Telemetering	-	-	0%	-	-	NA	-	NA	NA
383	20383000	House Regulators	10,070,258	10,170,961	-1%	(100,703)	0	2.00	0	0.00%	101.00%
Total Gas Vintage Group			102,248,532	68,061,845		(4,709,616)	38,896,303		3,986,321		

Note: Gas Amortized Accounts exclude known change retirements which will occur when the age of the asset is greater than average service life.

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Xcel Energy

Computation of Amortization Amount
For Amortized Property
At January 1, 2017

Electric Utility

FERC Account	Description	Plant Balance 1/1/2017	Allocated Reserve 1/1/2017	Theoretical Reserve 1/1/2017	Reserve Difference	Remaining Life	Amortize Reserve Difference
Intangible							
303	Intangible Computer Software - 5 Year	115,172,555	72,443,511	77,704,767	(5,261,257)	2.14	2,453,471
	Total Intangible	115,172,555	72,443,511	77,704,767	(5,261,257)		2,453,471
General							
391	Office Furniture & Equipment	27,593,861	14,947,880	13,486,891	1,460,989	10.22	(142,888)
391	Network Equipment	32,398,061	11,957,884	10,809,106	1,148,778	4.00	(287,324)
392	Transportation Equipment - Automobiles	1,108,813	391,080	352,850	38,230	6.65	(5,749)
392	Transportation Equipment - Light Trucks	32,832,470	19,387,112	18,141,619	1,245,493	5.03	(247,756)
392	Transportation Equipment - Trailers	17,878,078	5,631,534	5,107,733	523,801	7.71	(67,898)
392	Transportation Equipment - Heavy Trucks	97,589,361	37,083,215	33,922,126	3,161,090	7.50	(421,554)
393	Stores Equipment	1,648,791	790,289	715,144	75,145	11.33	(6,635)
394	Tools, Shop & Garage Equipment	81,301,137	33,694,832	30,556,536	3,138,296	9.38	(334,430)
395	Laboratory Equipment	3,209,733	1,630,248	1,487,920	142,328	5.36	(26,532)
396	Power Operated Equipment	45,134,817	15,825,286	14,318,885	1,506,401	7.52	(200,287)
397	Communication Equipment	17,117,461	11,636,242	10,799,860	836,381	3.73	(224,517)
397	Communication Equipment - Two Way	6,532,362	669,209	603,791	65,418	9.08	(7,208)
397	Communication Equipment - AES	7,071,726	3,976,600	3,587,868	388,732	7.39	(52,605)
397	Communication Equipment - EMS	47,275,858	8,169,456	7,370,853	798,604	12.66	(63,074)
398	Miscellaneous Equipment	2,723,841	2,211,897	2,004,226	207,671	4.06	(51,122)
	Total General	421,416,370	168,002,764	153,265,408	14,737,356		(2,139,579)
	Total Electric Intangible and General	536,588,924	240,446,274	230,970,175	9,476,099		313,892

Excluding Fully Accrued Assets

FERC Account	Description	Plant Balance 1/1/2017	Allocated Reserve 1/1/2017	Amortization Life	Net Salvage %	Annual Amortization	Accrual For Reserve Difference	Total Amortization	Amortization Rate
Intangible									
303	Intangible Computer Software - 5 Year	87,361,384	44,632,341	5.00	0.00%	17,472,277	2,453,471	19,925,748	22.81%
	Total Intangible	87,361,384	44,632,341			17,472,277	2,453,471	19,925,748	
General									
391	Office Furniture & Equipment	27,593,861	14,947,880	20.00	0.00%	1,379,693	(142,888)	1,236,805	4.48%
391	Network Equipment	32,398,061	11,957,884	6.00	0.00%	5,399,677	(287,324)	5,112,352	15.78%
392	Transportation Equipment - Automobiles	1,108,813	391,080	10.00	5.00%	105,337	(5,749)	99,589	8.98%
392	Transportation Equipment - Light Trucks	26,592,763	13,147,406	10.00	10.00%	2,393,349	(247,756)	2,145,592	8.07%
392	Transportation Equipment - Trailers	17,878,078	5,631,534	12.00	20.00%	1,191,872	(67,898)	1,123,974	6.29%
392	Transportation Equipment - Heavy Trucks	93,469,576	32,963,431	12.00	15.00%	6,620,762	(421,554)	6,199,207	6.63%
393	Stores Equipment	1,648,791	790,289	20.00	0.00%	82,440	(6,635)	75,804	4.60%
394	Tools, Shop & Garage Equipment	81,113,250	33,506,944	15.00	0.00%	5,407,550	(334,430)	5,073,120	6.25%
395	Laboratory Equipment	3,209,733	1,630,248	10.00	0.00%	320,973	(26,532)	294,441	9.17%
396	Power Operated Equipment	45,134,817	15,825,286	12.00	15.00%	3,197,050	(200,287)	2,996,763	6.64%
397	Communication Equipment	16,958,859	11,477,639	10.00	0.00%	1,695,886	(224,517)	1,471,369	8.68%
397	Communication Equipment - Two Way	6,532,362	669,209	10.00	0.00%	653,236	(7,208)	646,028	9.89%
397	Communication Equipment - AES	7,071,726	3,976,600	15.00	0.00%	471,448	(52,605)	418,844	5.92%
397	Communication Equipment - EMS	47,275,858	8,169,456	15.00	0.00%	3,151,724	(63,074)	3,088,650	6.53%
398	Miscellaneous Equipment	2,657,198	2,145,253	15.00	0.00%	177,147	(51,122)	126,025	4.74%
	Total General	410,643,745	157,230,139			32,248,143	(2,139,579)	30,108,564	
	Total Electric Intangible & General	498,005,130	201,862,480			49,720,419	313,892	50,034,312	

