DOCKET NO.

APPLICATION OF SOUTHWESTERN PUBLIC SERVICE COMPANY FOR AUTHORITY TO CHANGE RATES	**§**	**PUBLIC UTILITY COMMISSION OF TEXAS**

DIRECT TESTIMONY
of
DANE A. WATSON

on behalf of

SOUTHWESTERN PUBLIC SERVICE COMPANY

(*Filename*: WatsonRRDirect.doc)

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GLOSSARY OF ACRONYMS AND DEFINED TERMS

Acronym/Defined Term	Meaning
ALG	Average Life Group
Commission	Public Utility Commission of Texas
EEI	Edison Electric Institute
IEEE	Institute of Electrical and Electronics Engineers
SDP	Society of Depreciation Professionals
SPS	Southwestern Public Service Company, a New Mexico Corporation
Technical Update	SPS –Texas Technical Update at June 30, 2017 for SPS assets at Tolk power plant
Test Year	April 1, 2016 through March 31, 2017
TXU	Texas Utilities Electric Company and successor companies
Update Period	April 1, 2017 through June 30, 2017
Updated Test Year	July 1, 2016 through June 30, 2017

LIST OF ATTACHMENTS

Attachment	Description
DAW-RR-1	List of Appearances before Regulatory Bodies by Dane A. Watson. (*Filename*: DAW-RR-1.xls)
DAW-RR-2	Southwestern Public Service Company – Texas Technical Update at June 30, 2017 (*Non-native format*)
DAW-RR-3	Computation of Depreciation Accrual Rates at March 31, 2017 (*Non-native format*)
DAW-RR-4(CD)	Workpapers to SPS Technical Update (*Various native and pdf files provided on CD*)

DIRECT TESTIMONY
OF
DANE A. WATSON

I. WITNESS IDENTIFICATION AND QUALIFICATIONS

Q. Please state your name and business address.

A. My name is Dane A. Watson. My business address is 101. E Park Blvd., Suite 220, Plano, Texas 75074.

Q. By whom are you employed and in what position?

A. I am a Partner of Alliance Consulting Group. Alliance Consulting Group provides consulting and expert services to the utility industry.

Q. On whose behalf are you testifying in this proceeding?

A. I am filing testimony on behalf of Southwestern Public Service Company, a New Mexico corporation ("SPS") and wholly-owned electric utility subsidiary of Xcel Energy Inc.

Q. Please describe your educational background.

A. I hold a Bachelor of Science degree in Electrical Engineering from the University of Arkansas at Fayetteville and a Master's Degree in Business Administration from Amberton University.

Q. Please describe your professional experience.

A. Since graduation from college in 1985, I have worked in the area of depreciation and valuation. I founded Alliance Consulting Group in 2004 and am responsible for conducting depreciation, valuation, and certain accounting-related studies for clients in various industries. My duties related to depreciation studies include the assembly and analysis of historical and simulated data, conducting field reviews,

determining service life and net salvage estimates, calculating annual depreciation, presenting recommended depreciation rates to utility management for its consideration, and supporting such rates before regulatory bodies.

My prior employment from 1985 to 2004 was with Texas Utilities Electric Company and successor companies ("TXU"). During my tenure with TXU, I was responsible for, among other things, conducting valuation and depreciation studies for the domestic TXU companies. During that time, I served as Manager of Property Accounting Services and Records Management in addition to my depreciation responsibilities.

I have twice been Chair of the Edison Electric Institute ("EEI") Property Accounting and Valuation Committee and have been Chairman of EEI's Depreciation and Economic Issues Subcommittee. I am a Registered Professional Engineer in the State of Texas and a Certified Depreciation Professional. I am a Senior Member of the Institute of Electrical and Electronics Engineers ("IEEE") and served for several years as an officer of the Executive Board of the Dallas Section of IEEE as well as national and worldwide offices. I have served as President of the Society of Depreciation Professionals ("SDP") twice.

Q. Do you hold any special certification as a depreciation expert?

A. Yes. The SDP has established national standards for depreciation professionals. The SDP administers an examination and has certain required qualifications to become certified in this field. I met all requirements and hold a Certified Depreciation Professional certification.

Q. Have you previously testified at any regulatory commission?

A. Yes. I have conducted depreciation studies and filed testimony or testified on depreciation and valuation issues in more than 30 proceedings before the Public Utility Commission of Texas ("Commission") and numerous other regulatory bodies as listed in my Attachment DAW-RR-1.

II. ASSIGNMENT AND SUMMARY OF TESTIMONY AND RECOMMENDATIONS

Q. What is your assignment in this proceeding?

A. The purpose of my testimony is to:

- Discuss the recent SPS –Texas Technical Update at June 30, 2017 for SPS assets at Tolk power plant ("Technical Update");
- Support the recommended depreciation rate changes for SPS production assets at Tolk power plant for the period between July 1, 2016 and June 30, 2017 ("Updated Test Year") based on the results of the Technical Update; and
- Provide a computation of depreciation accrual rates for the period between April 1, 2016 and March 31, 2017 ("Test Year").

Q. Please summarize your conclusions regarding depreciation rate changes for SPS assets based on the results of the Technical Update.

A. The Technical Update and analysis performed under my supervision fully support SPS's proposed depreciation rates applied to June 30, 2017 depreciable plant balances for Tolk generating assets in Production plant (Texas only). The Technical Update follows the Commission's long-standing precedent for Average Life Group ("ALG") straight-line depreciation. In this way, all customers are charged for their appropriate share of the capital expended for their benefit. In order to ensure intergenerational equities, the Commission should adopt the life and net salvage parameters proposed in this study.

The Technical Update incorporates a new retirement date for Tolk generating station as well as the terminal decommissioning cost, which is estimated at negative two percent as approved in the SPS's last litigated base rate proceeding before the Commission in Docket No. 43695. SPS's approved negative two percent terminal decommissioning cost remained unchanged in

SPS's most recent base rate proceeding, Docket No. 45524. Per Commission precedent, no interim retirements are incorporated in the proposed depreciation rates.

Q. How is the Technical Update used to determine SPS's depreciation expense for the Updated Test Year and Test Year?

A. SPS uses depreciation rates determined in the Technical Update to calculate the appropriate depreciation expense for the Updated Test Year. The information presented in the Technical Update is based on June 30, 2017 Updated Test Year depreciable plant balances and all of the conclusions are based on those balances. SPS uses depreciation rates set forth in my Attachment DAW-RR-3, which were determined consistent with the Technical Update and are based on March 31, 2017 Test Year depreciable plant balances, to calculate the appropriate depreciation expense for the Test Year. SPS witness Melissa Ostrom will discuss the impact of the new depreciation rates on SPS's Updated Test Year and Test Year depreciation expense.

Q. Will you update your testimony in SPS's 45-day case update filing?

A. No. Because the depreciation accrual rates at June 30, 2017 that I support are based on actual plant closed to service at June 30, 2017, my testimony will not need to be updated in SPS's 45-day case update filing.

Q. Were Attachments DAW-RR-1 through DAW-RR-4(CD) prepared by you or under your direct supervision and control?

A. Yes.

III. DEPRECIATION ANALYSIS PHILOSOPHY

Q. Please describe the depreciation analysis philosophy reflected in the current Technical Update.

A. The objective of any sound depreciation philosophy should be the matching of expense with revenue over the life of the asset. In general, the life of the asset is determined by several factors including the rate of physical deterioration, obsolescence, weather, maintenance, or (in some cases) the economic usefulness of an entire operating unit. The function of depreciation is to recognize the cost of an asset spread over its useful life. Book depreciation techniques should not accelerate or defer the recovery of an asset in comparison to its appropriate useful life.

Q. What objective should the Commission strive to achieve in setting depreciation rates?

A. The objective of computing depreciation is to ensure that all customers using the assets pay their pro rata share for the investment, including the cost of retirement. This objective is achieved by allocating the cost or depreciable base of a group of assets over the service life of those assets, on a straight-line basis, by charging a portion of the consumption of the assets to each accounting period.

Q. Is this objective consistent with Commission rules and historic practice?

A. Yes. As evidenced by 16 Tex. Admin. Code § 25.231(b)(1)(B) and the Commission's prior rate decisions, the Commission has a long standing practice of establishing depreciation rates using the straight-line depreciation method based on the actual historic data of the utility. The straight-line method of

depreciation operates by collecting a pro rata share of the cost of the investment, including removal cost, from all customers that use the asset over its useful life.

