Minnesota Public Utilities Commission

Staff Briefing Papers

Meeting Date: April 18, 2017 .....* Agenda Item # **2**

Company: Otter Tail Power Company

Docket No. E-017/D-16-729

In the Matter of Otter Tail Power Company's (OTP) 2016 Annual Review of Depreciation Certification

Issues: Should the Commission Approve a 33.91 Year Remaining Life for the Hoot Lake Ash Disposal Facilities?

Should the Commission Approve a Life Extension to 2033 for OTP's Jamestown and Lake Preston Peaking Facilities?

Should the Commission Approve a Change to the Salvage Rate for OTP's Big Stone Plant?

Should the Commission Approve OTP's 2016 Proposed Service Lives and Salvage Values and the Resulting Depreciation Rates?

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Relevant Documents

OTP – Initial Filing……September 1, 2016
OTP – Errata to Initial Filing……..September 14, 2016
Department – Comments……December 13, 2016
OTP – Reply Comments……December 22, 2016
OTP – Letter Correcting Proposed Order……...January 18, 2017

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April 6, 2017

Statement of the Issues

Should the Commission approve a 33.91 year remaining life for the Hoot Lake ash disposal facilities?

Should the Commission approve a life extension to 2033 for OTP's Jamestown and Lake Preston peaking facilities?

Should the Commission approve a change to the salvage rate for OTP's Big Stone Plant?

Should the Commission approve OTP's 2016 proposed service lives and salvage values and the resulting depreciation rates?

Background

September 1, 2016: OTP filed its *2016 Annual Review of Depreciation Certification*. OTP requested approval of changes to the lives and salvage rates of a number of property accounts based on OTP's plant and reserve balances as of December 31, 2015.The Company proposed a 33.91 year remaining life for the Hoot Lake ash disposal sites.

September 14, 2016: Due to an error, OTP filed errata to correct its initial petition.

December 13, 2016: The Department filed comments and recommended the Commission approve OTP's service lives, proposed salvage values and proposed depreciation rates for all facilities, except the Jamestown and Lake Preston peaking facilities. The Department asked OTP to explain why it did not extend the lives of the facilities to 2033 in this petition. The Department requested that OTP calculate the impact on depreciation expense if the lives of the facilities were extended to 2033.

December 22, 2016: OTP submitted reply comments and agreed with the Department's recommendation to extend the lives of the Jamestown and Lake Preston peaking facilities to 2033. The impact on depreciation expense compared to the initial filing would be a reduction of $162,330 on a system wide basis or, a reduction of $83,916 on a Minnesota jurisdictional basis.

January 18, 2017: OTP submitted a letter and an update of its proposed Order. The updated Order corrected a data entry error the Company found in its December 22, 2016 reply comments.

Staff Analysis

In the traditional rate base rate-of-return environment, the revenue requirement is calculated by summing operation and maintenance expenses, depreciation expenses, taxes other than income taxes, income taxes (current and deferred), and a return, which is a product of rate base and the cost of capital. Depreciation has a sizeable effect on the revenue requirement of a utility, and for most utilities, depreciation expense represents a large percentage of total operating expenses.

To account for the annual effect of depreciation on rate base, the Company will increase its accumulated depreciation account by the amount of the annual depreciation expense. Accumulated depreciation, is then subtracted from the Company's plant in service which reduces the amount of plant in service (or rate base) on which the Company is allowed to earn a rate of return. In ratemaking, rate base is multiplied by the cost of capital, and this is considered the Company's return on investment as ratepayers have paid the Company back for their use of the utility plant.

A corresponding amount is recorded as a depreciation expense on the annual income statement which reduces the Company's operating income. The amount of the expense has an effect of the Company's financial statements because it could raise or lower its earned rate of return. Depreciation expense is set as a constant during a general rate case. If the annual expense increases the Company shows decreased earnings and if the expense decreases, it is considered to be in the Company's favor as the Company is allowed to show increased earnings.