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Gas Utility

FERC Account	Description	Plant Balance 1/1/2017	Allocated Reserve 1/1/2017	Theoretical Reserve 1/1/2017	Reserve Difference	Remaining Life	Amortize Reserve Difference
Intangible							
303	Intangible Computer Software - 10 Year	7,256,644	5,122,739	5,090,801	31,937.94	2.58	(12,369)
303	Intangible Computer Software - 5 Year	234,274	85,975	81,996	3,978.61	6.50	(612)
	Total Intangible	7,490,919	5,208,713	5,172,797	35,917		(12,981)
General							
391	Office Furniture & Equipment	906,378	467,586	299,696	167,890	13.39	(12,541)
391	Network Equipment	38,023	25,279	15,843	9,436	3.50	(2,696)
392	Transportation Equipment - Automobiles	376,943	67,568	42,346	25,222	8.82	(2,860)
392	Transportation Equipment - Light Trucks	6,054,537	3,889,243	2,961,227	928,016	5.49	(169,051)
392	Transportation Equipment - Trailers	1,504,110	753,603	550,626	202,977	6.84	(29,686)
392	Transportation Equipment - Heavy Trucks	8,425,887	5,125,059	3,787,150	1,337,909	6.39	(209,494)
393	Stores Equipment	10,091	4,428	2,775	1,653	14.50	(114)
394	Tools, Shop & Garage Equipment	6,257,777	2,797,083	1,878,476	918,606	10.40	(88,335)
396	Power Operated Equipment	2,858,219	946,052	622,370	323,682	8.93	(36,263)
397	Communication Equipment	4,722,283	4,554,658	3,635,958	918,700	2.30	(399,361)
397	Communication Equipment - Two Way	120,072	15,970	10,009	5,961	9.17	(650)
397	Communication Equipment - AES	15,492,768	6,555,265	4,108,288	2,446,977	11.02	(222,001)
397	Communication Equipment - EMS	764,413	356,090	223,167	132,923	10.62	(12,515)
398	Miscellaneous Equipment	50,705	42,589	33,509	9,080	5.09	(1,785)
	Total General	47,582,206	25,600,471	18,171,440	7,429,031		(1,187,353)
	Total Gas Intangible & General	55,073,125	30,809,184	23,344,237	7,464,947		(1,200,334)

