EXHIBIT TPB - 5 - 2017 DEPRECIATION STUDY

SOUTHWESTERN ELECTRIC POWER COMPANY

DEPRECIATION STUDY REPORT

FOR

FLINT CREEK AND WELSH GENERATING PLANTS

AT DECEMBER 31, 2016

I. INTRODUCTION

This report presents the results of a depreciation study of Southwestern Electric Power Company's (SWEPCO or Company) Flint Creek and Welsh Generating Plant electric utility plant in service balances at December 31, 2016. The study was prepared by David A. Davis, Manager – Property Accounting Policy and Research at American Electric Power Service Corporation (AEPSC). The purpose of the depreciation study was to develop appropriate annual depreciation accrual rates for each of the primary plant accounts for these two generating plants.

The recommended depreciation rates are based on the Average Remaining Life Method of computing depreciation.

The definition of depreciation used in this Study is the same as that used by the Federal Energy Regulatory Commission (FERC) and the National Association of Regulatory Utility Commissioners:

> "Depreciation, as applied to depreciable electric plant, means the loss in service value not restored by current maintenance, incurred in connection with the consumption or prospective retirement of electric plant in the course of service from causes which are known to be in current operation and against which the utility is not protected by insurance. Among the causes to be given consideration are wear and tear, decay, action of the elements, inadequacy, obsolescence, changes in the art, changes in demand and requirements of public authorities."
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> "Service value means the difference between original cost and the net salvage value (net salvage value means the salvage value of the property retired less the cost of removal) of the electric plant." (FERC

Accounting and Reporting Requirements for Public Utilities and Licensees, ¶15.001.)

Schedule I of this report provides the recommended depreciation accrual rates for Flint Creek and Welsh Plants for each primary plant account and calculates a weighted average generating plant accrual rate for each plant. Schedule II compares depreciation expense using rates approved by the Commission and rates recommended by my depreciation study. Schedule III provides the MW capacity, year installed (in-service year), estimated year retired and life span for the two plants/units.

Based on Flint Creek and Welsh Plant total Company Depreciable Plant In-Service as of December 31, 2016, the recommended depreciation rates are 3.76% higher than the existing rates and produce an increase in total Company annual depreciation expense of $45,466,573 (approximately $13 million on a Louisiana jurisdictional basis). The depreciation rate changes are necessary because of changes in investment, average service lives and net salvage estimates used to calculate SWEPCO's current depreciation rates as discussed below.

II. DISCUSSION OF METHODS AND PROCEDURES USED IN THE STUDY

1. Group Method

All of the depreciable property included in this report was considered on a group plan methodology. Under the group plan, depreciation expense is accrued upon the basis of the original cost of all property included in each depreciable plant account. Upon retirement of any depreciable property, its full cost, less any net salvage realized, is charged to the accrued depreciation reserve regardless of the age of the particular item retired. Also, under this plan, the dollars in each primary plant account are considered as a separate group for depreciation accounting purposes and an annual depreciation rate for each account is

determined. The annual accruals by primary account were then summed, to arrive at the total accrual for each functional group. The total accrual divided by the original cost yields the functional group accrual rate.

2. Determination of Annual Depreciation Rates by the Average Remaining Life Method

SWEPCO's current depreciation rates are based on the Average Remaining Life Method. The Average Remaining Life Method recovers the original cost of the plant, adjusted for net salvage, less accumulated depreciation, over the average remaining life of the plant. By this method, the annual depreciation rate for each account is determined on the following basis:

$$\text{Annual Depreciation Expense} = \frac{(\text{Orig. Cost})\ (\text{Net Salvage Ratio}) - \text{Accumulated Depreciation}}{\text{Average Remaining Life}}$$

$$\text{Annual Depreciation Rate} = \frac{\text{Annual Depreciation Expense}}{\text{Original Cost}}$$

3. Method of Life Analysis

Life Span Analysis

The life span analysis was employed for Flint Creek and Welsh Plant. The life-span method of analysis is particularly suited to specific location property, such as a generating plant, where all of the surviving investments are likely to be retired in total at a future date.