The hypothetical example below shows the effect a $5 million change to depreciation expense can have on net operating income, the revenue requirement and rate of return if all other revenues and expenses remain constant.

In Millions	**Increase DE**	**Decrease DE**
Revenues	$200	$200	$200
Expenses	170	175	165
Net Operating Income	30	25	35
AFUDC	1.5	1.5	1.5
Total Available for Return	31.5	26.5	36.5
Average Rate Base	430	435	425
Rate of Return on Rate Base	7.33%	6.24%	8.39%

Otter Tail Power's current depreciation expense is approximately $45.1 million when stated on a total Company basis, with about $22 million allocated to the Minnesota jurisdiction. OTP is asking the Commission to approve its 2016 proposed service lives and salvage values and the resulting depreciation rates. The Company estimated that if the Commission approves the proposed depreciation rates, it would increase OTP's overall depreciation expense by $4.7 million dollars, with about $2.45 million of the expense allocated to Minnesota when compared to the rates currently in effect.

Minnesota Statutes Section 216B.11 and Minnesota Rules, parts 7825.0500-7825.0900 require public utilities to seek Commission approval of their depreciation practices. Utilities must file comprehensive depreciation studies at least once every five years. A straight-line depreciation method, either average service life or remaining life must be used, unless the utility can justify a different method.

When a utility uses the average service life technique to depreciate group property accounts, 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 one year's 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.

With the exception of certain selected General Plant accounts and one Distribution Plant account for which the Company uses amortization accounting, OTP uses a remaining-life accounting method and, as a result, must file annual depreciation study updates. This filing constitutes Otter Tail's 2016 Annual Petition for Depreciation Certification. The Company will use the depreciation parameters approved by the Commission in this filing to calculate its 2017 Minnesota jurisdictional depreciation expense. The Company has requested that the approved rates become effective on January 1, 2017

Otter Tail's last five-year comprehensive depreciation study was filed in 2013 and approved by the Minnesota Public Utilities Commission (Commission) on April 7, 2014, in Docket No. E017/D-13-795. Otter Tail's next five-year comprehensive depreciation study is due September 1, 2018. Annual depreciation certification filings are to be filed on or before September 1 of each year in the four interim years between the five-year comprehensive depreciation studies.

The Department and OTP have agreed to all of the issues presented in this case and if the Commission agrees, it would be approving the following:

- Remaining life and sub account for the Hoot Lake ash disposal facilities;
- Remaining lives of the Jamestown and Lake Preston peaking facilities;
- A change to the Big Stone AQCS net salvage value; and
- The depreciation parameters resulting from changes in the remaining lives, one-year's passage of time, the accounting of plant additions and retirements and changes in net salvage values.

Hoot Lake Ash Disposal Facilities

The Company's Hoot Lake plant will be decommissioned beginning in June 2021. The remaining lives of the plant facility were addressed in OTP's 2015 filing. In this filing, the Company has asked the Commission to establish a sub account and set the remaining lives for the ash disposal facilities at 33.91 years, or to 2051. The ash ponds will remain in place after the plant is decommissioned and will require 30 years of monitoring after the final ash landfill capping under the Environmental Protection Agency's (EPA) Coal Combustion Residuals (CCR) rule which OTP is required to meet.

OTP proposed transferring the costs of the ash ponds from FERC account 312 to a new sub account 312.1. The gross plant associated with the ash ponds is $6,980,676 and accumulated depreciation is $2,331,763 and results in a Net Plant balance of $4,648,913. The Company stated these costs were not included in the test year of its rate case (Docket No. E-017/GR-15-1033)

which was decided by the Commission on March 2, 2017. OTP plans to reflect the changes in depreciation expense and additional rate base investments in its next rate case.

The Department noted that normally, clean-up related costs are allocated over the life of the plant (2021) so that ratepayers who benefited from the energy and capacity of the plant also pay the related costs. OTP responded that it is still allocating the Future Net Negative Salvage value over the Hoot Lake plant's remaining life and ratepayers that benefit from the output of the plant are paying for its cost of removal through the negative net salvage rate. In other words, these costs are being accounted for in the Hoot Lake plant account (312), which is independent of the Hoot Lake ash disposal facilities account (312.1) the Company has proposed. OTP noted it is not proposing any future net salvage value for the Hoot Lake ash disposal facility because at the end of the 30 year monitoring period, no further decommissioning activity will be required.