Excluding Fully Accrued Assets

FERC Account	Description	Plant Balance 1/1/2017	Allocated Reserve 1/1/2017	Amortization Life	Net Salvage %	Annual Amortization	Accrual For Reserve Difference	Total Amortization	Amortization Rate
Intangible									
303	Intangible Computer Software - 5 Year	4,194,027	2,060,121	5	0	838,805	(12,369)	826,436	19.71%
303	Intangible Computer Software - 10 Year	234,274	81,996	10	0	23,427	(612)	22,815	9.74%
	Total Intangible	4,428,301	2,142,117			862,233	(12,981)	849,251	
General									
391	Office Furniture & Equipment	906,378	468,787	20	0.00%	45,319	(12,541)	32,778	3.62%
391	Network Equipment	38,023	25,348	6	0.00%	6,337	(2,696)	3,641	9.58%
392	Transportation Equipment - Automobiles	376,943	67,753	10	5.00%	35,810	(2,860)	32,949	8.74%
392	Transportation Equipment - Light Trucks	5,207,054	3,044,907	10	10.00%	468,635	(169,051)	299,584	5.75%
392	Transportation Equipment - Trailers	1,453,858	704,544	12	20.00%	96,924	(29,686)	67,238	4.62%
392	Transportation Equipment - Heavy Trucks	7,700,813	4,406,250	12	15.00%	545,474	(209,494)	335,981	4.36%
393	Stores Equipment	10,091	4,440	20	0.00%	505	(114)	391	3.87%
394	Tools, Shop & Garage Equipment	6,316,850	2,861,461	15	0.00%	421,123	(88,335)	332,788	5.27%
396	Power Operated Equipment	2,858,219	947,870	12	15.00%	202,457	(36,263)	166,194	5.81%
397	Communication Equipment	4,722,283	4,556,223	10	0.00%	472,228	(399,361)	72,867	1.54%
397	Communication Equipment - Two Way	120,072	16,014	10	0.00%	12,007	(650)	11,357	9.46%
397	Communication Equipment - AES	15,492,768	6,573,194	15	0.00%	1,032,851	(222,001)	810,850	5.23%
397	Communication Equipment - EMS	764,413	357,064	15	0.00%	50,961	(12,515)	38,446	5.03%
398	Miscellaneous Equipment	50,705	2,878	15	0.00%	3,380	(1,785)	1,596	3.15%
	Total General	46,018,470	24,036,734			3,394,012	(1,187,353)	2,206,659	
	Total Gas Intangible & General	50,446,771	26,178,851			4,256,244	(1,200,334)	3,055,910	

Northern States Power Company - Minnesota: Transmission, Distribution & General Study

Common Utility

FERC Account	Account Description	Plant Balance 1/1/2017	Allocated Reserve 1/1/2017	Theoretical Reserve 1/1/2017	Reserve Difference	Remaining Life	Amortize Reserve Difference
Intangible							
303	Intangible Computer Software - 3 Year	7,673,530	7,673,530	7,673,530	0	0.00	0
303	Intangible Computer Software - 5 Year	197,541,349	133,587,921	137,960,011	(4,372,090)	2.70	1,617,774
303	Intangible Computer Software - 7 Year	44,140,612	44,140,612	44,140,612	0	0.00	0
303	Intangible Computer Software - 10 Year	68,449,240	61,860,387	62,199,795	(339,408)	6.14	55,296
303	Intangible Computer Software - 15 Year	61,015,418	3,523,252	3,856,103	(332,851)	14.05	23,687
	Total Intangible	378,820,150	250,785,703	255,830,052	(5,044,349)		1,696,756
General							
391	Office Furniture & Equipment	27,141,560	15,321,726	14,505,093	816,633	10.44	(78,237)
391	Network Equipment	100,446,164	46,842,989	43,560,690	3,282,299	2.83	(1,159,189)
392	Transportation Equipment - Automobiles	823,465	290,391	270,044	20,346	6.55	(3,107)
392	Transportation Equipment - Light Trucks	3,431,469	1,949,727	1,924,358	25,369	3.81	(6,667)
392	Transportation Equipment - Trailers	1,099,687	661,080	622,073	39,008	4.20	(9,292)
392	Transportation Equipment - Heavy Trucks	5,505,442	3,756,624	3,612,498	144,126	4.17	(34,598)
393	Stores Equipment	246,162	44,140	41,047	3,093	16.67	(186)
394	Tools, Shop & Garage Equipment	4,041,708	1,492,666	1,389,262	103,404	9.87	(10,476)
395	Laboratory Equipment	0	0	0	0	0.00	0
396	Power Operated Equipment	990,912	565,370	545,459	19,912	6.74	(2,953)
397	Communication Equipment	964,432	831,102	790,286	40,815	2.43	(16,778)
397	Communication Equipment - Two Way	75,068	4,036	3,753	283	9.50	(30)
398	Miscellaneous Equipment	582,227	420,760	400,574	20,186	4.68	(4,313)
	Total General	145,348,298	72,180,609	67,665,137	4,515,473		(1,325,825)
	Total Common Intangible & General	524,168,448	322,966,313	323,495,189	(528,876)		370,931