Q. What is the best evidence that the Commission can rely on to ensure that the cost of certain assets are ratably recovered over the service life of the asset?

A. The best evidence is the actual experience of the specific group of assets being analyzed. This evidence is found in the Technical Update based on plant investment in service at June 30, 2017 and in my Attachment DAW-RR-3, which provides the depreciation expense based on plant investment in service at March 31, 2017.

Q. What happens when depreciation rates are not adjusted to reflect the actual life and retirement characteristics of the assets?

A. When depreciation rates are set at a level that does not reflect the actual life and retirement characteristics of a utility's assets, the cost of the asset will not be recovered on a pro rata basis from all customers that use the asset. For example, in instances where the net salvage rate for certain plant accounts is set at a level that is insufficient under current conditions to recover the cost of the asset, SPS will not accrue a reasonable level of removal cost over the useful life of the plant asset. This, in turn, means that future customers will have to pay a disproportionate share of the removal costs to make up for the payment deferrals.

Q. How has the life of the assets changed since SPS's last depreciation rate filing before this Commission?

A. The terminal retirement date for Tolk generating station has been modified from the dates approved in Docket No. 43695, which dates were originally established

eight years ago through a settlement agreement approved by the Commission.[1] Currently, SPS is using retirement dates of 2042 and 2045 for Tolk Units 1 and 2, respectively. SPS has changed the retirement date for Tolk generating station to 2032. SPS witnesses Alan J. Davidson and Bennie F. Weeks discuss the reasons behind this decision. My proposed depreciation rates reflect the shortened life span for Tolk generating station.

Q. What ratemaking actions are warranted to reflect the change in dismantling costs and other changes in life and net salvage?

A. The Commission should approve SPS's proposed depreciation rates which more accurately reflect service life and net salvage for SPS's existing assets at Tolk generating station. The depreciation rates proposed in my Attachment DAW-RR-2 more accurately reflect SPS's current experience and future expectations and also allow for the recovery of depreciation expense. In addition, adoption of the proposed depreciation rates should ensure, going forward, that current SPS customers pay more of their pro-rata share of the investment over the remaining life of the investment. This ensures that future customers are not unduly burdened by having to pay a disproportionate share of any remaining investment balance for the shortening of the asset's useful life.

[1] *Application of Southwestern Public Service Company for Authority to Change Rates, to Reconcile Fuel and Purchased Power Costs for 2006 and 2007, and to Provide a Credit for Fuel Cost Savings*, Docket No. 35763, Order at 4, Finding of Fact No. 18a (Jun. 2, 2009).

IV. SPS BOOK TECHNICAL UPDATE

A. Summary of the SPS Study

Q. Have you prepared a Technical Update for SPS?

A. Yes. I undertook an analysis of annual depreciation for SPS's depreciable plant in service at Tolk Generating Station as of June 30, 2017. The study is attached to my testimony as Attachment DAW-RR-2. Also, consistent with this study, I undertook an analysis of annual depreciation for SPS's depreciable plant in service at Tolk as of March 30, 2017. The results of that analysis are attached to my testimony as Attachment DAW-RR-3.

Q. What depreciation rates are you recommending in this proceeding?

A. My recommended depreciation rates for Tolk generating station are provided in Appendix A of the Technical Update. Based on updated terminal life information for Tolk as of June 30, 2017, I derived the appropriate depreciation rates for production plant at Tolk generating station.

Q. When did the last change in SPS's Commission-approved depreciation rates occur?

A. The last change in SPS's depreciation rates became effective in June 2015 as a result of the Commission's final order in Docket No. 43695.

Q. Did you present a depreciation study in Docket No. 43695?

A. Yes. I presented a comprehensive depreciation study in my direct testimony in that docket. I also presented rebuttal testimony on depreciation issues. The case was fully litigated before this Commission, and I testified at the hearing on the merits.

Q. What has changed since your Docket No. 43695 testimony?

A. Due to different operating circumstances, SPS has shortened the terminal retirement date for Tolk generating station. Mr. Davidson and Ms. Weeks discuss the reasons for this decision.

Q. What depreciation methodology did you use?

A. The ALG, straight-line, remaining-life depreciation system, was employed to calculate annual and accrued depreciation in the studies in this Technical Update. The ALG methodology is the same method used in prior studies and has been approved by this Commission in prior dockets both for SPS and other companies within Texas.

B. Production Plant-Tolk Generating Station

1. Life of Assets

Q. Please describe the methodology you used to determine life for Production and Other Production plant.

A. For Production, Commission precedent assumes that all assets at a generating unit will have a retirement date concurrent with the planned retirement date of the generating unit. The terminal retirement date refers to the year that each facility will cease operations. The estimated terminal retirement dates for Tolk were determined based on consultation with SPS management, financial, and engineering staff and are shown in Attachment DAW-RR-2, Appendix C. Interim retirement curves were not used to model the retirement of individual assets within primary plant accounts for each generating unit prior to the terminal

retirement of the facility for all steam generating units, consistent with the Commission's decision in Docket No. 43695.

2. Depreciation Rate for Production Assets

Q. Please describe the results of the Technical Update for Production Plant.

A. The results of the analysis conducted in the Technical Update, based on the shortened service life of production assets at Tolk generating station, resulted in an increase to SPS's depreciation rates for production plant. SPS's present depreciation rates were compared to the Technical Update recommendations in Attachment DAW-RR-2, Appendix B. Likewise, the present depreciation rates have been compared to the depreciation rates based on March 31, 2017 production plant set forth in Attachment DAW-RR-3, which comparison is shown within that attachment.

Q. Does this conclude your pre-filed direct testimony?

A. Yes.

AFFIDAVIT

STATE OF TEXAS)
)
COUNTY OF COLLIN)

DANE A. WATSON, first being sworn on his oath, states:

I am the witness identified in the preceding testimony. I have read the testimony and the accompanying attachment(s) and am familiar with the contents. Based upon my personal knowledge, the facts stated in the testimony are true. In addition, in my judgment and based upon my professional experience, the opinions and conclusions stated in the testimony are true, valid, and accurate.

Dane A. Watson
DANE A. WATSON

Subscribed and sworn to before me this 7th day of August, 2017 by DANE A. WATSON.

Kristen Vela
Notary Public,
State of Texas
Expires: 01/07/2019

Kristen Vela
Notary Public, State of Texas

My Commission Expires: 1/7/19

Dane Watson Testimony Appearances

Line No.	Asset Location	Commission	Docket (If Applicable)	Company	Year	Description
1	MultiState	FERC	ER17-1664	American Transmission Company	2017	Electric Depreciation Study
2	Alaska	Regulatory Commission of Alaska	U-17-008	Municipal Power and Light City of Anchorage	2017	Generating Unit Depreciation Study
3	Mississippi	Mississippi Public Service Commission	2017-UN-041	Atmos Energy	2017	Gas Depreciation Study
4	Texas	Public Utility Commission of Texas	46957	Oncor Electric Delivery	2017	Electric Depreciation Study
5	Oklahoma	Oklahoma Corporation Commission	PUD 201700078	CenterPoint Oklahoma	2017	Gas Depreciation Study
6	New York	FERC	ER17-1010-000	New York Power Authority	2017	Electric Depreciation Study
7	Texas	Railroad Commission of Texas	GUD 10580	Atmos Pipeline Texas	2017	Gas Depreciation Study
8	Texas	Railroad Commission of Texas	GUD 10567	CenterPoint Texas	2016	Gas Depreciation Study
9	MultiState	FERC	ER17-191-000	American Transmission Company	2016	Electric Depreciation Study
10	New Jersey	New Jersey Public Utilities Board	GR16090826	Elizabethtown Natural Gas	2016	Gas Depreciation Study
11	North Carolina	North Carolina Utilities Commission	Docket G-9 Sub 77H	Piedmont Natural Gas	2016	Gas Depreciation Study
12	Michigan	Michigan Public Service Commission	U-18195	Consumers Energy/DTE Electric	2016	Ludington Pumped Storage Depreciation Study
13	Alabama	FERC	ER16-2313-000	SEGCO	2016	Electric Depreciation Study
14	Alabama	FERC	ER16-2312-000	Alabama Power Company	2016	Electric Depreciation Study
15	Michigan	Michigan Public Service Commission	U-18127	Consumers Engergy	2016	Natural Gas Depreciation Study
16	Mississippi	Mississippi Public Service Commission	2016 UN 267	Willmut Natural Gas	2016	Natural Gas Depreciation Study