The key elements in the life span analysis are the age of the surviving investments, the projected retirement date of the facility and the

expected interim retirements. Interim retirements are those that are expected to occur between the date of the depreciation study and the expected final retirement date of the generating plant. Examples of interim retirements include fans, pumps, motors, a set of boiler tubes, a turbine rotor, etc.

The age of the surviving investments was obtained from SWEPCO's property accounting records. SWEPCO personnel provided the estimated retirement dates used in the life-span analysis for Flint Creek and Welsh Plants. A discussion of the life analyses for Flint Creek and Welsh Plants follows:

Production Plant – Flint Creek and Welsh Plants

SWEPCO's depreciable investments included in this depreciation study are Flint Creek and Welsh plants which are coal fired plants where environmental related retrofits were undertaken since the last depreciation study.

Also, since SWEPCO's last Louisiana depreciation study for these two plants (property investment dated December 31, 2006), SWEPCO retired Welsh Unit 2 (in April 2016). The generating units and their capacities are shown on Schedule III of this report. In addition, SWEPCO reevaluated the expected retirement date for Flint Creek Unit 1 and Welsh Units 1 and 3 as follows:

Table 1 - Estimated Retirement Year

Plant/Unit	Estimated Retirement Year: 2006 - Depreciation Study	2016 - Depreciation Study
Flint Creek U1	2018	2028
Welsh U1	2017	2027
Welsh U3	2022	2032

In total, SWEPCO added $561.7 million to the original cost of Flint Creek and Welsh plants since the last depreciation study. Included in the $561.7 million is $608.9 million in additions for major environmental projects at Welsh Units 1 and 3 and Flint Creek Unit 1 that were placed in service in the first half of 2016, the April 2016 retirement of Welsh Unit 2 which reduced original cost by $174.8 million and various other additions and retirements totaling $127.6 million during the period from December 31, 2006 through December 31, 2016.

The major steam plant environmental additions since the last depreciation study are the primary reason for the higher recommended Flint Creek and Welsh Plant depreciation rates when compared to the prior study's depreciation rates. The higher depreciation rates are partially offset by SWEPCO's proposal to increase each plant/unit's expected life span from 40 to 50 years.

III. NET SALVAGE

1. Net Salvage – Flint Creek and Plants

The net salvage analysis for Flint Creek and Welsh plants included a review of the Company's experienced functional interim retirement, salvage and

removal history and a terminal net salvage amount.

To assist in establishing total final (terminal) net salvage (demolition cost less salvage) applicable to Flint Creek and Welsh generating plants, SWEPCO contracted with Sargent & Lundy (S&L) to prepare conceptual demolition cost estimates for the plants. The S&L cost estimates to demolish the plants are based on current (2016) price levels which were inflated to the retirement date in the depreciation study. The estimates of demolition costs were incorporated into the net salvage ratios for Flint Creek and Welsh Plants. S&L's demolition costs do not include Asset Retirement Obligation (ARO) amounts associated with the removal of asbestos or any cost associated with the final disposition of landfills and ash ponds since depreciation and accretion on ARO's are separate adjustments that are included in the cost of service outside of the depreciation study.

2. Net Salvage – Ratios

The net salvage ratios shown in Column IV on Schedule I of this report may be explained as follows:

a. Where the ratio is shown as unity (1.00), it was assumed that the net salvage in that particular account would be zero.

b. Where the ratio is less than unity, it was assumed that the salvage exceeded the removal costs. For example, if the net salvage were 20%, the net salvage ratio would be expressed as .80.

c. Where the ratio is greater than unity, it was assumed that the salvage was

less than the cost of removal. For example, if the net salvage were minus 5%, the net salvage ratio would be expressed as 1.05.

IV. CALCULATION OF DEPRECIATION REQUIREMENT AT DECEMBER 31, 2016

The accumulated depreciation by functional group was allocated to individual plant accounts based on the calculation of a depreciation requirement (theoretical reserve) for each plant account using the average service life and net salvage amount recommended in this study.