Common Utility

Excluding Fully Accrued Assets

FERC Account	Description	Plant Balance 1/1/2017	Allocated Reserve 1/1/2017	Amortization Life	Net Salvage %	Annual Amortization	Accrual For Reserve Difference	Total Amortization	Amortization Rate
Intangible									
303	Intangible Computer Software - 3 Year	0	0	3.00	0.00%	0	0	0	33.33% (2)
303	Intangible Computer Software - 5 Year	110,232,298	46,278,871	5.00	0.00%	22,046,460	1,617,774	23,664,233	21.47%
303	Intangible Computer Software - 7 Year	0	0	7.00	0.00%	0	0	0	14.29% (2)
303	Intangible Computer Software - 10 Year	10,181,505	3,592,653	10.00	0.00%	1,018,150	55,296	1,073,446	10.54%
303	Intangible Computer Software - 15 Year	61,015,418	3,523,252	15.00	0.00%	4,067,695	23,687	4,091,382	6.71%
	Total Intangible	181,429,222	53,394,775			27,132,305	1,696,756	28,829,061	
(2) Rate if new plant is added									
General									
391	Office Furniture & Equipment	24,212,478	12,392,643	20	0.00%	1,210,624	(78,237)	1,132,387	4.68%
391	Network Equipment	100,449,425	46,846,249	5	0.00%	20,089,885	(1,159,189)	18,930,696	18.85%
392	Transportation Equipment - Automobiles	823,465	290,391	10	5.00%	78,229	(3,107)	75,122	9.12%
392	Transportation Equipment - Light Trucks	3,406,217	1,924,475	10	10.00%	306,560	(6,667)	299,892	8.80%
392	Transportation Equipment - Trailers	995,338	556,732	12	20.00%	66,356	(9,292)	57,063	5.73%
392	Transportation Equipment - Heavy Trucks	4,253,089	2,504,271	12	15.00%	301,260	(34,598)	266,663	6.27%
393	Stores Equipment	246,162	44,140	20	0.00%	12,308	(186)	12,123	4.92%
394	Tools, Shop & Garage Equipment	4,030,816	1,481,774	15	0.00%	268,721	(10,476)	258,245	6.41%
395	Laboratory Equipment	0	0	10	0.00%	0	0	0	10.00%
396	Power Operated Equipment	709,729	284,187	12	15.00%	50,272	(2,953)	47,320	6.67%
397	Communication Equipment	715,864	582,533	10	0.00%	71,586	(16,778)	54,808	7.66%
397	Communication Equipment - Two Way	75,068	4,036	10	0.00%	7,507	(30)	7,477	9.96%

Northern States Power Company - Minnesota: Transmission, Distribution & General Study

398 Miscellaneous Equipment	582,227	420,760	15	0.00%	38,815	(4,313)	34,502	5.93%
Total General	140,499,879	67,332,190			22,502,124	(1,325,825)	21,176,299	
Total Common Intangible & General	321,929,101	120,726,966			49,634,429	370,931	50,005,360	

Northern States Power Company
Proposed Lives, Net Salvage Rates, and Depreciation Rates