Dane Watson Testimony Appearances

Line No.	Asset Location	Commission	Docket (If Applicable)	Company	Year	Description
17	Iowa	Iowa Utilities Board	RPU-2016-0003	Liberty-Iowa	2016	Natural Gas Depreciation Study
18	Illinois	Illinois Commerce Commission	GRM #16-208	Liberty-Illinois	2016	Natural Gas Depreciation Study
19	Kentucky	FERC	RP16-097-000	KOT	2016	Natural Gas Depreciation Study
20	Alaska	Regulatory Commission of Alaska	U-16-067	Alaska Electric Light and Power	2016	Generating Unit Depreciation Study
21	Florida	Florida Public Service Commission	160170-EI	Gulf Power	2016	Electric Depreciation Study
22	California	California Public Utilities Commission	A 16-07-002	California American Water	2016	Water and Waste Water Depreciation Study
23	Arizona	Arizona Corporation Commission	G-01551A-16-0107	Southwest Gas	2016	Gas Depreciation Study
24	Texas	Public Utility Commission of Texas	45414	Sharyland	2016	Electric Depreciation Study
25	Colorado	Colorado Public Utilities Commission	16A-0231E	Public Service of Colorado	2016	Electric Depreciation Study
26	Multi-State NE US	FERC	16-453-000	Northeast Transmission Development, LLC	2015	Electric Depreciaiton Study
27	Arkansas	Arkansas Public Service Commission	15-098-U	CenterPoint Arkansas	2015	Gas Depreciation Study and Cost of Removal Study
28	New Mexico	New Mexico Public Regulation Commission	15-00296-UT	Southwestern Public Service Company	2015	Electric Depreciation Study
29	Atmos Energy Corporation	Tennessee Regulatory Authority	14-00146	Atmos Tennessee	2015	Natural Gas Depreciation Study
30	New Mexico	New Mexico Public Regulation Commission	15-00261-UT	Public Service Company of New Mexico	2015	Electric Depreciation Study
31	Hawaii	NA	NA	Hawaii American Water	2015	Water/Wastewater Depreciation Study

Dane Watson Testimony Appearances

Line No.	Asset Location	Commission	Docket (If Applicable)	Company	Year	Description
32	Kansas	Kansas Corporation Commission	16-ATMG-079-RTS	Atmos Kansas	2015	Gas Depreciation Study
33	Texas	Public Utility Commission of Texas	44704	Entergy Texas	2015	Electric Depreciation Study
34	Alaska	Regulatory Commission of Alaska	U-15-089	Fairbanks Water and Wastewater	2015	Water and Waste Water Depreciation Study
35	Arkansas	Arkansas Public Service Commission	15-031-U	Source Gas Arkansas	2015	Underground Storage Gas Depreciation Study
36	New Mexico	New Mexico Public Regulation Commission	15-00139-UT	Southwestern Public Service Company	2015	Electric Depreciation Study
37	Texas	Public Utility Commission of Texas	44746	Wind Energy Transmission Texas	2015	Electric Depreciation Study
38	Colorado	Colorado Public Utilities Commission	15-AL-0299G	Atmos Colorado	2015	Gas Depreciation Study
39	Arkansas	Arkansas Public Service Commission	15-011-U	Source Gas Arkansas	2015	Gas Depreciation Study
40	Texas	Railroad Commission of Texas	GUD 10432	CenterPoint- Texas Coast Division	2015	Gas Depreciation Study
41	Kansas	Kansas Corporation Commission	15-KCPE-116-RTS	Kansas City Power and Light	2015	Electric Depreciation Study
42	Alaska	Regulatory Commission of Alaska	U-14-120	Alaska Electric Light and Power	2014-2015	Electric Depreciation Study
43	Texas	Public Utility Commission of Texas	43950	Cross Texas Transmission	2014	Electric Depreciation Study
44	New Mexico	New Mexico Public Regulation Commission	14-00332-UT	Public Service of New Mexico	2014	Electric Depreciation Study
45	Texas	Public Utility Commission of Texas	43695	Southwestern Public Service Company	2014	Electric Depreciation Study
46	Multi State – SE US	FERC	RP15-101	Florida Gas Transmission	2014	Gas Transmission Depreciation Study

Dane Watson Testimony Appearances

Line No.	Asset Location	Commission	Docket (If Applicable)	Company	Year	Description
47	California	California Public Utilities Commission	A.14-07-006	Golden State Water	2014	Water and Waste Water Depreciation Study
48	Michigan	Michigan Public Service Commission	U-17653	Consumers Energy Company	2014	Electric and Common Depreciation Study
49	Colorado	Public Utilities Commission of Colorado	14AL-0660E	Public Service of Colorado	2014	Electric Depreciation Study
50	Wisconsin	Wisconsin	05-DU-102	WE Energies	2014	Electric, Gas, Steam and Common Depreciation Studies
51	Texas	Public Utility Commission of Texas	42469	Lone Star Transmission	2014	Electric Depreciation Study
52	Nebraska	Nebraska Public Service Commission	NG-0079	Source Gas Nebraska	2014	Gas Depreciation Study
53	Alaska	Regulatory Commission of Alaska	U-14-055	TDX North Slope Generating	2014	Electric Depreciation Study
54	Alaska	Regulatory Commission of Alaska	U-14-054	Sand Point Generating LLC	2014	Electric Depreciation Study
55	Alaska	Regulatory Commission of Alaska	U-14-045	Matanuska Electric Coop	2014	Electric Generation Depreciation Study
56	Texas, New Mexico	Public Utility Commission of Texas	42004	Southwestern Public Service Company	2013-2014	Electric Production, Transmission, Distribution and General Plant Depreciation Study
57	New Jersey	Board of Public Utilities	GR13111137	South Jersey Gas	2013	Gas Depreciation Study
58	Various	FERC	RP14-247-000	Sea Robin	2013	Gas Depreciation Study
59	Arkansas	Arkansas Public Service Commission	13-078-U	Arkansas Oklahoma Gas	2013	Gas Depreciation Study
60	Arkansas	Arkansas Public Service Commission	13-079-U	Source Gas Arkansas	2013	Gas Depreciation Study

Dane Watson Testimony Appearances

Line No.	Asset Location	Commission	Docket (If Applicable)	Company	Year	Description
61	California	California Public Utilities Commission	Proceeding No.: A.13-11-003	Southern California Edison	2013	Electric Depreciation Study
62	North Carolina/South Carolina	FERC	ER13-1313	Progress Energy Carolina	2013	Electric Depreciation Study
63	Wisconsin	Public Service Commission of Wisconsin	4220-DU-108	Northern States Power-Wisconsin	2013	Electric, Gas and Common Transmission, Distribution and General
64	Texas	Public Utility Commission of Texas	41474	Sharyland	2013	Electric Depreciation Study
65	Kentucky	Kentucky Public Service Commission	2013-00148	Atmos Energy Corporation	2013	Gas Depreciation Study
66	Minnesota	Minnesota Public Utilities Commission	13-252	Allete Minnesota Power	2013	Electric Depreciation Study
67	New Hampshire	New Hampshire Public Service Commission	DE 13-063	Liberty Utilities	2013	Electric Distribution and General
68	Texas	Railroad Commission of Texas	10235	West Texas Gas	2013	Gas Depreciation Study
69	Alaska	Regulatory Commission of Alaska	U-12-154	Alaska Telephone Company	2012	Telecommunications Utility
70	New Mexico	New Mexico Public Regulation Commission	12-00350-UT	Southwestern Public Service Company	2012	Electric Depreciation Study
71	Colorado	Colorado Public Utilities Commission	12AL-1269ST	Public Service of Colorado	2012	Gas and Steam Depreciation Study
72	Colorado	Colorado Public Utilities Commission	12AL-1268G	Public Service of Colorado	2012	Gas and Steam Depreciation Study
73	Alaska	Regulatory Commission of Alaska	U-12-149	Municipal Power and Light City of Anchorage	2012	Electric Depreciation Study
74	Texas	Texas Public Utility Commission	40824	Xcel Energy	2012	Electric Depreciation Study
75	South Carolina	Public Service Commission of South Carolina	Docket 2012-384-E	Progress Energy Carolina	2012	Electric Depreciation Study