V. STUDY RESULTS

Flint Creek and Welsh Plants

Depreciation rates for Flint Creek and Welsh plants increased from 2.48% to 6.24%. The increase is primarily due to the $561.7 million net additions to steam production plant original cost (since the last depreciation study dated December 31, 2006). The $561.7 million net additions include $608.9 million in major environmental project additions at Flint Creek Unit 1 and Welsh plant Units 1 and 3 that were placed in service in the first half of 2016 and a reduction in original cost of $174.8 million for the April 2016 retirement of Welsh Unit 2.

As in the prior study, demolition costs are included in the depreciation rates. The estimates of terminal demolition costs were developed by Sargent & Lundy, LLC. The S&L estimated demolition costs for Flint Creek and Welsh Plants in 2016 pricing levels are provided as attachments to this depreciation report and a calculation of the terminal demolition cost at each plant's retirement date is included in the depreciation study work papers.

SCHEDULE I – EXPLANATION OF COLUMN HEADINGS

Schedule I shows the determination of the recommended annual depreciation accrual rate by primary plant accounts by the straight line remaining life method. An explanation of the schedule follows:

Column I	-	Account number.
Column II	-	Account title.
Column III	-	Original Cost
Column IV	-	Net Salvage Ratio.
Column V	-	Total to be Recovered (Column III) * (Column IV).
Column VI	-	Calculated Depreciation Requirement.
Column VII	-	Allocated Accumulated Depreciation – Flint Creek and Welsh accumulated depreciation (book reserve) spread to each account on the basis of the Calculated Depreciation Requirement shown in Column VI.
Column VIII	-	Remaining to be Recovered (Column V - Column VII).
Column IX	-	Average Remaining Life.
Column X	-	Recommended Annual Accrual Amount.
Column XI	-	Accrual Percent or Depreciation Rate (Column X/Column III).

SOUTHWESTERN ELECTRIC POWER COMPANY
SCHEDULE I - CALCULATION OF DEPRECIATION RATES BY THE REMAINNG LIFE METHOD FOR FLINT CREEK AND WELSH PLANTS
BASED ON TOTAL COMPANY PLANT IN SERVICE AT DECEMBER 31, 2016
AVERAGE LIFE GROUP (ALG) METHOD ACCRUAL RATES

LA Acct. (I)	Title (II)	Original Cost (III)	Net Salvage Ratio (IV)	Total to be Recovered (V)	Calculated Depreciation Requirement (VI)	Allocated Accumulated Depreciation (VII)	Remaining to be Recovered (VIII)	Avg. Remain Life (IX)	Annual Accrual Amount (X)	Accrual Percent (XI)
	FLINT CREEK									
311.0	Structures & Improvements	25,739,191	1.02	26,253,975	18,173,095	10,683,172	15,370,803	11.37	1,351,874	5.25%
312.0	Boiler Plant Equipment	288,032,499	1.02	293,793,149	98,457,561	58,962,470	234,830,679	11.13	21,098,893	7.33%
314.0	Turbogenerator Units	14,604,001	1.02	14,896,081	10,035,444	6,009,844	8,886,237	10.83	820,520	5.62%
315.0	Accessory Electrical Equipment	8,188,997	1.02	8,352,777	5,567,691	3,334,277	5,018,500	11.23	446,883	5.46%
316.0	Misc. Power Plant Equip.	5,988,022	1.02	6,107,782	3,647,760	2,304,276	3,803,506	11.06	343,897	5.74%
	Total	342,552,710	1.02	349,403,764	136,081,551	81,494,039	267,909,725		24,062,067	7.02%
	WELSH									
311.0	Structures & Improvements	75,282,031	1.05	79,046,133	51,838,307	31,042,783	48,003,350	12.85	3,735,669	4.96%
312.0	Boiler Plant Equipment	511,703,315	1.05	537,288,481	260,193,511	155,819,949	381,468,532	12.46	30,615,452	5.98%
314.0	Turbogenerator Units	112,704,429	1.05	118,339,650	72,397,739	43,356,239	74,983,411	12.59	5,955,791	5.28%
315.0	Accessory Electrical Equipment	129,808,771	1.05	136,299,210	34,592,899	20,716,365	115,582,845	12.76	9,058,217	6.98%
316.0	Misc. Power Plant Equip.	20,706,099	1.05	21,741,404	12,334,066	7,386,401	14,355,003	12.15	1,181,462	5.71%
	Total	850,204,645	1.05	892,714,878	431,354,522	258,321,737	634,393,141		50,546,611	5.95%
	RAIL CARS									
312.11	Rail Cars - Flint Creek	6,459,975	1.02	6,589,175	3,980,624	2,383,844	4,205,331	11.35	370,514	5.74%
312.11	Rail Cars - Welsh Plant	9,935,869	1.05	10,432,662	5,476,066	3,279,405	7,153,257	13.74	520,616	5.24%
	Total	16,395,844	1.04	17,021,837	9,456,690	5,663,249	11,358,588		891,130	5.44%
	Total Flint Creek and Welsh Plants	1,209,153,199	1.04	1,259,140,479	578,892,763	346,479,026	913,661,454	12.10	75,499,808	6.24%