Docket No. E_g002/D-17-581
DOC IR No. 1
Attachment C - Electric Depr Rate

Electric Utility

FERC Account	Account Description	Note	As approved in Docket No. E _g 002/D-12-858				Proposed					Proposed to Approved Comparison			DOC Request 001 Response				
			Average Service Life	Curve	Net Salvage Rate	Depreciation Rate (ASL)	Average Service Life	Average Remaining Life	Curve	Net Salvage Rate	Depreciation Rate (ARL)	Average Service Life	Net Salvage Rate	Depreciation Annual Rate	Adjusted Plant Balance 1/1/2017	Proposed ARL minus Current ASL	Impact of change in Net Salvage Rate	% change in Depreciation Rates	
			(a)	(b)	(c)	(d) = (100 - (c))/(a)	(e)	(f)	(g)	(h)	(i)	(j) = (e) - (a)	(k) = (h) - (c)	(l) = (i) - (d)	(m) From Schedule C	(n) = (f) - (a)	(o) = (m) * (k)/100	(p) = (l) / (d)	
Intangible																			
303	Computer Software - 5 year	(1)	5	(2)	0	20.00	5	2.14	(2)	0	22.81	0	0	2.81	87,361,385	-2.86	-	14.1%	
Transmission																			
352	Structures & Improvements		68	R5	0	1.47	70	58.75	R5	-5	1.51	2	-5	0.04	103,086,366	-9.25	(5,154,318)	2.7%	
353	Station Equipment		56	R2	-10	1.96	56	44.63	R2	-15	2.07	0	-5	0.11	1,181,449,210	-11.37	(59,072,460)	5.4%	
354	Towers & Fixtures		70	R4	-35	1.93	75	42.73	R4	-35	1.85	5	0	-0.08	118,631,858	-27.27	-	-4.1%	
355	Poles & Fixtures		62	R2	-35	2.18	62	55.94	R2	-50	2.43	0	-15	0.25	1,330,556,061	-6.06	(199,583,409)	11.6%	
356	Overhead Conductor & Devices		63	R1	-30	2.06	67	58.38	R1	-35	2.03	4	-5	-0.03	532,704,102	-4.62	(26,635,205)	-1.6%	
357	Underground Conduit		73	R4	0	1.57	73	62.13	R4	0	1.38	0	0	0.01	25,910,138	-10.87	-	0.7%	
358	Underground Conductor & Devices		55	R2	0	1.82	50	39.20	R3	-5	2.12	-5	-5	0.30	30,710,573	-15.80	(1,535,529)	16.6%	
Distribution - Minnesota Only																			
361	Structures & Improvements		60	R3	-30	2.17	63	47.26	R2.5	-30	2.07	3	0	-0.10	43,721,596	-12.74	-	-4.5%	
362	Station Equipment		55	R1.5	-20	2.18	53	37.99	R2	-25	2.37	-2	-5	0.19	552,978,032	-17.01	(27,648,902)	8.6%	
364	Poles, Towers & Fixtures		44	R1	-100	4.55	47	34.83	R1	-120	4.69	3	-20	0.14	343,536,905	-9.17	(68,707,381)	3.2%	
365	Overhead Conductor & Devices		39	L0	-20	3.08	39	30.40	L0	-25	3.21	0	-5	0.13	373,235,852	-8.60	(18,661,793)	4.3%	
366	Underground Conduit		52	R3	-10	2.12	56	42.12	R3	-20	2.15	4	-10	0.03	261,312,548	-9.88	(26,131,255)	1.6%	
367	Underground Conductor & Devices		45	R2.5	0	2.22	49	36.62	R1.5	-10	2.25	4	-10	0.03	967,850,933	-8.38	(96,785,093)	1.3%	
368	Line Transformers	(1)	32	(2)	-5	3.28	32	18.27	(2)	-5	3.23	0	0	-0.05	372,629,100	-13.73	-	-1.6%	