Dane Watson Testimony Appearances

Line No.	Asset Location	Commission	Docket (If Applicable)	Company	Year	Description
76	Alaska	Regulatory Commission of Alaska	U-12-141	Interior Telephone Company	2012	Telecommunications Utility
77	Michigan	Michigan Public Service Commission	U-17104	Michigan Gas Utilities Corporation	2012	Gas Depreciation Study
78	North Carolina	North Carolina Utilities Commission	E-2 Sub 1025	Progress Energy Carolina	2012	Electric Depreciation Study
79	Texas	Texas Public Utility Commission	40606	Wind Energy Transmission Texas	2012	Electric Depreciation Study
80	Texas	Texas Public Utility Commission	40604	Cross Texas Transmission	2012	Electric Depreciation Study
81	Minnesota	Minnesota Public Utilities Commission	12-858	Minnesota Northern States Power	2012	Electric, Gas and Common Transmission, Distribution and General
82	Texas	Railroad Commission of Texas	10170	Atmos Mid-Tex	2012	Gas Depreciation Study
83	Texas	Railroad Commission of Texas	10174	Atmos West Texas	2012	Gas Depreciation Study
84	Texas	Railroad Commission of Texas	10182	CenterPoint Beaumont/ East Texas	2012	Gas Depreciation Study
85	Kansas	Kansas Corporation Commission	12-KCPE-764-RTS	Kansas City Power and Light	2012	Electric Depreciation Study
86	Nevada	Public Utility Commission of Nevada	12-04005	Southwest Gas	2012	Gas Depreciation Study
87	Texas	Railroad Commission of Texas	10147, 10170	Atmos Mid-Tex	2012	Gas Depreciation Study
88	Kansas	Kansas Corporation Commission	12-ATMG-564-RTS	Atmos Kansas	2012	Gas Depreciation Study
89	Texas	Texas Public Utility Commission	40020	Lone Star Transmission	2012	Electric Depreciation Study
90	Michigan	Michigan Public Service Commission	U-16938	Consumers Energy Company	2011	Gas Depreciation Study

Dane Watson Testimony Appearances

Line No.	Asset Location	Commission	Docket (If Applicable)	Company	Year	Description
91	Colorado	Public Utilities Commission of Colorado	11AL-947E	Public Service of Colorado	2011	Electric Depreciation Study
92	Texas	Texas Public Utility Commission	39896	Entergy Texas	2011	Electric Depreciation Study
93	MultiState	FERC	ER12-212	American Transmission Company	2011	Electric Depreciation Study
94	California	California Public Utilities Commission	A1011015	Southern California Edison	2011	Electric Depreciation Study
95	Mississippi	Mississippi Public Service Commission	2011-UN-184	Atmos Energy	2011	Gas Depreciation Study
96	Michigan	Michigan Public Service Commission	U-16536	Consumers Energy Company	2011	Wind Depreciation Rate Study
97	Texas	Public Utility Commission of Texas	38929	Oncor	2011	Electric Depreciation Study
98	Texas	Railroad Commission of Texas	10038	CenterPoint South TX	2010	Gas Depreciation Study
99	Alaska	Regulatory Commission of Alaska	U-10-070	Inside Passage Electric Cooperative	2010	Electric Depreciation Study
100	Texas	Public Utility Commission of Texas	36633	City Public Service of San Antonio	2010	Electric Depreciation Study
101	Texas	Texas Railroad Commission	10000	Atmos Pipeline Texas	2010	Gas Depreciation Study
102	Multi State – SE US	FERC	RP10-21-000	Florida Gas Transmission	2010	Gas Depreciation Study
103	Maine/ New Hampshire	FERC	10-896	Granite State Gas Transmission	2010	Gas Depreciation Study
104	Texas	Public Utility Commission of Texas	38480	Texas New Mexico Power	2010	Electric Depreciation Study
105	Texas	Public Utility Commission of Texas	38339	CenterPoint Electric	2010	Electric Depreciation Study
106	Texas	Texas Railroad Commission	10041	Atmos Amarillo	2010	Gas Depreciation Study
107	Georgia	Georgia Public Service Commission	31647	Atlanta Gas Light	2010	Gas Depreciation Study
108	Texas	Public Utility Commission of Texas	38147	Southwestern Public Service Company	2010	Electric Technical Update

Dane Watson Testimony Appearances

Line No.	Asset Location	Commission	Docket (If Applicable)	Company	Year	Description
109	Alaska	Regulatory Commission of Alaska	U-09-015	Alaska Electric Light and Power	2009-2010	Electric Depreciation Study
110	Alaska	Regulatory Commission of Alaska	U-10-043	Utility Services of Alaska	2009-2010	Water Depreciation Study
111	Michigan	Michigan Public Service Commission	U-16055	Consumers Energy/DTE Energy	2009-2010	Ludington Pumped Storage Depreciation Study
112	Michigan	Michigan Public Service Commission	U-16054	Consumers Energy	2009-2010	Electric Depreciation Study
113	Michigan	Michigan Public Service Commission	U-15963	Michigan Gas Utilities Corporation	2009	Gas Depreciation Study
114	Michigan	Michigan Public Service Commission	U-15989	Upper Peninsula Power Company	2009	Electric Depreciation Study
115	Texas	Railroad Commission of Texas	9869	Atmos Energy	2009	Shared Services Depreciation Study
116	Mississippi	Mississippi Public Service Commission	09-UN-334	CenterPoint Energy Mississippi	2009	Gas Depreciation Study
117	Texas	Railroad Commission of Texas	9902	CenterPoint Energy Houston	2009	Gas Depreciation Study
118	Colorado	Colorado Public Utilities Commission	09AL-299E	Public Service of Colorado	2009	Electric Depreciation Study
119	Tennessee	Tennessee Regulatory Authority	11-00144	Piedmont Natural Gas	2009	Gas Depreciation Study
120	Louisiana	Louisiana Public Service Commission	U-30689	Cleco	2008	Electric Depreciation Study
121	Texas	Public Utility Commission of Texas	35763	Southwestern Public Service Company	2008	Electric Production, Transmission, Distribution and General Plant Depreciation Study
122	Wisconsin	Wisconsin	05-DU-101	WE Energies	2008	Electric, Gas, Steam and Common Depreciation Studies

Dane Watson Testimony Appearances

Line No.	Asset Location	Commission	Docket (If Applicable)	Company	Year	Description
123	North Dakota	North Dakota Public Service Commission	PU-07-776	Northern States Power	2008	Net Salvage
124	New Mexico	New Mexico Public Regulation Commission	07-00319-UT	Southwestern Public Service Company	2008	Testimony – Depreciation
125	Multiple States	Railroad Commission of Texas	9762	Atmos Energy	2007-2008	Shared Services Depreciation Study
126	Minnesota	Minnesota Public Utilities Commission	E015/D-08-422	Minnesota Power	2007-2008	Electric Depreciation Study
127	Texas	Public Utility Commission of Texas	35717	Oncor	2008	Electric Depreciation Study
128	Texas	Public Utility Commission of Texas	34040	Oncor	2007	Electric Depreciation Study
129	Michigan	Michigan Public Service Commission	U-15629	Consumers Energy	2006-2009	Gas Depreciation Study
130	Colorado	Colorado Public Utilities Commission	06-234-EG	Public Service of Colorado	2006	Electric Depreciation Study
131	Arkansas	Arkansas Public Service Commission	06-161-U	CenterPoint Energy – Arkla Gas	2006	Gas Distribution Depreciation Study and Removal Cost Study
132	Texas, New Mexico	Public Utility Commission of Texas	32766	Southwestern Public Service Company	2005-2006	Electric Production, Transmission, Distribution and General Plant Depreciation Study
133	Texas	Railroad Commission of Texas	9670/9676	Atmos Energy Corp	2005-2006	Gas Distribution Depreciation Study
134	Texas	Railroad Commission of Texas	9400	TXU Gas	2003-2004	Gas Distribution Depreciation Study
135	Texas	Railroad Commission of Texas	9313	TXU Gas	2002	Gas Distribution Depreciation Study
136	Texas	Railroad Commission of Texas	9225	TXU Gas	2002	Gas Distribution Depreciation Study