SOUTHWESTERN ELECTRIC POWER COMPANY
ANNUAL DEPRECIATION RATES AND ACCRUALS BY THE REMAINNG LIFE METHOD FOR FLINT CREEK AND WELSH PLANTS
SCHEDULE II - COMPARE DEPRECIATION EXPENSE USING CURRENT AND STUDY RATES
BASED ON TOTAL COMPANY PLANT IN SERVICE AT DECEMBER 31, 2016

LA No. (1)	Title (2)	Original Cost (3)	Current LA Approved Rate (4)	Annual Accrual (5)	Study Rate (6)	Study Accrual (7)	Difference (Decrease) (8)
	FLINT CREEK						
311.0	Structures & Improvements	25,739,191	2.01%	517,358	5.25%	1,351,874	834,516
312.0	Boiler Plant Equipment	288,032,499	2.21%	6,365,518	7.33%	21,098,893	14,733,375
314.0	Turbogenerator Units	14,604,001	2.25%	328,590	5.62%	820,520	491,930
315.0	Accessory Electrical Equipment	8,188,997	2.21%	180,977	5.46%	446,883	265,906
316.0	Misc. Power Plant Equip.	5,988,022	2.89%	173,054	5.74%	343,897	170,843
	Total	342,552,710	2.21%	7,565,497	7.02%	24,062,067	16,496,570
	WELSH						
311.0	Structures & Improvements	75,282,031	2.11%	1,588,451	4.96%	3,735,669	2,147,218
312.0	Boiler Plant Equipment	511,703,315	2.65%	13,560,138	5.98%	30,615,452	17,055,314
314.0	Turbogenerator Units	112,704,429	2.32%	2,614,743	5.28%	5,955,791	3,341,048
315.0	Accessory Electrical Equipment	129,808,771	2.46%	3,193,296	6.98%	9,058,217	5,864,921
316.0	Misc. Power Plant Equip.	20,706,099	3.85%	797,185	5.71%	1,181,482	384,297
	Total	850,204,645	2.56%	21,753,813	5.95%	50,546,611	28,792,798
	RAIL CARS						
312.11	Rail Cars - Flint Creek	6,459,975	4.93%	318,477	5.74%	370,514	52,037
312.11	Rail Cars - Welsh Plant	9,935,869	3.98%	395,448	5.24%	520,616	125,168
	Total	16,395,844	4.35%	713,925	5.44%	891,130	177,205
	Total Flint Creek and Welsh Plants	1,209,153,199	2.48%	30,033,235	6.24%	75,499,808	45,466,573

SOUTHWESTERN ELECTRIC POWER COMPANY
SCHEDULE III - Flint Creek and Welsh Retirement Dates
December 31, 2016

Station & Unit	Capability MW	Year Installed	Estimated Year Retired	Life Span (Years)
Flint Creek				
Unit 1	264	1978	2028	50
Welsh				
Unit 1	528	1977	2027	50
Unit 3	528	1982	2032	50

Note: Welsh Unit 2 was retired in April 2016.