368	Line Capacitors	(1)	25	(2)	-10	4.40	25	12.71	(2)	-7	4.20	0	3	-0.20	15,188,563	-12.29	455,657	-4.5%	
369	Services - Overhead		40	R1.5	-70	4.25	42	24.76	R1.5	-85	4.43	2	-15	0.18	71,641,753	-15.24	(10,746,263)	4.2%	
369	Services - Underground		41	R4	-5	2.56	49	25.07	R4	-5	2.40	8	0	-0.16	185,773,119	-15.93	-	-6.3%	
370	Meters	(1)	15	(2)	0	6.67	15	8.64	(2)	-5	6.90	0	-5	0.23	54,362,948	-6.36	(2,718,147)	3.5%	
373	Street Light & Signal Systems		29	L0	-35	4.66	29	22.19	L0	-40	4.84	0	-5	0.18	64,184,329	-6.81	(3,209,216)	4.0%	
General																			
390	Structures & Improvements		57	R1.5	-20	2.11	55	36.29	R1.5	-20	2.27	-2	0	0.16	63,508,306	-20.71	-	7.8%	
390	Structures & Improvements - Leasehold Improvements		10	SQ	0	10.00	10	0.00	SQ	0	10.00	0	0	0.00	35,652	-10.00	-	0.0%	
391	Office Furniture & Equipment	(1)	20	(2)	0	5.00	20	10.22	(2)	0	4.48	0	0	-0.52	27,593,861	-9.78	-	-10.4%	
391	Network Equipment	(1)	4	(2)	0	25.00	6	4.00	(2)	0	15.78	2	0	-9.22	32,398,061	0.00	-	-36.9%	
392	Transportation Equipment - Automobiles	(1)	10	(2)	0	10.00	10	6.65	(2)	5	8.98	0	5	-1.02	1,108,813	-3.35	55,441	-10.2%	
392	Transportation Equipment - Light Trucks	(1)	12	(2)	0	8.33	10	5.03	(2)	10	8.07	-2	10	-0.26	26,592,763	-6.97	2,659,276	-3.2%	
392	Transportation Equipment - Trailers	(1)	15	(2)	0	6.67	12	7.71	(2)	20	6.29	-3	20	-0.38	17,878,078	-7.29	3,575,616	-5.7%	
392	Transportation Equipment - Heavy Trucks	(1)	14	(2)	0	7.14	12	7.50	(2)	15	6.63	-2	15	-0.51	93,469,576	-6.50	14,020,436	-7.2%	
393	Stores Equipment	(1)	20	(2)	0	5.00	20	11.33	(2)	0	4.60	0	0	-0.40	1,648,791	-8.67	-	-8.0%	
394	Tools, Shop & Garage Equipment	(1)	15	(2)	0	6.67	15	9.38	(2)	0	6.25	0	0	-0.42	81,113,250	-5.62	-	-6.3%	
395	Laboratory Equipment	(1)	10	(2)	0	10.00	10	5.36	(2)	0	9.17	0	0	-0.83	3,209,733	-4.64	-	-8.3%	
396	Power Operated Equipment	(1)	12	(2)	0	8.33	12	7.52	(2)	15	6.64	0	15	-1.69	45,134,817	-4.48	6,770,223	-20.3%	
397	Communication Equipment	(1)	9	(2)	0	11.11	10	3.73	(2)	0	8.68	1	0	-2.43	16,958,859	-5.27	-	-21.9%	
397	Communication Equipment - Two Way	(1)	9	(2)	0	11.11	10	9.08	(2)	0	9.89	1	0	-1.22	6,532,362	0.08	-	-11.0%	
397	Communication Equipment - EMS	(1)	15	(2)	0	6.67	15	7.39	(2)	0	5.92	0	0	-0.75	7,071,726	-7.61	-	-11.2%	
397	Communication Equipment - AMR	(1)	15	(2)	0	6.67	15	12.66	(2)	0	6.53	0	0	-0.14	47,275,858	-2.34	-	-2.1%	
398	Miscellaneous Equipment	(1)	15	(2)	0	6.67	15	4.06	(2)	0	4.74	0	0	-1.93	2,657,198	-10.94	-	-28.9%	
														<u>7,191,013,074</u>		<u>(519,052,323)</u>			