Dane Watson Testimony Appearances

Line No.	Asset Location	Commission	Docket (If Applicable)	Company	Year	Description
137	Texas	Public Utility Commission of Texas	24060	TXU	2001	Line Losses
138	Texas	Public Utility Commission of Texas	23640	TXU	2001	Line Losses
139	Texas	Railroad Commission of Texas	9145-9148	TXU Gas	2000-2001	Gas Distribution Depreciation Study
140	Texas	Public Utility Commission of Texas	22350	TXU	2000-2001	Electric Depreciation Study, Unbundling
141	Texas	Railroad Commission of Texas	8976	TXU Pipeline	1999	Pipeline Depreciation Study
142	Texas	Public Utility Commission of Texas	20285	TXU	1999	Fuel Company Depreciation Study
143	Texas	Public Utility Commission of Texas	18490	TXU	1998	Transition to Competition
144	Texas	Public Utility Commission of Texas	16650	TXU	1997	Customer Complaint
145	Texas	Public Utility Commission of Texas	15195	TXU	1996	Mining Company Depreciaiton Study
146	Texas	Public Utility Commission of Texas	12160	TXU	1993	Fuel Company Depreciation Study
147	Texas	Public Utility Commission of Texas	11735	TXU	1993	Electric Depreciation Study

SOUTHWESTERN PUBLIC SERVICE COMPANY-TEXAS
Technical Update
At June 30, 2017

ALLIANCE CONSULTING GROUP

SOUTHWESTERN PUBLIC SERVICE COMPANY- TEXAS
TECHNICAL UPDATE
AT JUNE 30, 2017

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PURPOSE

The purpose of this technical update is to develop depreciation rates for specific depreciable Production Property as recorded on the books of Southwestern Public Service Company (SPS or Company) as of June 30, 2017. The depreciation rates were designed to recover the total remaining undepreciated investment, adjusted for net salvage, over the remaining life of SPS's property on a straight-line basis. Non-depreciable property, such as land, was excluded from this study. SPS is engaged in the generation, transmission, and distribution of electricity within Texas and New Mexico.

The Company has defined the scope of this technical update to be the depreciable assets at Tolk generating station. This includes property at Tolk Unit 1, Tolk Unit 2, and Common property. The retirement date of the generating units is changed based on input from SPS management and the terminal dismantling cost of negative 2 percent as approved in the Company's last litigated base rate case before the Public Utility Commission of Texas ("PUCT") in Docket No. 43695. Per precedent of the PUCT, no interim retirements are incorporated in the technical update.

STUDY RESULTS

Recommended depreciation rates for SPS depreciable property at Tolk Generating station are shown in Appendix A. These rates translate into an annual depreciation accrual (total company) for Generation of $27.1 million. These accruals are based on SPS's depreciable investment as of June 30, 2017 (Updated Test Year) as shown in Appendix B. The annual depreciation expense calculated by the same method using the existing approved Texas depreciation rates was $14.1 million for Generation. Appendix B shows the effect of the change in lives on depreciation accrual by account. The proposed retirement date and net salvage percentages are shown in Appendix C.

GENERAL DISCUSSION

Definition

The term "depreciation" as used in this study is considered in the accounting sense; that is, a system of accounting that distributes the cost of assets, less net salvage (if any), over the estimated useful life of the assets in a systematic and rational manner. It is a process of allocation, not valuation. This expense is systematically allocated to accounting periods over the life of the properties. The amount allocated to any one accounting period does not necessarily represent the loss or decrease in value that will occur during that particular period. SPS accrues depreciation on the basis of the original cost of all depreciable property included in each functional property group. At retirement, the full cost of depreciable property, less the net salvage value, is charged to the depreciation reserve.

Basis of Depreciation Estimates

Annual and accrued depreciation rates were calculated in this study by the straight-line, broad group, remaining-life depreciation system. In this system, the annual depreciation expense for each group is computed by dividing the original cost of the asset group less book depreciation reserve less estimated net salvage by its respective average remaining life. The resulting annual accrual amounts of all depreciable property within a function were accumulated and the total was divided by the original cost of all functional depreciable property to determine the depreciation rate. The calculated remaining lives and annual depreciation accrual rates were based on attained ages of plant in service and the estimated service life and salvage characteristics of each depreciable group, and were computed in a direct weighting by multiplying each vintage or account balance times its remaining life and dividing by the plant investment in service as of June 30, 2017. The computations of the annual depreciation rates are shown in Appendix A, and the weighted remaining life calculations are also shown in Appendix A.

In the Company's last litigated base rate case before the Texas Public Utility Commission, Docket No. 43695, the depreciation rates established for Tolk generating unit followed the Texas precedent of excluding any interim retirement activity. That methodology remained unchanged in the Company's last base rate case, Docket No.

45524, and is incorporated in this Technical update.

Life Span Procedure

The life span procedure was used for production facilities for which most components are expected to have a retirement date concurrent with the planned retirement date of the generating unit. The terminal retirement date refers to the year that each unit will cease operations. The estimated terminal retirement dates for the Tolk generating station was provided by SPS based on determinations made by SPS management, financial, and engineering staff. The estimated terminal retirement dates for the Tolk generating units are shown in Appendix C.

Theoretical Depreciation Reserve

The book accumulated provision for depreciation within each function was computed for each generating unit and plant account through the use of the theoretical depreciation reserve model. This study used a reserve model that relied on a prospective concept relating future retirement and accrual patterns for property, given current life and salvage estimates.

The theoretical reserve of a property group is developed from the estimated remaining life of the group, the total life of the group, and estimated net salvage. The theoretical reserve represents the portion of the group cost that would have been accrued if current forecasts were used throughout the life of the group for future depreciation accruals. The computation involves multiplying the vintage balances within the group by the theoretical reserve ratio for each vintage. The straight-line remaining-life theoretical reserve ratio (RR) at any given age is calculated as:

$$RR = 1 - \frac{(Average\ Remaining\ Life)}{(Average\ Service\ Life)} * (1 - Net\ Salvage\ Ratio)$$

No reserve reallocation was performed in this technical update. Book reserves by generating unit and plant account were used to determine the proposed depreciation accrual rates. The theoretical reserves for each generating unit and account are shown

in the workpapers.

DETAILED DISCUSSION

Depreciation Study Process

This depreciation study encompassed four distinct phases. The first phase involved data collection. The second phase was where the initial data analysis occurred. The third phase was where the information and analysis was evaluated. After the first three stages were complete, the fourth phase began. This phase involved the calculation of deprecation rates and documenting the corresponding recommendations.

During the Phase I data collection process, historical data was compiled from continuing property records and general ledger systems. Data was validated for accuracy by extracting and comparing to multiple financial system sources: Projects System (Construction ledger), Fixed Asset System (continuing property ledger), General Ledger, and interfaces from other operating systems. Audit of this data was validated against historical data from prior periods, historical general ledger sources, and field personnel discussions. This data was reviewed extensively so that it could be put in the proper format for a depreciation study. Further discussion on data review and adjustment is found in the Salvage Consideration section of this study. Also as part of the Phase I data collection process, numerous discussions were conducted with engineers and field operations personnel to obtain information that would be helpful in formulating life and salvage recommendations in this study. One of the most important elements in performing a proper depreciation study is to understand how a company utilizes assets and the environment of those assets. Understanding industry and geographical norms for mortality characteristics are important factors in selecting life and salvage recommendations; however, care must be used not to apply them rigorously to any particular company since no two companies would have the same exact forces of retirement acting upon their assets. Interviews with engineering and operations personnel are important ways to allow the analyst to obtain information that is helpful when evaluating the output from the life and net salvage programs in relation to a company's actual asset utilization and environment. Information that was gleaned in these discussions with SPS personnel for this study is found both in the Detailed Discussion portions of the Life Analysis and Salvage Analysis sections and also in workpapers. In addition, Alliance personnel possess a significant understanding of the types of electric utility property the forces of retirement due to years of day-to-day

exposures, and operations of electric utility property.