The Company has moved ash from unlined ash pits on Hoot Lake property and placed the ash into EPA permitted lined pits. These pit must function and be monitored for an additional 30 years. OTP argued that the accounting principle of matching costs to the periods in which they were incurred are met because future ratepayers who will bear these costs will benefit from its current risk mitigation practice at the ash disposal facilities. It is in this way that the concept of ratepayer intergenerational equity is met.

The Department agreed with the Company's assessment that ratepayers will indirectly benefit from OTP's current risk mitigation practices. The Department recommended the Commission approve OTP's proposal to:

- Set up a new subaccount (312.1) under the Hoot Lake plant account (312);
- Transfer the costs of the existing lined permitted ash disposal facility into the subaccount (312.1); and
- Depreciate the costs of the ash disposal facility over 33.91 years.

Jamestown and Lake Preston

The Department noted that OTP did not propose any changes to the remaining lives of either the Jamestown or Lake Preston peaking facilities in this filing. In the 4th quarter of 2016, OTP completed Control System upgrades at both of the plants. The costs of the upgrades were approximately $500k at Jamestown and approximately $274k at Lake Preston. The Department recommended extending the remaining lives of the facilities from 2023 to 2033.

OTP agreed with the Department's recommendation to extend the lives in this filing primarily because the depreciation rates derived from this petition will be utilized in the 2017 calendar year and the plant control systems are in service and benefiting customers.

Big Stone

In December 2015 Big Stone Plant completed its new air-quality control system (AQCS) to meet the Environmental Protection Agency's requirement to further reduce emissions. The three-year

$367 million project helped the Company balance its commitment to environmental stewardship with cost-effective service for its customers by enabling the Company to responsibly generate base-load electricity from coal at Big Stone Plant. The new system reduced plant emissions of sulfur dioxide, nitrogen oxides, and mercury by approximately 90 percent.

OTP owns 53.9% of the Big Stone Plant. To account for the addition of the AQCS, Otter Tail proposed a change to the Big Stone AQCS net salvage value from (11.4%) to (6%). The Company is requesting a 2016 future net salvage value of ($40,638,669), or a 5.4% increase when compared to the Company's 2015 future net salvage value estimate of ($38,572,383).

When depreciable property reaches the end of its service life, its physical retirement is accomplished by either 1) abandonment in place, 2) removal and storage for future use, or 3) removal and disposal. The cost of dismantlement, decommissioning, removal, and site remediation must be incorporated into the expenses associated with the depreciation of the original cost of the asset. The reuse or sale of the plant can offset these costs to some degree. Net salvage is the difference between the revenues realized from selling the retired plant and the costs associated with the retirement. The net salvage value is designed to protect ratepayers and the Company from under- or over-recovery due to retirement costs.

The Department agreed with OTP's assessment that the overall increase in the plant-in-service balances outweighs the overall increase in future net salvage amounts, which results in reduced net negative future salvage percentages. Since OTP proposed only minimal or no changes to the salvage rates of its remaining production plants, the Department concluded that the proposed salvage rates for all production facilities, including Big Stone are reasonable.

Depreciation Parameters

The table below provides a summary of the changes in annual rates and accruals on a total Company basis. As one can observe from the table, if OTP were to keep the 2015 rates in effect its annual accrual to depreciation expense on a total Company basis would be $45,063,787. OTP's proposed changes result in an annual accrual of $49,804,106 using the rates proposed in this filing. This equates to $24,412,396 on a Minnesota basis.

Stated another way, if the Commission were to approve the proposed depreciation parameters the Company estimates it would increase its annual depreciation expense by $4,740,318. The portion allocated to the Minnesota jurisdiction would be $2,447,949. OTP stated that the majority of the increase in depreciation expense was driven primarily by adjusting the decommissioning costs of Big Stone plant's Advanced Air Quality Control System (AQCS).