(1): Plant balance for vintage group (amortized) assets is for the vintages as of 1/1/2017 that are not fully depreciated.
(2): Vintage group and software accounts do not have an Iowa Curve assigned.

Northern States Power Company
Proposed Lives, Net Salvage Rates, and Depreciation Rates

Docket No. E₂G002/D-17-581
DOC IR No. 1
Attachment C - Gas Depr Rate

Gas Utility

FERC Account	Account Description	Note	As approved in Docket No. E ₂ G002/D-12-858				Proposed					Proposed to Approved Comparison			DOC Request 001 Response				
			Average Service Life	Curve	Net Salvage Rate	Depreciation Rate (ASL)	Average Service Life	Average Remaining Life	Curve	Net Salvage Rate	Depreciation Rate (ARL)	Average Service Life	Net Salvage Rate	Depreciation Annual Rate	Adjusted Plant Balance 1/1/2017	Proposed ARL minus Current ASL	Impact of change in Net Salvage Rate	% change in Depreciation Rates	
			(a)	(b)	(c)	(d) = (100 - (c)) / (a)	(e)	(f)	(g)	(h)	(i)	(j) = (e) - (a)	(k) = (h) - (c)	(l) = (i) - (d)	(m) From Schedule C	(n) = (f) - (a)	(o) = (m) * (k) / 100	(p) = (l) / (d)	
Intangible																			
303	Computer Software - 5 year	(1)	5	(3)	0	20	5	2.58	(3)	0	19.71	0	0	-0.29	4,194,027	-2.42	-	-1.5%	
303	Computer Software - 10 year	(1) (5)	10	(3)	0	10	10	6.50	(3)	0	9.74	0	0	-0.26	234,274	-3.50	-	-2.6%	
Transmission																			
366	Structures & Improvements		52	R3	-5	2.02	65	42.90	R4	-5	1.15	13	0	-0.87	1,130,639	-9.10	-	-43.0%	
367	Mains		75	R2.5	-15	1.53	75	60.44	R2.5	-15	1.31	0	0	-0.22	65,790,678	-14.56	-	-14.6%	
369	Measure & Regulating Station Equipment		33	R1.5	-30	3.94	40	31.13	R1	-30	2.68	7	0	-1.26	13,617,811	-1.87	-	-32.0%	
Distribution - Minnesota Only																			
375	Structures & Improvements		41	R5	0	2.44	50	45.78	R5	-5	2.06	9	-5	-0.38	727,864	4.78	(36,393)	-15.5%	
376	Mains - Metallic		51	R1.5	-20	2.35	63	48.59	R2	-25	1.85	12	-5	-0.50	135,069,020	-2.41	(6,753,451)	-21.4%	
376	Mains - Plastic		45	R2.5	-15	2.56	54	40.84	R2.5	-20	2.05	9	-5	-0.51	384,394,656	-4.16	(19,219,733)	-19.8%	
378	Measure & Regulating Station Equipment - General		38	R0.5	-25	3.29	38	33.10	R0.5	-25	3.18	0	0	-0.11	22,768,673	-4.90	-	-3.3%	
379	Measure & Regulating Station Equipment - City Gate		38	R0.5	-2	2.68	38	31.61	R0.5	-5	2.63	0	-3	-0.05	1,392,566	-6.39	(41,777)	-2.0%	
380	Services - Metallic		40	S3	-40	3.50	51	24.13	R3	-40	2.06	11	0	-1.44	12,590,915	-15.87	-	-41.1%	
380	Services - Plastic		39	R2.5	-30	3.33	39	25.82	R2.5	-25	2.82	0	5	-0.51	272,681,597	-13.18	13,634,080	-15.4%	
381	Meters	(1)	20	(3)	-3	5.15	20	9.76	(3)	-5	4.32	0	-2	-0.83	92,178,273	-10.24	(1,843,565)	-16.1%	
381	Meters - Telemetry	(2)	8	(3)	0	12.50	8	0.00	(3)	0	12.50	0	0	0.00	-	-8.00	-	0.0%	
383	House Regulators	(2)	20	(3)	0	5.00	20	0.00	(3)	-1	0.00	0	-1	-5.00	10,070,258	-20.00	(100,703)	-100.0%	
General																			
390	Structures & Improvements		55	R1.5	-20	2.18	55	46.31	R1.5	-14	2.36	0	6	0.18	1,493,079	-8.69	89,585	8.2%	
391	Office Furniture & Equipment	(1)	20	(3)	0	5.00	20	13.39	(3)	0	3.62	0	0	-1.38	906,378	-6.61	-	-27.6%	
391	Network Equipment	(1)	4	(3)	0	25.00	6	3.50	(3)	0	9.58	2	0	-15.42	38,023	-0.50	-	-61.7%	
392	Transportation Equipment - Automobiles	(1)	10	(3)	0	10.00	10	8.82	(3)	5	8.74	0	5	-1.26	376,943	-1.18	18,847	-12.6%	
392	Transportation Equipment - Light Trucks	(1)	12	(3)	0	8.33	10	5.49	(3)	10	5.75	-2	10	-2.58	5,207,054	-6.51	520,705	-31.0%	
392	Transportation Equipment - Trailers	(1)	15	(3)	0	6.67	12	6.84	(3)	20	4.62	-3	20	-2.05	1,453,858	-8.16	290,772	-30.7%	
392	Transportation Equipment - Heavy Trucks	(1)	14	(3)	0	7.14	12	6.39	(3)	15	4.36	-2	15	-2.78	7,700,813	-7.61	1,155,122	-39.0%	
393	Stores Equipment	(1)	20	(3)	0	5.00	20	14.50	(3)	0	3.87	0	0	-1.13	10,091	-5.50	-	-22.6%	
394	Tools, Shop & Garage Equipment	(1)	15	(3)	0	6.67	15	10.40	(3)	0	5.27	0	0	-1.40	6,316,850	-4.60	-	-21.0%	
395	Laboratory Equipment	(4)	10	(3)	0	10.00	10	0.00	(3)	0	10.00	0	0	0.00	-	-10.00	-	0.0%	
396	Power Operated Equipment	(1)	12	(3)	0	8.33	12	8.93	(3)	15	5.81	0	15	-2.52	2,858,219	-3.07	428,733	-30.3%	
397	Communication Equipment	(1)	9	(3)	0	11.11	10	2.30	(3)	0	1.54	1	0	-9.57	4,722,283	-6.70	-	-86.1%	
397	Communication Equipment - Two Way	(1)	9	(3)	0	11.11	10	9.17	(3)	0	9.46	1	0	-1.65	120,072	0.17	-	-14.9%	
397	Communication Equipment - AMR	(1)	15	(3)	0	6.67	15	11.02	(3)	0	5.23	0	0	-1.44	15,492,768	-3.98	-	-21.6%	
397	Communication Equipment - EMS	(1)	15	(3)	0	6.67	15	10.62	(3)	0	5.03	0	0	-1.64	764,413	-4.38	-	-24.6%	
398	Miscellaneous Equipment	(1)	15	(3)	0	6.67	15	5.09	(3)	0	3.15	0	0	-3.52	50,705	-9.91	-	-52.8%	
															<u>1,064,352,800</u>			<u>(11,857,779)</u>	

(1): Plant balance for vintage group (amortized) assets is for the vintages as of 1/1/2017 that are not fully depreciated.

(2): This account is fully depreciated.

(3): Vintage group accounts do not have an Iowa Curve assigned.

(4): As of 1/1/2017 there was zero plant balance in this FERC Account. It is included in proposed rates using the same factors as the electric segment for possible future use.

(5): This rate is being proposed in this docket. It is included here for comparative purposes.