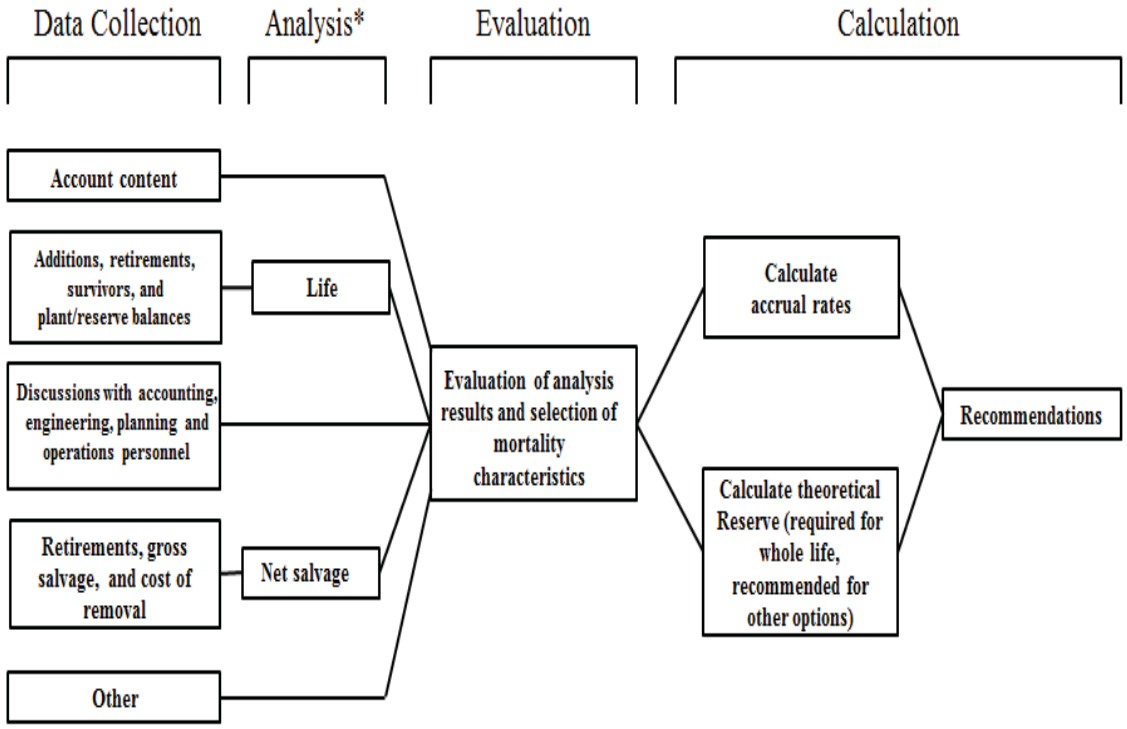
Phase 2 is where the SPR and actuarial analysis are performed. Phase 2 and Phase 3 (to be discussed in the next paragraph) overlap to a significant degree. The detailed property records information is used in Phase 2 to develop observed life tables for life analysis and SPR graphs and statistics. It is possible that an analyst would cycle back to this phase based on the evaluation process performed in Phase 3. Net salvage analysis consists of compiling historical salvage and removal data by functional group and account to determine values and trends in gross salvage and removal cost. This information is then carried forward into Phase 3 for the evaluation process.

Phase 3 is the evaluation process, which synthesizes analysis, interviews, and operational characteristics into a final selection of asset lives and net salvage parameters. The historical analysis from Phase 2 is further enhanced by the incorporation of recent or future changes in the characteristics or operations of assets that were revealed in Phase 1. The preliminary results are then reviewed by the depreciation analyst and discussed with accounting and operations personnel. Phases 2 and 3 allow a depreciation analyst to validate the asset characteristics as seen in the accounting transactions with actual company operational experience.

Finally, Phase 4 involves the calculation of accrual rates, making recommendations and documenting the conclusions in a final report. The calculation of accrual rates for this study is found in Appendix A. Recommendations for the various accounts are contained within the Detailed Discussion of this report. The depreciation study flow diagram shown as Figure 1[1] documents the steps used in conducting this study. Depreciation Systems on page 289 documents the same basic processes in performing a depreciation study. With the narrow scope of this technical update, the detailed actions within some phases were abbreviated.

[1] Introduction to Depreciation for Public Utilities and Other Industries, AGA EEI, 2013

Book Depreciation Study Flow Diagram



Source: Introduction to Depreciation for Public Utilities and Other Industries, AGA EEI , 2013.

*Although not specifically noted, the mathematical analysis may need some level of input from other sources (for example, to determine analysis bands for life and adjustments to data used in all analysis).

Production Depreciation Calculation Process

Annual depreciation expense amounts for the Steam Production accounts were calculated by the straight line, remaining life procedure. In a whole life representation, the annual accrual rate is computed by the following equation,

$$\textit{Annual Accrual Rate} = \frac{\textit{(100\% - Net Salvage Percent)}}{\textit{Average Service Life}}$$

For Steam Production assets, no interim retirement curve is used so there is no truncated survivor curve. Use of the remaining life depreciation system adds a self-correcting mechanism, which accounts for any differences between theoretical and book depreciation reserve over the remaining life of the group. For generation assets, the remaining life for each account is derived from the remaining life of the generating unit. With the straight line, remaining life, average life group system, composite remaining lives were calculated by computing a direct weighted average of each remaining life by vintage within the group. Within each group, for each plant account and generating unit, the difference between the surviving investment, adjusted for estimated future net salvage, and the book depreciation reserve, was divided by the composite remaining life to yield the annual depreciation expense as noted in this equation.

$$\textit{Annual Depreciation Expense} = \frac{\textit{Original Cost – Book Reserve – (Original Cost * Net Salvage \%)}}{\textit{Remaining Life}}$$

Within a group, the sum of the group annual depreciation expense amounts, as a percentage of the depreciable original cost investment summed, gives the annual depreciation rate as shown below:

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

These calculations are shown in Appendix A. The calculations of the theoretical

depreciation reserve values and the corresponding remaining life calculations are shown in the workpapers. Book depreciation reserves are maintained on a plant account and generating unit level basis. Book reserves were used for all depreciation rate computations.

LIFE ANALYSIS

PRODUCTION PLANT

Steam Production, FERC Accounts 311-316

SPS has seven Fossil Steam Production generating sites. Only units at Tolk generating were included in this technical update.

Terminal Retirement Date

The terminal retirement date refers to the year in which a generating unit will be retired from service. The retirement can be for a number of reasons such as the physical end of the generating unit but will generally be driven by economic retirement of the unit. SPS personnel provided their estimated retirement dates for each generating unit. These dates are based on the current plans and investment in the generating units. Retirement dates for generating units can be found in Appendix C. As new investment is committed to these units or decisions made that units are not economically viable, these retirement dates may change. At this time, these retirement dates are the best estimate of the current lives remaining in the generating assets.

No life analysis was performed for Steam Production Accounts 310-316.

SALVAGE ANALYSIS

When a capital asset is retired, physically removed from service, and finally disposed of, terminal retirement is said to have occurred. The residual value of a terminal retirement is called gross salvage. Net salvage is the difference between the gross salvage (what the asset was sold for) and the removal cost (cost to remove and dispose of the asset).

Gross salvage and cost of removal related to retirements are recorded to the general ledger in the accumulated provision for depreciation at the time retirements occur within the system.

Removal cost percentages are calculated by dividing the current cost of removal by the original installed cost of the asset. Some plant assets can experience significant negative removal cost percentages due to the timing of the addition versus the retirement. Inflation from the time of installation of the asset until the time of its removal must be taken into account in the calculation of the removal cost percentage because the depreciation rate, which includes the removal cost percentage, will be applied to the original installed cost of assets.

Salvage - Steam Production Property

The concept behind the net salvage cost component of depreciation rates for power plants is different from that of Transmission or Distribution assets. Power plants are discrete units that will need to be dismantled after the end of their useful lives. Because of this, instead of statistically analyzing the historical cost for salvaging and removing assets with rolling and shrinking bands, engineering studies are conducted to determine the cost to dismantle the individual units or plants.

The current net salvage rates for Steam Production plant are negative two percent as approved by the PUCT in Docket No. 43695. For this technical update net salvage is assumed to be negative two percent as currently approved.