The table also shows the change in accrual rate from its current 2.57% to the updated 2.84%, or an increase of 0.27% over the current rate. The Company stated its proposal to change the Big Stone AQCS net salvage value from (11.4%) to (6%) was the primary driver of the 0.27% increase over the current rate. As shown in the bottom two rows of Column G, when the Big Stone 2016 annualized accrual is compared to the Total Utility annualized accrual it is almost 100% of the total.

	Accrual Rate[1]			*2016 vs 2017 Annualized Accrual*		
Function	**Current**	**Updated**	**Difference**	**Current**	**Updated**	**Difference**
A	B	C	D=C-B	E	F	G=F-E
Production						
Steam	2.14%	2.97%	0.83%	$11,847,476	$16,453,939	$4,606,463
Hydraulic	8.46%	8.66%	0.20%	595,096	609,377	14,279
Other	4.14%	4.16%	0.02%	12,803,834	12,861,053	57,219
Transmission	1.69%	1.71%	0.02%	6,451,080	6,511,672	60,592
Distribution	2.49%	2.50%	0.01%	11,237,506	11,241,540	4,034
General Plant	3.95%	3.94%	-0.01%	2,128,793	2,126,525	(2,268)
Total Utility	**2.57%**	**2.84%**	**0.27%**	**$45,063,787**	**$49,804,106**	**$4,740,319**
Big Stone	**1.44%**	**2.90%**	**1.46%**	**$4,672,147**	**$9,411,455**	**$4,739,308**

Decision Alternatives

1. Approve the Company's proposed remaining life of the Hoot Lake ash ponds and allow the Company to establish a sub account for the Hoot Lake ash disposal facilities:

    - Set up a new subaccount (312.1) under the Hoot Lake plant account (312);
    - Transfer the costs of the existing lined permitted ash disposal facility into the subaccount (312.1); and
    - Depreciate the costs of the ash disposal facility over 33.91 years, or to 2051.

2. Approve the Company's proposal to extend the remaining lives of the Jamestown and Lake Preston peaking facilities from 2023 to 2033.

3. Approve Otter Tail Power's proposed change to the Big Stone AQCS net salvage value from (11.4%) to (6%).

4. Approve the depreciation parameters resulting from the above changes to remaining lives and salvage values, the adjustment of one-year's passage of time and the accounting of plant additions and retirements. (The changes to these parameter are reflected in Attachment No. 1 to Otter Tail Power's January 18, 2017 letter correcting proposed order.)

5. Order the rates to be effective as of January 1, 2017.

6. Require OTP to include in future depreciation filings a table comparing asset lives used for the purpose of the Company's resource planning with the remaining lives proposed in

[1] The accrual rate is calculated as: 1-Reserve Ratio-Future Net Salvage Rate/Remaining Life. It is not an average.

the depreciation filings, explaining any differences.

7. Require the Company to make its next depreciation filing on or before September 1, 2017.

OTTER TAIL POWER COMPANY
2016 ANNUAL REVIEW OF DEPRECIATION CERTIFICATION
PROPOSED REMAINING LIVES & SALVAGE FOR USE IN 2017