Northern States Power Company
Proposed Lives, Net Salvage Rates, and Depreciation Rates

Docket No. E,G002/D-17-581
DOC IR No. 1
Attachment C - Common Depr Rate

Common Utility

FERC Account	Account Description	Note	As approved in Docket No. E,G002/D-12-858				Proposed					Proposed to Approved Comparison			DOC Request 001 Response			
			Average Service Life	Curve	Net Salvage Rate	Depreciation Rate (ASL)	Average Service Life	Average Remaining Life	Curve	Net Salvage Rate	Depreciation Rate (ARL)	Average Service Life	Net Salvage Rate	Depreciation Annual Rate	Adjusted Plant Balance 1/1/2017	Proposed ARL minus Current ASL	Impact of change in Net Salvage Rate	% change in Depreciation Rates
			(a)	(b)	(c)	(d) = (100 - (c))/(a)	(e)	(f)	(g)	(h)	(i)	(j) = (e) - (a)	(k) = (h) - (c)	(l) = (i) - (d)	(m) From Schedule C	(n) = (f) - (a)	(o) = (m) * (k)/100	(p) = (l) / (d)
Intangible																		
303	Computer Software - 3 year	(1)	3	(2)	0	33.33	3	0.00	(2)	0	33.33	0	0	0.00	-	-3.00	-	0.0%
303	Computer Software - 5 year	(1)	5	(2)	0	20.00	5	2.70	(2)	0	21.47	0	0	1.47	110,232,298	2.30	-	7.3%
303	Computer Software - 7 year	(1)	7	(2)	0	14.29	7	0.00	(2)	0	14.29	0	0	0.00	-	7.00	-	0.0%
303	Computer Software - 10 year	(1)	10	(2)	0	10.00	10	6.14	(2)	0	10.54	0	0	0.54	10,181,505	3.86	-	5.4%
303	Computer Software - 15 year	(1) (3)	15	(2)	0	6.67	15	14.05	(2)	0	6.71	0	0	0.04	61,015,418	0.95	-	0.6%
General																		
390	Structures & Improvements		55	R1.5	-20	2.18	50	42.93	L0	-25	2.58	-5	-5	0.40	151,813,406	12.07	(7,590,670)	18.3%
390	Structures & Improvements - Leasehold Improvements		10	SQ	0	10.00	10	9.04	SQ	0	10.22	0	0	0.22	18,509,449	0.96	-	2.2%
391	Office Furniture & Equipment	(1)	20	(2)	0	5.00	20	10.44	(2)	0	4.68	0	0	-0.32	24,212,478	9.56	-	-6.4%
391	Network Equipment	(1)	4	(2)	0	25.00	5	2.83	(2)	0	18.85	1	0	-6.15	100,449,426	1.17	-	-24.6%
392	Transportation Equipment - Automobiles	(1)	10	(2)	0	10.00	10	6.55	(2)	5	9.12	0	5	-0.88	823,465	3.45	41,173	-8.8%
392	Transportation Equipment - Light Trucks	(1)	12	(2)	0	8.33	10	3.81	(2)	10	8.80	-2	10	0.47	3,406,217	8.19	340,622	5.6%
392	Transportation Equipment - Trailers	(1)	15	(2)	0	6.67	12	4.20	(2)	20	5.73	-3	20	-0.94	995,338	10.80	199,068	-14.1%
392	Transportation Equipment - Heavy Trucks	(1)	14	(2)	0	7.14	12	4.17	(2)	15	6.27	-2	15	-0.87	4,253,089	9.83	637,963	-12.2%
393	Stores Equipment	(1)	20	(2)	0	5.00	20	16.67	(2)	0	4.92	0	0	-0.08	246,162	3.33	-	-1.6%
394	Tools, Shop & Garage Equipment	(1)	15	(2)	0	6.67	15	9.87	(2)	0	6.41	0	0	-0.26	4,030,816	5.13	-	-3.9%
395	Laboratory Equipment	(1)	10	(2)	0	10.00	10	0.00	(2)	0	10.00	0	0	0.00	-	10.00	-	0.0%
396	Power Operated Equipment	(1)	12	(2)	0	8.33	12	6.74	(2)	15	6.67	0	15	-1.66	709,729	5.26	106,459	-20.0%
397	Communication Equipment	(1)	9	(2)	0	11.11	10	2.43	(2)	0	7.66	1	0	-3.45	715,864	6.57	-	-31.1%
397	Communication Equipment - Two Way	(1)	9	(2)	0	11.11	10	9.50	(2)	0	9.96	1	0	-1.15	75,068	-0.50	-	-10.4%
398	Miscellaneous Equipment	(1)	15	(2)	0	6.67	15	4.68	(2)	0	5.93	0	0	-0.74	582,227	10.32	-	-11.1%
													<u>492,251,957</u>	<u>(6,265,385)</u>				

(1): Plant Balance for vintage group (amortized) assets is for the vintages as of 1/1/2017 that are not fully depreciated.

(2): Vintage Group accounts do not have an Iowa Curve assigned.

(3): This rate was approved in Docket E002-GR-13-868. It is included here for comparative purposes.