APPENDIX A

Computation of Depreciation Accrual Rates

Southwestern Public Service Company
Computation of Depreciation Accrual Rates
At June 30, 2017

Production Unit	FERC Account	Description	Plant Balance 06/30/2017	Book Reserve 06/30/2017	Net Salvage %	Net Salvage Amount	Unaccrued Balance	Remaining Life	Annual Accrual	Annual Accrual Rate
			(1)	(2)	(3)	(4)= (1) x (3)	(5)= (1)- (2)-(4)	(6)	(7) =(5)/(6)	(8)= (7)/(1)
	Steam Production Tolk									
Tolk Common Facilities	310	Water Rights	10,199,108	1,630,344	0%	-	8,568,764	15.50	552,823	5.4203%
Tolk Common Facilities	311	Structures and Improvements	34,707,776	6,023,801	-2%	(694,156)	29,378,131	15.50	1,895,363	5.4609%
Tolk Common Facilities	312	Boiler Plant Equipment	16,357,636	4,800,908	-2%	(327,153)	11,883,881	15.50	766,702	4.6871%
Tolk Common Facilities	314	Turbogenerators	13,377,761	3,391,147	-2%	(267,555)	10,254,169	15.50	661,559	4.9452%
Tolk Common Facilities	315	Accessory Electric Equipment	22,551	(2,968)	-2%	(451)	25,970	15.50	1,675	7.4297%
Tolk Common Facilities	316	Miscellaneous Power Plant Equipment	7,142,523	3,620,761	-2%	(142,850)	3,664,612	15.50	236,427	3.3101%
	Tolk Common Facilities - Total/Composite		81,807,355	19,463,993		(1,432,165)	63,775,527		4,114,550	5.0296%
						-	-			
Tolk 1	310	Land Rights	19,917	13,036	0%	-	6,881	15.50	444	2.2290%
Tolk 1	311	Structures and Improvements	32,251,575	18,846,474	-2%	(645,032)	14,050,133	15.50	906,460	2.8106%
Tolk 1	312	Boiler Plant Equipment	192,823,981	94,499,707	-2%	(3,856,480)	102,180,753	15.50	6,592,307	3.4188%
Tolk 1	314	Turbogenerators	76,180,490	43,415,905	-2%	(1,523,610)	34,288,196	15.50	2,212,142	2.9038%
Tolk 1	315	Accessory Electric Equipment	15,344,204	8,964,371	-2%	(306,884)	6,686,717	15.50	431,401	2.8115%
Tolk 1	316	Miscellaneous Power Plant Equipment	721,430	404,380	-2%	(14,429)	331,479	15.50	21,386	2.9644%
	Tolk 1- Total/Composite		317,341,598	166,143,872		(6,346,434)	157,544,159		10,164,139	3.2029%
Tolk 2	310	Land Rights	277,377	173,648	0%	-	103,729	15.50	6,692	2.4127%
Tolk 2	311	Structures and Improvements	18,359,028.11	10,008,413	-2%	(367,181)	8,717,796	15.50	562,438	3.0636%
Tolk 2	312	Boiler Plant Equipment	220,936,758	96,841,079	-2%	(4,418,735)	128,514,415	15.50	8,291,253	3.7528%
Tolk 2	314	Turbogenerators	105,153,927	52,092,221	-2%	(2,103,079)	55,164,785	15.50	3,559,018	3.3846%
Tolk 2	315	Accessory Electric Equipment	10,423,974	5,189,178	-2%	(208,479)	5,443,275	15.50	351,179	3.3690%
Tolk 2	316	Miscellaneous Power Plant Equipment	3,513,536	2,005,977	-2%	(70,271)	1,577,829	15.50	101,795	2.8972%
	Tolk 2- Total/Composite		358,664,600	166,310,516		(7,167,744)	199,521,829		12,872,376	3.5890%
Total Steam Production Tolk			757,813,553	351,918,381		(14,946,343)	420,841,515		27,151,065	3.5828%

APPENDIX B

Comparison of Approved vs Proposed Accrual Rates

Southwestern Public Service Company
Comparison of Approved vs Proposed
Depreciation Accrual Rates
At June 30, 2017

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Production Unit	FERC Account	Description	Plant Balance 06/30/2017	Approved Total Depr Rate (A)	Notes	Depreciation Expense At Approved Rates	Proposed Depreciation Rate	Proposed Depreciation Expense	Difference
			(1)	(2)		(3)= (1) x (2)	(4)	(5)= (4) x (1)	(6)= (5)-(3)
	Steam Production Tolk								
Tolk Common Facilities	310	Water Rights	10,199,108	2.4717%		252,091	5.4203%	552,823	300,732
Tolk Common Facilities	311	Structures and Improvements	34,707,776	2.6663%		925,413	5.4609%	1,895,363	969,950
Tolk Common Facilities	312	Boiler Plant Equipment	16,357,636	1.9722%		322,605	4.6871%	766,702	444,097
Tolk Common Facilities	314	Turbogenerators	13,377,761	2.5984%		347,608	4.9452%	661,559	313,952
Tolk Common Facilities	315	Accessory Electric Equipment	22,551	2.4044%	(B)	542	7.4297%	1,675	1,133
Tolk Common Facilities	316	Miscellaneous Power Plant Equipment	7,142,523	1.7779%		126,987	3.3101%	236,427	109,440
	Tolk Common Facilities - Total/Composite		81,807,355	2.4145%		1,975,247	5.0296%	4,114,550	2,139,303
						-			
Tolk 1	310	Land Rights	19,917	1.4797%		295	2.2290%	444	149
Tolk 1	311	Structures and Improvements	32,251,575	1.6639%		536,634	2.8106%	906,460	369,826
Tolk 1	312	Boiler Plant Equipment	192,823,981	1.8736%		3,612,750	3.4188%	6,592,307	2,979,557
Tolk 1	314	Turbogenerators	76,180,490	1.6242%		1,237,324	2.9038%	2,212,142	974,818
Tolk 1	315	Accessory Electric Equipment	15,344,204	1.6337%		250,678	2.8115%	431,401	180,723
Tolk 1	316	Miscellaneous Power Plant Equipment	721,430	1.7720%		12,784	2.9644%	21,386	8,602
	Tolk 1- Total/Composite		317,341,598	1.7806%		5,650,464	3.2029%	10,164,139	4,513,675
Tolk 2	310	Land Rights	277,377	1.4255%		3,954	2.4127%	6,692	2,738
Tolk 2	311	Structures and Improvements	18,359,028	1.6257%		298,463	3.0636%	562,438	263,976
Tolk 2	312	Boiler Plant Equipment	220,936,758	1.8845%		4,163,553	3.7528%	8,291,253	4,127,699
Tolk 2	314	Turbogenerators	105,153,927	1.7318%		1,821,056	3.3846%	3,559,018	1,737,963
Tolk 2	315	Accessory Electric Equipment	10,423,974	1.6406%		171,016	3.3690%	351,179	180,163
Tolk 2	316	Miscellaneous Power Plant Equipment	3,513,536	1.5515%		54,513	2.8972%	101,795	47,283
	Tolk 2- Total/Composite		358,664,600	1.8158%		6,512,554	3.5890%	12,872,376	6,359,822
	Total Steam Production Tolk		757,813,553	1.8657%		14,138,265	3.5828%	27,151,065	13,012,800

(A) Approved depreciation rates are from Docket No. 43695.
(B) Composite rate for Tolk Common Steam Production

APPENDIX C

Comparison of Depreciation Parameters

and Terminal Retirement Date

Southwestern Public Service Company
Texas
Comparison of Depreciation Parameters and Terminal Retirement Date
at June 30, 2017

				Current (1)			Proposed				
Unit Name	Net Dependable Capacity (MW)	Location	In-service Date	Service Life	Net Salvage %	Depreciation Retirement Date	Depreciation Retirement Date	Service Life	Net Salvage %	Remaining Life as of June 30, 2017	Change in Life From Current Approved
Steam Production - Coal											
Tolk Unit 1	540	Muleshoe, TX	1982	60	-2%	2042	2032	50	-2%	15.50	(10)
Tolk Unit 2	540	Muleshoe, TX	1985	60	-2%	2045	2032	47	-2%	15.50	(13)

(1) Current retirement dates and net salvage percentages were used in depreciation rates approved in Docket No. 43695.