Account Number	Class of Utility Plant	Remaining Life (Yrs)	Net Salvage (%)	Amortization Period (Yrs)
STEAM PRODUCTION				
	Big Stone Plant			
311-101	Structures & Improvements	29.32	-6.0%	
312-101	Boiler Plant Equipment	29.32	-6.0%	
314-101	Turbogenerator Units	29.29	-6.0%	
315-101	Accessory Electric Equipment	29.31	-6.0%	
316-101	Misc. Power Plant Equipment	29.29	-5.6%	
	Hoot Lake Plant - Units 2 & 3			
311-102	Structures & Improvements	5.46	~~-13.5%~~ -12.2%	
312-102	Boiler Plant Equipment	5.46	~~-13.5%~~ -12.2%	
312.1-102	Boiler Plant Equipment	33.91	0.0%	
314-102	Turbogenerator Units	5.46	~~-13.5%~~ -12.2%	
315-102	Accessory Electric Equipment	5.46	~~-13.5%~~ -12.2%	
316-102	Misc. Power Plant Equipment	5.46	~~-13.4%~~ -12.1%	
	Coyote Station			
311-103	Structures & Improvements	24.62	-8.5%	
312-103	Boiler Plant Equipment	24.63	-8.5%	
314-103	Turbogenerator Units	24.65	-8.5%	
315-103	Accessory Electric Equipment	24.63	-8.5%	
316-103	Misc. Power Plant Equipment	24.65	-8.2%	
HYDRAULIC PRODUCTION				
	Hoot Lake Hydro Unit			
331-131	Structures & Improvements	5.46	0.0%	
332-131	Reservoirs, Dams & Waterways	5.46	0.0%	
333-131	Water Wheels, Turbines & Gen.	5.46	0.0%	
334-131	Accessory Electric Equipment	5.46	0.0%	
335-131	Misc. Power Plant Equipment	5.46	0.0%	
	Wright Hydro Unit			
331-132	Structures & Improvements	5.46	0.0%	
332-132	Reservoirs, Dams & Waterways	5.46	0.0%	
333-132	Water Wheels, Turbines & Gen.	5.46	0.0%	
334-132	Accessory Electric Equipment	5.46	0.0%	
335-132	Misc. Power Plant Equipment	5.46	0.0%	
	Pisgah Hydro Unit			
331-133	Structures & Improvements	5.46	0.0%	
332-133	Reservoirs, Dams & Waterways	5.46	0.0%	
333-133	Water Wheels, Turbines & Gen.	5.46	0.0%	
334-133	Accessory Electric Equipment	5.46	0.0%	
335-133	Misc. Power Plant Equipment	5.46	0.0%	
	Dayton Hollow Hydro Unit			
331-134	Structures & Improvements	5.46	0.0%	
332-134	Reservoirs, Dams & Waterways	5.46	0.0%	
333-134	Water Wheels, Turbines & Gen.	5.46	0.0%	
334-134	Accessory Electric Equipment	5.46	0.0%	
335-134	Misc. Power Plant Equipment	5.46	0.0%	
	Taplin Gorge Hydro Unit			
331-135	Structures & Improvements	5.45	0.0%	

OTTER TAIL POWER COMPANY
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PROPOSED REMAINING LIVES & SALVAGE FOR USE IN 2017

Account Number	Class of Utility Plant	Remaining Life (Yrs)	Net Salvage (%)	Amortization Period (Yrs)
332-135	Reservoirs, Dams & Waterways	5.46	0.0%	
333-135	Water Wheels, Turbines & Gen.	5.45	0.0%	
334-135	Accessory Electric Equipment	5.46	0.0%	
335-135	Misc. Power Plant Equipment	5.46	0.0%	
	Bemidji Hydro Unit			
331-138	Structures & Improvements	5.46	0.0%	
332-138	Reservoirs, Dams & Waterways	5.46	0.0%	
333-138	Water Wheels, Turbines & Gen.	5.46	0.0%	
334-138	Accessory Electric Equipment	5.45	0.0%	
335-138	Misc. Power Plant Equipment	5.46	0.0%	
OTHER PRODUCTION				
	Jamestown Unit 1			
341-140	Structures & Improvements	17.10	-1.7%	
342-140	Fuel Holders & Accessories	17.11	-1.7%	
343-140	Prime Movers	17.09	-1.7%	
345-140	Accessory Electric Equipment	17.07	-1.7%	
346-140	Misc. Power Plant Equipment	17.11	-1.7%	
	Jamestown Unit 2			
341-142	Structures & Improvements	17.11	-1.7%	
342-142	Fuel Holders & Accessories	17.08	-1.7%	
343-142	Prime Movers	17.08	-1.7%	
345-142	Accessory Electric Equipment	17.11	-1.7%	
346-142	Misc. Power Plant Equipment	17.09	-1.7%	
	Lake Preston			
341-141	Structures & Improvements	17.09	-2.9%	
342-141	Fuel Holders & Accessories	17.09	-2.9%	
343-141	Prime Movers	17.08	-2.9%	
345-141	Accessory Electric Equipment	17.08	-2.9%	
346-141	Misc. Power Plant Equipment	17.08	-2.9%	
	Fergus Falls Control Center			
343-143	Prime Movers	14.22	0.0%	
	Solway Combustion Turbine Plant			
341-144	Structures & Improvements	21.85	-0.4%	
342-144	Fuel Holders & Accessories	21.85	-0.4%	
343-144	Prime Movers	21.85	-0.4%	
345-144	Accessory Electric Equipment	21.85	-0.4%	
346-144	Misc. Power Plant Equipment	21.85	-0.4%	
	Langdon Wind Energy Center			
341-160	Structures & Improvements	16.15	-1.4%	
344-160	Generators	16.15	-1.4%	
345-160	Accessory Electric Equipment	16.15	-1.4%	
346-160	Misc. Power Plant Equipment	16.16	-1.5%	
	Ashtabula Wind Energy Center			
341-161	Structures & Improvements	17.11	-1.2%	
344-161	Generators	17.11	-1.2%	
345-161	Accessory Electric Equipment	17.11	-1.2%	