Southwestern Public Service Company
Computation of Depreciation Accrual Rates
At March 31, 2017

Production Unit	FERC Account	Description	Plant Balance 03/31/2017 (1)	Book Reserve 03/31/2017 (2)	Net Salvage % (3)	Net Salvage Amount (4)= (1) x (3)	Unaccrued Balance (5)= (1)- (2)-(4)	Remaining Life (6)	Annual Accrual (7) =(5)/(6)	Annual Accrual Rate (8)= (7)/(1)
	Steam Production Tolk									
Tolk Common Facilities	310	Water Rights	9,854,175	1,567,723	0%	-	8,286,452	15.75	526,124	5.3391%
Tolk Common Facilities	311	Structures and Improvements	31,583,427	5,879,388	-2%	(631,669)	26,335,708	15.75	1,672,108	5.2943%
Tolk Common Facilities	312	Boiler Plant Equipment	15,942,092	4,752,688	-2%	(318,842)	11,508,245	15.75	730,682	4.5834%
Tolk Common Facilities	314	Turbogenerators	13,377,761	3,304,245	-2%	(267,555)	10,341,071	15.75	656,576	4.9080%
Tolk Common Facilities	315	Accessory Electric Equipment	22,551	(3,103)	-2%	(451)	26,106	15.75	1,658	7.3500%
Tolk Common Facilities	316	Miscellaneous Power Plant Equipment	7,142,523	3,589,014	-2%	(142,850)	3,696,359	15.75	234,689	3.2858%
	Tolk Common Facilities - Total/Composite		77,922,528	19,089,956		(1,361,367)	60,193,940		3,821,837	4.9047%
Tolk 1	310	Land Rights	19,917	12,962	0%	-	6,955	15.75	442	2.2171%
Tolk 1	311	Structures and Improvements	32,251,575	18,712,315	-2%	(645,032)	14,184,291	15.75	900,590	2.7924%
Tolk 1	312	Boiler Plant Equipment	192,896,193	93,626,758	-2%	(3,857,924)	103,127,359	15.75	6,547,769	3.3945%
Tolk 1	314	Turbogenerators	76,026,623	43,216,705	-2%	(1,520,532)	34,330,451	15.75	2,179,711	2.8670%
Tolk 1	315	Accessory Electric Equipment	15,344,202	8,901,701	-2%	(306,884)	6,749,385	15.75	428,532	2.7928%
Tolk 1	316	Miscellaneous Power Plant Equipment	721,430	401,184	-2%	(14,429)	334,675	15.75	21,249	2.9454%
	Tolk 1- Total/Composite		317,259,940	164,871,625		(6,344,800)	158,733,115		10,078,293	3.1767%
Tolk 2	310	Land Rights	277,377	172,660	0%	-	104,717	15.75	6,649	2.3970%
Tolk 2	311	Structures and Improvements	18,359,028.11	9,933,797	-2%	(367,181)	8,792,412	15.75	558,248	3.0407%
Tolk 2	312	Boiler Plant Equipment	215,692,837	96,580,731	-2%	(4,313,857)	123,425,963	15.75	7,836,569	3.6332%
Tolk 2	314	Turbogenerators	102,378,455	51,639,427	-2%	(2,047,569)	52,786,597	15.75	3,351,530	3.2737%
Tolk 2	315	Accessory Electric Equipment	9,514,468	5,147,283	-2%	(190,289)	4,557,474	15.75	289,363	3.0413%
Tolk 2	316	Miscellaneous Power Plant Equipment	3,513,536	1,992,349	-2%	(70,271)	1,591,457	15.75	101,045	2.8759%
	Tolk 2- Total/Composite		349,735,701	165,466,247		(6,989,166)	191,258,620		12,143,404	3.4722%
Total Steam Production Tolk			744,918,170	349,427,828		(14,695,334)	410,185,675		26,043,535	3.4962%

Southwestern Public Service Company
Comparison of Approved vs Proposed
Depreciation Accrual Rates
At March 31, 2017

Production Unit	FERC Accoun	Description	Plant Balance 03/31/2017	Approved Total Depr Rate (A)	Notes	Depreciation Expense At Approved Rates	Proposed Depreciation Rate	Proposed Depreciation Expense	Difference
			(1)	(2)		(3)= (1) x (2)	(4)	(5)= (4) x (1)	(6)= (5)-(3)
	Steam Production Tolk								
Tolk Common Facilities	310	Water Rights	9,854,175	2.4717%		243,566	5.3391%	526,124	282,558
Tolk Common Facilities	311	Structures and Improvements	31,583,427	2.6663%		842,109	5.2943%	1,672,108	830,000
Tolk Common Facilities	312	Boiler Plant Equipment	15,942,092	1.9722%		314,410	4.5834%	730,682	416,272
Tolk Common Facilities	314	Turbogenerators	13,377,761	2.5984%		347,608	4.9080%	656,576	308,968
Tolk Common Facilities	315	Accessory Electric Equipment	22,551	2.4044%	(B)	542	7.3500%	1,658	1,115
Tolk Common Facilities	316	Miscellaneous Power Plant Equipment	7,142,523	1.7779%		126,987	3.2858%	234,689	107,703
		Tolk Common Facilities - Total/Composite	77,922,528	2.4065%		1,875,221	4.9047%	3,821,837	1,946,616
						-			
Tolk 1	310	Land Rights	19,917	1.4797%		295	2.2171%	442	147
Tolk 1	311	Structures and Improvements	32,251,575	1.6639%		536,634	2.7924%	900,590	363,956
Tolk 1	312	Boiler Plant Equipment	192,896,193	1.8736%		3,614,103	3.3945%	6,547,769	2,933,666
Tolk 1	314	Turbogenerators	76,026,623	1.6242%		1,234,824	2.8670%	2,179,711	944,887
Tolk 1	315	Accessory Electric Equipment	15,344,202	1.6337%		250,678	2.7928%	428,532	177,854
Tolk 1	316	Miscellaneous Power Plant Equipment	721,430	1.7720%		12,784	2.9454%	21,249	8,465
		Tolk 1- Total/Composite	317,259,940	1.7807%		5,649,318	3.1767%	10,078,293	4,428,975
Tolk 2	310	Land Rights	277,377	1.4255%		3,954	2.3970%	6,649	2,695
Tolk 2	311	Structures and Improvements	18,359,028	1.6257%		298,463	3.0407%	558,248	259,786
Tolk 2	312	Boiler Plant Equipment	215,692,837	1.8845%		4,064,732	3.6332%	7,836,569	3,771,838
Tolk 2	314	Turbogenerators	102,378,455	1.7318%		1,772,990	3.2737%	3,351,530	1,578,540
Tolk 2	315	Accessory Electric Equipment	9,514,468	1.6406%		156,094	3.0413%	289,363	133,269
Tolk 2	316	Miscellaneous Power Plant Equipment	3,513,536	1.5515%		54,513	2.8759%	101,045	46,532
		Tolk 2- Total/Composite	349,735,701	1.8159%		6,350,745	3.4722%	12,143,404	5,792,659
		Total Steam Production Tolk	744,918,170	1.8627%		13,875,285	3.4962%	26,043,535	12,168,250

(A) Approved depreciation rates are from Docket No. 43695.
(B) Composite rate for Tolk Common Steam Production

Southwestern Public Service Company
Texas
Comparison of Depreciation Parameters and Terminal Retirement Date
at March 31, 2017

				Current (1)			Proposed				
Unit Name	Net Dependable Capacity (MW)	Location	In-service Date	Service Life	Net Salvage %	Depreciation Retirement Date	Depreciation Retirement Date	Service Life	Net Salvage %	Remaining Life as of March 31, 2017	Change in Life From Current Approved
Steam Production - Coal											
Tolk Unit 1	540	Muleshoe, TX	1982	60	-2%	2042	2032	50	-2%	15.75	(10)
Tolk Unit 2	540	Muleshoe, TX	1985	60	-2%	2045	2032	47	-2%	15.75	(13)

(1) Current retirement dates and net sakvage oercebtages were used in depreciation rates approved in Docket No. 43695.

Workpapers of Dane A. Watson

2017 TX Rate Case

APPLICATION OF
SOUTHWESTERN PUBLIC SERVICE COMPANY
FOR AUTHORITY TO CHANGE RATES

DAW-RR-4(CD)