OTTER TAIL POWER COMPANY
2016 ANNUAL REVIEW OF DEPRECIATION CERTIFICATION
PROPOSED REMAINING LIVES & SALVAGE FOR USE IN 2017

Account Number	Class of Utility Plant	Remaining Life (Yrs)	Net Salvage (%)	Amortization Period (Yrs)
346-161	Misc. Power Plant Equipment	17.11	-1.2%	
	Luverne Wind Energy Center			
341-162	Structures & Improvements	18.07	-2.0%	
344-162	Generators	18.07	-2.0%	
345-162	Accessory Electric Equipment	18.07	-2.0%	
346-162	Misc. Power Plant Equipment	18.07	-2.0%	
TRANSMISSION				
353	Station Equipment	53.06	-5.0%	
354	Towers & Fixtures	66.45	-10.0%	
355	Poles & Fixtures	54.30	-50.0%	
356	Overhead Conductor & Devices	55.22	-30.0%	
358	Underground Conductor & Devices	9.36	-5.0%	
DISTRIBUTION				
362	Station Equipment	32.11	5.0%	
364	Poles, Towers & Fixtures	47.61	-75.0%	
365	Overhead Conductor & Devices	43.53	-100.0%	
367	Underground Conductor & Devices	24.39	-5.0%	
368	Line Transformers	28.21	50.0%	
369	Overhead Services	32.19	-150.0%	
369.1	Underground Services	29.99	-20.0%	
370	Meters	20.69	0.0%	
370.1	Load Management Switches	2.12	0.0%	
370.20	Interruption Monitors			5
371.20	Other Private Lighting	16.83	10.0%	
373	Street Lighting & Signal System	15.03	-5.0%	
GENERAL PLANT				
	Depreciable			
390	Structures & Improvements	30.54	10.0%	
390.1	General Office Buildings	14.22	49.6%	
390.2	Fleet Service Center Buildings	9.38	33.6%	
390.3	Central Stores Building	18.98	92.6%	
396	Power Operated Equipment	16.89	20.0%	
397.4	Communication Towers	24.13	5.0%	
	Amortizable			
391	Office Furniture			15
391.1	Office Equipment			10
391.2	Duplicating Equipment			10
391.5	Computer Systems			5
391.6	Computer Related Equipment			5
393	Stores Equipment			15
394	Tools, Shop & Garage Equipment			15
394.2	Automated Meter Reading Equip.			15
395	Laboratory Equipment			15
397	Communication Equipment			15
397.1	Radio Telecom Equipment			10
397.2	Microwave Equipment			15
397.3	Radio Load Control Equipment			10

Source is Statement A from Foster Report